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A COMPLETE BOOK OF DATA INTERPRETATION AND ANALYSIS

Useful for Banking and Insurance Examinations like IBPS, SBI, RBI, LIC, UIIC & Others

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DATA INTERPRETATION (PRELIMS)

Directions (1 - 5): Study the following information and answer the following questions:

In the following line graph number of males and number females visited Shopping Mall on different days shown.



Q1. What is the average number of Females visited shopping mall on Wednesday, Friday and Sunday?

- 1) 500
- 2) 450
- 3) 250
- 4) 300
- 5) 400

Answer: 1

Solution:



Total Number of females visited on Wednesday, Thursday and Friday = 300+440+760 = 1500

Therefore, Required Average = 1500/3 = 500

Q2. What is the difference between the number males who visited Shopping Mall on Wednesday, Thursday and Friday together and number of females who visited Shopping Mall on Friday, Saturday and Sunday together?

- 1) 510
- 2) 410
- 3) 250
- 4) 300
- 5) 400

Answer: 2

Solution:

Number Of males who visited Shopping Mall on Wednesday, Thursday and Friday together = 320+450+520= 1290

Number of females who visited Shopping Mall on Friday, Saturday and Sunday together = 440+500+760=1700

Therefore, Required Difference = 1700 – 1290 = 410

Q3. What is the approximate percentage increase in total number of males and females who visited Shopping Mall on Thursday over the total number of males and females who visited on Wednesday?

- 1) 47%
- 2) 41%
- 3) 37%
- 4) 30%
- 5) 40%

Answer: 3

Solution:

Total number of males and females who visited Shopping Mall on Thursday = 450 + 400 = 850



Total number of males and females who visited Shopping Mall on Wednesday = 320+300 = 620

Therefore, Required Percentage = (850 – 620)/620 × 100

⇒ 37.09% ≈ 37%

Q4. If number of males visited on Monday is increased by 20% than Sunday and number of females who visited on Monday is decreased by 10% than Sunday , then what will be the total number of males and females visited Shopping Mall on Monday?

1) 47% 2) 41% 3) 37% 4) 30% 5) 40% Answer: 3 **Solution:** Number of males visited on Monday = 850×120/100 = 1020 Number of females who visited on Monday = 760 × 90/100 = 684 Therefore, total number of males and females visited Shopping Mall on Monday = 1020 + 684 = 1704

Q5. Find the ratio of average number of female visited shopping Mall to average number of males visited shopping mall?

- 1) 110 : 117
- 2) 150 : 167
- 3) 120 : 147
- 4) 140 : 137
- 5) 120 : 137

Answer: 5

Solution:

Average number of female visited shopping Mall = (300+400+440+500+760)/5 = 480

Average number of male visited shopping Mall = (320+450+520+600+850)/5 = 548



Therefore, Required ratio = 480 : 548

= 120 : 137

Directions (6 -10): Study the following information carefully to answer the questions given below it:



Number of students in three different schools over the years.

Q6. What was the average number of students in all the schools together in the year 2016?

- 1) 1800
- 2) 1600
- 3) 1100
- 4) 1300
- 5) 1500

Answer: 3

Solution:

Total students in school A in 2016 = 1100

Total students in school B in 2016 = 1000



Total students in school C in 2016 = 1200

Required average = 3300/3 = 1100

Q7. Total number of students in school B and school C together in the year 2014 was what percentage of the total number of students in school B and school C together in the year 2015?

1) 97%

2) 86%

3) 79%

4) 92%

5) 98%

Answer: 3

Solution:

Total number of students in school B in 2014 =900

Total number of students in school C in 2014 =680

Total number of students in school B in 2015 = 1200

Total number of students in school C in 2015 =800

Required percentage = (900 + 680)/(1200 + 800) × 100 = 79% initiative by 314 PC350110

Q8. What is the difference between total number of students in School A and B in 2015 and Total number of students in School C in year 2016 and 2017?

- 1) 200
- 2) 240
- 3) 320
- 4) 300
- 5) 250

Answer: 5

Solution:

Total number of students in School A and B in 2015 = 1000 + 1200 = 2200

Total number of students in School C in year 2016 and 2017 = 1200+1250= 2450

Required difference = 2450 - 2200 = 250



Q9. What was the average number of students in school C over all the years together (approximate)?

1) 1017

2) 1100

3) 1300

- 4) 1020
- 5) 1025

Answer: 1

Solution:

Total students in school C in 2014 = 680

Total students in school C in 2015 = 800

Total students in school C in 2016 = 1200

Total students in school C in 2017 = 1250

Total students in school C in 2018 = 920

Total students in school C in 2019 = 1250

Required average = (680 + 800+ 1200 + 1250 + 920 + 1250)/6 = /6 = 1016.67≈1017

Q10. What was the difference between the total number of students in all the school together in year 2019 and number of students in school C in the year 2015?

- 1) 2500
- 2) 2770

3) 2300

4) 2880



5) 2200

Answer: 2

Solution:

Total students in school A in 2019 = 1120

Total students in school B in 2019 = 1200

Total students in school C in 2019 = 1250

Total number of students in school C in the year 2015 = 800

Required difference = (1120 + 1200 + 1250) - 800 = 2770

Directions (11-15): Study the following information carefully to answer the questions given below it:

In an engineering college consisting of 4000 students, the ratio of girls to boys is 3 : 5respectively. All the students have taken different branches viz. Mechanical, CS, Electronics and Chemical. 20% percent of the boys take Mechanical Branch. The number of girls CS branch is three – fifth of the number of boys taking the same. One – Fifth of the girls take Chemical Branch. The total number of students taking Chemical Branch is 900. 900 boys take Electronics branch and remaining boys take CS branch. The girls taking Electronics branch is 400 less than the number of boys taking the same. The remaining girls take Mechanical Branch.

Q11. What is the respective ratio of boys taking CS branch to the girls taking Mechanical Branch?

1)3 : 5

2) 5 : 4

3) 4 : 1

4)8 : 5

5)2 : 1

Answer: 2

Solution:

Total number of girls = $(3/8) \times 4000 = 1500$

Total number of Boys = (5/8) × 4000 = 2500

Number of boys in Mechanical branch = $(20/100) \times 2500 = 500$

Number of girls in Chemical branch = $(1/5) \times 1500 = 300$

Number of boys in Chemical branch = 900 - 300 = 600



Number of boys in Electronics = 900Number of girls in Electronics = 900 - 400 = 500Number of boys in CS branch = 2500 - (500 + 600 + 900) = 500Number of girls in CS branch = $500 \times (3/5) = 300$ Number of girls in Mechanical Branch = 1500 - (300 + 300 + 500) = 400Therefore required ratio = 500 : 400 = 5 : 4

Q12 . The number of girls taking Chemical branch is what percent of the total number of students in the school?

1) 12.8%

2) 12.5%

3) 7.5%

4) 8.2%

5) 10.5%

Answer: 3

Solution:

Total number of girls = $(3/8) \times 4000 = 1500$ Total number of Boys = $(5/8) \times 4000 = 2500$ Number of boys in Mechanical branch = $(20/100) \times 2500 = 500$ Number of girls in Chemical branch = $(1/5) \times 1500 = 300$ Number of boys in Chemical branch = 900 - 300 = 600Number of boys in Electronics = 900Number of girls in Electronics = 900 - 400 = 500Number of girls in Electronics = 900 - 400 = 500Number of boys in CS branch = 2500 - (500 + 600 + 900) = 500Number of girls in CS branch = $500 \times (3/5) = 300$ Number of girls in Mechanical Branch = 1500 - (300 + 300 + 500) = 400Therefore required percentage = $(300/4000) \times 100 = 7.5\%$

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Q13. The number of boys taking Chemical Branch is approximately what percent of the total number of students taking Electronics branch ?

1) 65%

- 2) 62%
- 3) 73%
- 4) 74%
- 5) 68%

Answer: 1

Solution:

Total number of girls = $(3/8) \times 4000 = 1500$

Total number of Boys = $(5/8) \times 4000 = 2500$

Number of boys in Mechanical branch = $(20/100) \times 2500 = 500$

Number of girls in Chemical branch = $(1/5) \times 1500 = 300$

Number of boys in Chemical branch = 900 - 300 = 600

Number of boys in Electronics = 900

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Number of girls in Electronics = 900 - 400 = 500

Number of boys in CS branch = 2500 - (500 + 600 + 900) = 500

Number of girls in CS branch = $500 \times (3/5) = 300$

Number of girls in Mechanical Branch = 1500 - (300 + 300 + 500) = 400

Required percentage =(600/900) × 100 = 64.67% ≈ 65%

Q14. What is the number of students taking CS branch?

1) 850

2) 600

3) 800

4) 900



Answer: 5 Total number of girls = $(3/8) \times 4000 = 1500$ Total number of Boys = $(5/8) \times 4000 = 2500$ Number of boys in Mechanical branch = $(20/100) \times 2500 = 500$ Number of girls in Chemical branch = $(1/5) \times 1500 = 300$ Number of boys in Chemical branch = 900 - 300 = 600Number of boys in Electronics = 900Number of girls in Electronics = 900 - 400 = 500Number of girls in Electronics = 900 - 400 = 500Number of boys in CS branch = 2500 - (500 + 600 + 900) = 500Number of girls in CS branch = $500 \times (3/5) = 300$ Number of girls in Mechanical Branch = 1500 - (300 + 300 + 500) = 400Therefore required answer = 500 + 300 = 800

Q15. What is the number of girls taking Mechanical Branch?

- 1) 416
- 2) 420
- 3) 330
- 4) 480
- 5) 400

Answer: 5

Solution:

Total number of girls = $(3/8) \times 4000 = 1500$

Total number of Boys = (5/8) × 4000 = 2500

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Number of boys in Mechanical branch = $(20/100) \times 2500 = 500$ Number of girls in Chemical branch = $(1/5) \times 1500 = 300$ Number of boys in Chemical branch = 900 - 300 = 600Number of boys in Electronics = 900Number of girls in Electronics = 900 - 400 = 500Number of girls in Electronics = 900 - 400 = 500Number of boys in CS branch = 2500 - (500 + 600 + 900) = 500Number of girls in CS branch = $500 \times (3/5) = 300$ Number of girls in Mechanical Branch = 1500 - (300 + 300 + 500) = 400Required answer = 400



Directions(16-20) : Study the given line graph carefully to answer the questions:

Number of trains cancelled from three states in five different months.



Q16. What is the Average number of trains cancelled from Uttar Pradesh over all the months together? 1) 45 2) 35 3) 30 4) 40 5) 25 Answer: 4 Solution:

Average number of trains cancelled from Uttar Pradesh over all the months together = 40 + 30 + 45 + 50 + 35 = 200

 \therefore Required average = 200/5= 40

Q17.What is the respective ratio between the number of trains cancelled from Madhya Pradesh in the month of September and the number of Trains cancelled form Andhra Pradesh in the same month?

1) 9 : 5



Q19. What is the difference between the total numbers of trains cancelled from all the three states in the month of July and number of trains cancelled from Andhra Pradesh in the month of November?

1) 40

2) 30

3) 50



5) 35

Answer: 1

Solution:

Total numbers of trains cancelled from all the three states in the month of July = 30 + 50 + 60 = 140

Number of trains cancelled from Andhra Pradesh in the month of November = 75

 \therefore Required difference = 140 - 75 = 65

Q20. Which month was the highest number of flights cancelled from all the States together?

1) March

2) September

3) July

4) November

5) December

Answer: 4

Solution:

March = 40 + 35 + 40 = 115

July = 30 + 50 + 60 = 140

September = 45 + 60 + 45 = 150

November = 50 + 75 + 75 = 200

December = 35 + 50 + 60 = 145

Hence, November is highest Trains cancellation month.

Directions (21-25) : Study the following bar graph carefully and answer the questions below:

Bar graph shows number of students working in three different schools in five different years

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Q21. What was approximate percentage decrease in number of students in School A in the year 2018 as compared to the previous year?



Q22. What is the respective ratio between the number of students in school B in the year 2020 and the number of students in school C in the year 2018?

1) 3 : 2

2) 3 : 4

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3) 3 : 5
4) 5 : 4
5) 6 : 5
Answer: 5
Solution:
Number of students in school B in the year 2020= 1800
number of students in school C in the year 2018= 1500
Required Ratio = 1800 : 1500 = 6 : 5
Q23. What was the average number of students in school C over all the years together?
1) 1680
2) 1240
3) 1660
5) 1280
Answer: 4
Solution:

Number of students in school C over all the years together = 1000 + 1200 + 1500 + 2000 + 2100 = 8800

 \therefore Required average = 8800/5 = 1760

Q24. If $33\frac{1}{3}\%$ of the total number of students in the year 2016 in all the schools together is female, what was the total number of male students in the same year in all the schools together?

1) 20,000

2) 25,000

3)26,000

4) 24,000

5) 13,000



Answer: 3

Solution:

Total number of students in the year 2016 in all the schools together = 1200 + 800 + 1000 = 3000Hence, $33\frac{1}{3}\%$ of the total number of students are females = $3000 \times (1/3) = 1000$ \therefore Total number of male students in 2016 in all the schools = 3000 - 1000 = 2000

Q25. Total number of students in school B over all the years together was approximately what percent of the total number of students in school C in the year 2018 and 2019 together?

- 1) 253%
- 2) 224%
- 3) 220%
- 4) 234%
- 5) 200%
- Answer: 5

Solution:

Total number of students in school B over all the years together = 800 + 1500 + 1400 + 1500 + 1800= 7000

Total number of students in school C in the year 2018 and 2019 together = 1500 + 2000 = 3500

 \therefore Required percentage = (7000/3500) × 200%

Directions (26 – 30): Line chart given below shows number of students recruited in five different companies in a year. Study the following graph carefully and answer the questions given below it.



Q26. Find the average number of students recruited in the TCS, HCL and Genpact together?



1) 40%



Solution:

Total male students recruited in Accenture = 1200

Total number of male students recruited in all the companies together = 1500 + 800 + 900 + 1200 + 600 = 5000

∴ Required percentage = (1200/5000) × 100 = 24%

Q28. Find the ratio between total number of students recruited in Infosys and HCL together to the total number of male students recruited in all the companies together?

1) 27 : 43
3) 23 : 50 ALA A COM
4) 23 : 35 An Initiative by 3IHZ 35IICII
5) 29 : 50
Answer: 2
Solution:
Total students recruited in Infosys = 1500 + 1000 = 2500
Total students recruited in HCL = 900 + 1200 = 2100
Total number of male students recruited in all the companies together = 1500 + 800 + 900 + 1200 + 600 = 5000
∴ Required ratio = 2500 + 2100 : 5000
⇒4600 : 5000
⇒ 23 : 25
Q29. Number of Male students recruited in Infosys and Genpact together is what percent of the number of female students recruited in Accenture and Genpact?

1) 180%



- 2) 185%
- 3) 175%
- 4) 125%
- 5) 200%
- Answer: 3

Solution:

Total male students recruited in Infosys = 1500

Total male students recruited in Genpact = 600

Total female students recruited in Accenture = 750

Total female students recruited in Genpact = 450

∴ Required percent = (1500 + 600)/(750 + 450) × 100 = 175%

Q30. Find the difference between total number of male and female students recruited in all the companies together?



 \therefore Required difference = 5000 – 4250 = 750

Directions (31 – 35) : Refer to the following graph and answer the given questions.

Data related to the number of Iphones sold by two stores (A and B)during five years:





Q31. What is the difference between the total number of Iphones sold by store A in 2016 and 2017 togeter and total number of Iphones sold by store B in 2020 and 2021 together?





Q32. The number of Iphones sold by store A increased by what percent from 2019 to 2020?

1) 30%

2) 50%

3) 100%

4) 200%

5) 250%

Answer: 3

Solution:

Total number of Iphones sold by store A in 2019 = 4000

Total number of Iphones sold by store A in 2020 = 8000

∴ Required percentage = (8000 – 4000)/4000 × 100

⇒(4000/4000) × 100

⇒ 100%

Q33. If the respective ratio between total number of Iphones sold by stores A and B together in 2014 and that in 2020 is 5 : 7. What is the total number of Iphones sold by stores A and B together in 2014?

1) 9500

- 2) 12000
- 3) 12500

4) 10000

5) 11000

Answer: 4

Solution:

Total number of Iphones sold by store A in 2020 = 8000

Total number of Iphones sold by store B in 2020 = 6000

total number of Iphones sold by stores A and B together in 2020 = 8000 + 6000 = 14000

 \therefore total number of Iphones sold by stores A and B together in 2014 = 14000 × (5/7) = 10000



Q34. Find the difference between total number of Iphones sold by Store A and B in all the years together?

- 1) 4500
- 2) 4000
- 3) 6500
- 4) 3000
- 5) 4900

Answer: 2

Solution:

Total number of Iphones sold by store A in all the years = 2000 + 6000 + 3500 + 4000 + 8000 + 2500 = 26000

Total number of Iphones sold by store B in all the years = 3500 + 4000 + 4500 + 2500 + 6000 + 1500 = 22000

 \therefore Required difference = 26000 - 22000 = 4000.

Q35. Find the ratio between total number of Iphones sold by store A and B together in 2018 to the total number of Iphones sold by store A and B together in 2021?

- 1) 5 : 3
- 2) 2 : 1
- 3) 3 : 5
- 4) 1 : 2
- 5) 5 : 4
- Answer: 2

Solution:

Total number of Iphones sold by store A and B together in 2018 = 3500 + 4500 = 8000

Total number of Iphones sold by store A and B together in 2021 = 2500 + 1500 = 4000

∴ Required ratio = 8000 : 4000

 \Rightarrow 2 : 1

Direction (36 – 40) : Refer to the graph and answer the given question.

An Initiative by 3147333161



Number of tickets sold by two cab companies Ola and Uber on five days to people travelling to Nainital on particular Cab :



Q36. Total number of tickets sold by both the Cab companies Ola and Uber together on Thursday is what percent more than that sold by both companies together on Wednesday?

1) 12.57%

2) 5.67%

3) 3.67%

4) 5.23%

5) 6.67%

Answer: 5

Solution:

Total number of tickets sold by both the Companies Ola and Uber together on Thursday = 4500 + 3500 = 8000

Total number of tickets sold by both the companies Ola and Uber together on Wednesday = 3500 + 4000 = 7500

∴Required percent = (8000 – 7500)/7500 × 100 = 6.67%

Q37. What is the average number of tickets sold by Ola on Monday, Tuesday and Friday?

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- 1) 4500
- 2) 4000
- 3) 4150
- 4) 5250
- 5) 4900
- Answer: 1

Solution:

Total number of tickets sold by Ola on Monday = 4000

Total number of tickets sold by Ola on Tuesday = 5000

Total number of tickets sold by Ola on Friday = 6000

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∴Required average = (4000 + 5000 + 6000)/3
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 $\Rightarrow 15000/3 = 4500$

Q38. What is the difference between the total number of tickets sold on Wednesday and Thursday by Ola and the total number of tickets sold on the same days together by Uber?

1) 3500
2) 4050
3) 0
4) 5250
5) 4900
Answer: 3
Solution:
total number of tickets sold on Wednesday and Thursday by Ola = 3500 + 4000 = 7500
total number of tickets sold on Wednesday and Thursday by Uber = 4000 + 3500 = 7500
∴Required difference = 7500 - 7500 = 0
Q39: What is the respective ratio between the total number of tickets sold by both the Companies

1) 9 : 7

together on Tuesday and that on Friday?

2) 9 : 11

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3) 3 : 4
4) 1 : 1
5) 2 : 1
Answer: 4
Solution:
Total number of tickets sold by Ola and Uber on Tuesday = 5000 + 5500 = 10500
Total number of tickets sold by Ola and Uber on Friday = 6000 + 4500 = 10500
∴ Required ratio = 1 : 1
⇒11:9
Q40. Number of tickets sold by Uber decreased by what percent from Thursday to Wednesday?
1) 50%
2) 25%
3) 20% 4) 12.5% 5) 33.37% Answer: 4 Answer: 4
Solution:
Total number of tickets sold by Uber on Thursday = 3500
Total number of tickets sold by Uber on Wednesday = 4000
∴ Required percent = (4000 – 3500)/4000 × 100 = 12.5%

Directions (41 – 45) : Study the following graph carefully toanswer the questions that follow:

Cost of three different shoes Brand in five different cities.



Q41. In which city is the difference between the cost of one pair of Puma shoes and cost of one pair of Nike shoes is lowest?



difference between the cost of one pair of Puma shoes and cost of one pair of Nike shoes in Chandigarh = 6500 – 5000 = Rs 1500



∴ Required answer = Pune

Q42. Cost of one pair of of Reebok in Delhi is what percent of the cost of two pair shoes of Nike in Pune?

1) 40%

2) 50%

3) 60%

4) 80%

5) 75%

Answer: 5

Solution:

Cost of one pair of of Reebok in Delhi = Rs 6000

cost of two pair shoes of Nike in Pune = 2×4000 = Rs 8000

∴ Required percent = (6000/8000) × 100 = 75%

Q43. What total amount should Maanik pay to the shopkeeper for purchasing 3 Pairs of Puma shoes and 5 Pairs of Nike shoes in Chandigarh?

1) Rs 50000

2) Rs 56000

3) Rs 47500

4) Rs 48000

5) Rs 49000

Answer: 3

Solution:

3 Pairs of Puma shoes = 3×5000 = Rs 15000

5 Pairs of Nike shoes in Chandigarh = 5 × 6500 = Rs 32500

∴ Total amount = 15000 + 32500 = Rs 47500.

Q44. Mehek had to purchase 10 Pairs of Reebok shoes from Bengaluru , shopkeeper gave him discount of 12% per pair. what amount did he pay to the shopkeeper after the discount?

1) Rs 45000

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- 2) Rs 40500
- 3) Rs 41500
- 4) Rs 52500
- 5) Rs 44000
- Answer: 5

Solution:

Cost of one pair of Reebok shoes in Bengaluru = Rs 5000

After 12% discount = 5000 × (88/100) = Rs 4400

: Cost of 10 pairs of Reebok shoes in Bengaluru after discount = 4400 × 10 = Rs 44000

Q45. What is the respective ratio between the cost of one Pair of Puma from chennai and the cost of one Pair of Nike from Pune?

1) 3 : 2

- 2) 4 : 5
- 3) 7 : 5
- 4) 4 : 7
- 5) 9 : 4

Answer: 1

Solution:

cost of one Pair of Puma from chennai = Rs 6000

cost of one Pair of Nike from Pune = Rs 4000

 \therefore Required ratio = 6000 : 4000

 \Rightarrow 3 : 2

Directions(46 -50): Data given shows the total number of books available in the college library is 60,000, Ratio of technical (Mechanical and Automobile) to non-technical books (Bsc, Bcom, BA and Bed) is 2: 3.Out of total technical books(Mechanical and automobile) the number of books for Mechanical are 40% more than the number of books for Automobile.30% of total non-technical books (Bsc, Bcom, BA and Bed) are for Bsc and Bcom and out of this 33 1/3% are for Bcom course. The ratio of the number of books for BA to the number of books for Bed is 11: 10.

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Q46. The number of books available for Bcom course is how much percent more or less than the number of books available for Automobile course?

1) 24%

2) 36%

3) 40%

4) 72%

5) 50%

Answer: 2

Solution:

Total books in library = 6000

Technical books = 60000 × 2/5 = 24000

Non technical books = $60000 \times 3/5 = 36000$

Let the number of automobilecourse books = 100x

So mechanical course books = 140x (40% more than automobile books)

Therefore,

Number of automobile books in library = (24000/240x) × 100x = 10000 Ve by 314 F3351101

Then Mechanical books = 14000

Number of Bsc and Bcom course books = (30/100) × 36000 = 10800

Number of Bcom course books = $10800 \times (1/3) = 3600$

Number of Bcomcourse books = 10800 - 3600 = 7200

Number of BA and Bed course books = 36000 - 10800 = 25200

Number of BA course books = $25200 \times (11/21) = 13200$

Number of Bed course books = $25200 \times (10/21) = 12000$

∴Required percentage = (3600/10000) × 100 = 36%

Q47. Find the ratio of the total number of books available for Mechanical and Bed course to the total number of books available for BA and BSc course?

1) 67 : 72

2) 51 : 65

SAFALT 3) 65 : 51 4) 72 : 67 5) 51 : 92 Answer: 3 Solution: Total books in library = 6000 Technical books = 60000 × 2/5 = 24000 Non-technical books = $60000 \times 3/5 = 36000$ Let the number of automobile course books = 100x So mechanical course books = 140x (40% more than automobile books) Therefore, Number of automobile books in library = $(24000/240x) \times 100x = 10000$ Then Mechanical books = 14000 Number of Bsc and Bcom course books = $(30/100) \times 36000 = 10800$ Number of Bcom course books = $10800 \times (1/3) = 3600$ Number of Bcom course books = 10800 - 3600 = 7200Number of BA and Bed course books = 36000 - 10800 = 25200 Number of BA course books = $25200 \times (11/21) = 13200$ Number of Bed course books = $25200 \times (10/21) = 12000$ ∴Required ratio = (14000 + 12000) : (13200 + 7200) ⇒26000 : 20400 $\Rightarrow 65:51$ Q48. The number of books available for Bcom course is what percent of the number of books available for Bed course? 1) 24%

2) 30%

3) 40%



- 2) 36%
- 3) 40%
- 4) 72%
- 5) 50%

Answer: 5



Solution:

Total books in library = 6000 Technical books = 60000 × 2/5 = 24000 Non technical books = $60000 \times 3/5 = 36000$ Let the number of automobile course books = 100x So mechanical course books = 140x (40% more than automobile books) Therefore, Number of automobile books in library = (24000/240x) × 100x = 10000 Then Mechanical books = 14000 Number of Bsc and Bcom course books = $(30/100) \times 36000 = 10800$ Number of Bcom course books = $10800 \times (1/3) = 3600$ Number of Bcom course books = 10800 - 3600 = 7200Number of BA and Bed course books = 36000 - 10800 = 25200 Number of BA course books = 25200 × (11/21) = 13200 Number of Bed course books = $25200 \times (10/21) = 12000$ An Initiative by 31423316 ∴Required percentage = (12000/24000) × 100 = 50%

Q50. What is the difference between the number of books available for Automobile and BA course and the number of books available for Mechanical and Bcom Course?

1) 5600

2) 3600

3) 4000

4) 7200

5) 5000

Answer: 1

Solution:

Total books in library = 6000

Technical books = 60000 × 2/5 = 24000



Non technical books = $60000 \times 3/5 = 36000$ Let the number of automobile course books = 100x So mechanical course books = 140x (40% more than automobile books) Therefore, Number of automobile books in library = $(24000/240x) \times 100x = 10000$ Then Mechanical books = 14000 Number of Bsc and Bcom course books = $(30/100) \times 36000 = 10800$ Number of Bcom course books = $10800 \times (1/3) = 3600$ Number of Bcom course books = 10800 - 3600 = 7200Number of BA and Bed course books = 36000 - 10800 = 25200Number of BA course books = $25200 \times (11/21) = 13200$ Number of Bed course books = $25200 \times (10/21) = 12000$ ∴Required differcne = (10000 + 13200) – (14000 + 3600) ⇒23200 - 17600 ⇒5600 An Initiative by 314733161 ⇒ 8 : 7

Directions(51-55): Number of songs recorded by Neha Kakkar in 2018 is 1200.Number of songs recorded by Sunanda Sharma and Dhavani bhanusali in 2020 is 4: 5.Total number of songs recorded by 2019 is 300% more than the songs recorded by Dhavani Bhanusali in 2019.Total songs recorded by SunandaSharma in all three years is 1500.Averagenumber of songs recorded in 2020 is 5/4 th of songs recorded by Dhavani Bhanusali in 2018.Songs recorded by Dhavani bhanusali in 2019 is 300% more than the songs recorded by Dhavani bhanusali in 2018. Total songs recorded in 2018 is 300% more than the songs recorded by Ahavani bhanusali in 2019 and songs recorded by Sunanda Sharma in 2018 is 50% less than the songs recorded by Dhavani Bhanusali in 2019 is 5: 1

Q51. What is the difference of the average number of songs recorded by Sunanda sharma in 2018 and 2019 and average number of songs recorded by Neha kakkar and Dhavani Bhanusali in 2020?

1) 750

2) 650

3) 850



4) 950

5) 550

Answer: 1

Solution:

Number of songs recorded by Neha kakkar in 2018 = 1200

Number of songs recorded by Dhavani bhanusali in $2019 = 1200 \times (1/2) = 600$

Total songs recorded in 2018 = 600 × (400/100) = 2400

Let the number of songs recorded by Dhavani bhanusali in 2018 is x

X + (50x/100) + 1200 = 2400

⇒ X = 800

 \therefore number of songs recorded by Dhavani bhanusali and Sunanda sharma in 2018 are 800 and 400

Total number of songs recorded in $2019 = (400/100) \times 600 = 2400$

Number of songs recorded by Neha Kakkar in $2019 = (2400 - 600) \times (5/6) = 1500$

Number of songs recorded by Sunanda sharma in $2019 = (2400 - 600) \times (1/6) = 300$

Total number of songs recorded in $2020 = 3 \times 5/4 \times 800 = 3000$

Total number of songs recorded by Sunanda sharma in 2020 = 1500 - 400 - 300 = 800

Total number of songs recorded by Dhavani bhanusali in $2020 = 800 \times (5/4) = 1000$

Number of songs recorded by Neha kakkar in 2020 = 3000 - 800 - 1000 = 1200

 \therefore required difference = (1200 + 1000)/2 - (400 + 300)/2

⇒2200/2 - 700/2

⇒1100 – 350

⇒750

Q52. Number of songs recorded by Dhavani Bhanusali in all years is what percent of total songs recorded in 2018?

1) 125%

2) 100%

3) 50%


5) 75%

Answer: 2

Solution:

Number of songs recorded by Neha kakkar in 2018 = 1200

Number of songs recorded by Dhavani bhanusali in $2019 = 1200 \times (1/2) = 600$

Total songs recorded in 2018 = 600 × (400/100) = 2400

Let the number of songs recorded by Dhavani bhanusali in 2018 is x

X + (50x/100) + 1200 = 2400

 \Rightarrow X = 800

∴ number of songs recorded by Dhavani bhanusali and Sunanda sharma in 2018 are 800 and 400

Total number of songs recorded in $2019 = (400/100) \times 600 = 2400$

Number of songs recorded by Neha Kakkar in $2019 = (2400 - 600) \times (5/6) = 1500$

Number of songs recorded by Sunanda sharma in $2019 = (2400 - 600) \times (1/6) = 300$

Total number of songs recorded in $2020 = 3 \times 5/4 \times 800 = 3000$

Total number of songs recorded by Sunanda sharma in 2020 = 1500 - 400 - 300 = 800

Total number of songs recorded by Dhavani bhanusali in $2020 = 800 \times (5/4) = 1000$

Number of songs recorded by Neha kakkar in 2020 = 3000 - 800 - 1000 = 1200

∴Required percentage = (800 + 600 + 1000)/ (1200 + 800 + 400) × 100 = 100%

Q53. What is the ratio of total number of songs recorded in 2020 to total number of songs recorded in 2021 if total number of songs recorded in 2021 is 150% of songs recorded in 2019?

1) 5 : 6

2) 6 : 5

- 3) 7 : 5
- 4) 9 : 5

5) 11 : 7

Answer: 1



Solution:

Number of songs recorded by Neha kakkar in 2018 = 1200 Number of songs recorded by Dhavani bhanusali in $2019 = 1200 \times (1/2) = 600$ Total songs recorded in 2018 = 600 × (400/100) = 2400 Let the number of songs recorded by Dhavani bhanusali in 2018 is x X + (50x/100) + 1200 = 2400 $\Rightarrow X = 800$ ∴ number of songs recorded by Dhavani bhanusali and Sunanda sharma in 2018 are 800 and 400 Total number of songs recorded in $2019 = (400/100) \times 600 = 2400$ Number of songs recorded by Neha Kakkar in $2019 = (2400 - 600) \times (5/6) = 1500$ Number of songs recorded by Sunanda sharma in $2019 = (2400 - 600) \times (1/6) = 300$ Total number of songs recorded in $2020 = 3 \times 5/4 \times 800 = 3000$ Total number of songs recorded by Sunanda sharma in 2020 = 1500 - 400 - 300 = 800Total number of songs recorded by Dhavani bhanusali in $2020 = 800 \times (5/4) = 1000$ Number of songs recorded by Neha kakkar in 2020 = 3000 - 800 - 1000 = 1200Number of songs recorded in 2021 = 2400 × (150/100) = 3600 ∴Required ratio = 3000 : 3600 = 5 : 6

Q54. Average number of songs recorded by Neha Kakkar in all the years is what percent more and less than average number of songs recorded in 2019?

- 1) 58.5%
- 2) 87.5%
- 3) 72.5%
- 4) 67.5%
- 5) 62.5%
- Answer: 5

Solution:

Number of songs recorded by Neha kakkar in 2018 = 1200



Number of songs recorded by Dhavani bhanusali in $2019 = 1200 \times (1/2) = 600$

Total songs recorded in 2018 = 600 × (400/100) = 2400

Let the number of songs recorded by Dhavani bhanuslai in 2018 is x

X + (50x/100) + 1200 = 2400

 \Rightarrow X = 800

∴ number of songs recorded by Dhavani bhanusali and Sunanda sharma in 2018 are 800 and 400

Total number of songs recorded in $2019 = (400/100) \times 600 = 2400$

Number of songs recorded by Neha Kakkar in $2019 = (2400 - 600) \times (5/6) = 1500$

Number of songs recorded by Sunanda sharma in $2019 = (2400 - 600) \times (1/6) = 300$

Total number of songs recorded in $2020 = 3 \times 5/4 \times 800 = 3000$

Total number of songs recorded by Sunanda sharma in 2020 = 1500 - 400 - 300 = 800

Total number of songs recorded by Dhavani bhanusali in $2020 = 800 \times (5/4) = 1000$

Number of songs recorded by Neha kakkar in 2020 = 3000 - 800 - 1000 = 1200

Average number of songs recoreded by Neha Kakkar = (1200 + 1500 + 1200)/3 = 1300

average number of songs recorded in 2019 = (1500 + 600 + 300)/3 = 800

∴. Required percentage = (1300 – 800)/800 × 100 = 62.5%

Q55. Average number of songs recorded by all in all three years is how much more than average number of songs recorded by Sunanda sharma and Dhavani bhanusali in 2019?

1) 2150

2) 2050

3) 2200

4) 3350

5) 920

Answer: 1

Solution:

Number of songs recorded by Neha kakkar in 2018 = 1200

Number of songs recorded by Dhavani bhanusali in $2019 = 1200 \times (1/2) = 600$



Total songs recorded in 2018 = 600 × (400/100) = 2400

Let the number of songs recorded by Dhavani bhanusali in 2018 is x

 \Rightarrow X + (50x/100) + 1200 = 2400

 \Rightarrow X = 800

 \therefore number of songs recorded by Dhavani bhanusali and Sunanda sharma in 2018 are 800 and 400

Total number of songs recorded in $2019 = (400/100) \times 600 = 2400$

Number of songs recorded by Neha Kakkar in $2019 = (2400 - 600) \times (5/6) = 1500$

Number of songs recorded by Sunanda sharma in $2019 = (2400 - 600) \times (1/6) = 300$

Total number of songs recorded in $2020 = 3 \times 5/4 \times 800 = 3000$

Total number of songs recorded by Sunanda sharma in 2020 = 1500 - 400 - 300 = 800

Total number of songs recorded by Dhavani bhanusali in $2020 = 800 \times (5/4) = 1000$

Number of songs recorded by Neha kakkar in 2020 = 3000 - 800 - 1000 = 1200

∴Required difference = (3900 + 2400 + 1500)/3 – (300 + 600)/2

⇒2600 – 450

⇒2150

Directions (56-60): In a school of 1200 students the girls and the boys are in the ratio of 7: 5 respectively. The students can play only cricket or only football or both games. The number of boys and number of girls who can play only Cricket is equal and each of which is 40% total number of girls. 30% of girls can play both the games and 40% of boys can play only football.

Q56. How many girls can play only Football?

1) 100
2) 125
3) 220
4) 200
5) 150
Answer: 5
Solution:

An Initiative by 3대로 3 대



Total students in school = 1200 Total girls = (7/12) × 1200 = 700 Total boys = (5/12) × 1200 = 500 Number of boys Play only Cricket = $500 \times (40/100) = 200$ Number of girls play only Cricket = $500 \times (40/100) = 200$ Number of girls play both games = $(30/100) \times 500 = 150$ Number of boys Play only football = $(40/100) \times 700 = 280$ Number of girls play only Football = 500 - 200 - 150 = 150Number of boys play both the games = 700 - 200 - 280 = 220Q57. In all how many boys can play cricket? 1) 415 2) 420 3) 410 4) 480 5) 425 An Initiative by 3773376 Answer: 2 Solution: Total students in school = 1200 Total girls = $(7/12) \times 1200 = 700$ Total boys = (5/12) × 1200 = 500 Number of boys Play only Cricket = $500 \times (40/100) = 200$ Number of girls play only Cricket = $500 \times (40/100) = 200$ Number of girls play both games = $(30/100) \times 500 = 150$ Number of boys Play only football = $(40/100) \times 700 = 280$ Number of girls play only Football = 500 - 200 - 150 = 150 Number of boys play both the games = 700 - 200 - 280 = 220 \therefore total number of boys who play cricket = 200 + 220 = 420



Q58. What approximate percentage of all the students (Boys and Girls) together can play only cricket?

- 1) 27%
- 2) 29%
- 3) 38%
- 4) 33%
- 5) 31%

Answer: 4

Solution:

Total students in school = 1200

Total girls = $(7/12) \times 1200 = 700$

Total boys = (5/12) × 1200 = 500

Number of boys Play only Cricket = $500 \times (40/100) = 200$

Number of girls play only Cricket = $500 \times (40/100) = 200$

Number of girls play both games = (30/100) × 500 = 150

Number of boys Play only football = (40/100) × 700 = 280 In Initiative by 314 PC3501101

Number of girls play only Football = 500 - 200 - 150 = 150

Number of boys play both the games = 700 - 200 - 280 = 220

Total students in school = 1200

: required percentage = $(400/1200) \times 100 = 33.33\% \approx 33\%$

Q59. In all how many students(Boys and Girls) can speak both the languages?

- 1) 390
- 2) 370
- 3) 320
- 4) 360
- 5) 310

Answer: 2



Solution:

Total students in school = 1200 Total girls = $(7/12) \times 1200 = 700$ Total boys = $(5/12) \times 1200 = 500$ Number of boys Play only Cricket = $500 \times (40/100) = 200$ Number of girls play only Cricket = $500 \times (40/100) = 200$ Number of girls play both games = $(30/100) \times 500 = 150$ Number of boys Play only football = $(40/100) \times 700 = 280$ Number of girls play only Football = 500 - 200 - 150 = 150Number of boys play both the games = 700 - 200 - 280 = 220∴Total number of students can play both the games = 150 + 220 = 370 Q60. How many boys can play either only cricket or only football? 1) 360 2) 300 3) 400 An Initiative by 3मर 3जा 4) 325 5) 350 Answer: 5 Solution: Total students in school = 1200 Total girls = $(7/12) \times 1200 = 700$ Total boys = $(5/12) \times 1200 = 500$ Number of boys Play only Cricket = $500 \times (40/100) = 200$ Number of girls play only Cricket = $500 \times (40/100) = 200$ Number of girls play both games = $(30/100) \times 500 = 150$ Number of boys Play only football = $(40/100) \times 700 = 280$ Number of girls play only Football = 500 - 200 - 150 = 150



Number of boys play both the games = 700 - 200 - 280 = 220

 \therefore Total boys who can play either only cricket or only football= 200 + 150 = 350

Directions (61 – 65) :Study the following pie chart carefully to answer these questions. Percentage distribution of students in different branches of BTECH..



Q61. What is the value of $1/4^{th}$ of the difference the number of students in Mechanical branch and CS branch?

- 1) 200
- 2) 250
- 3) 300
- 4) 450
- 5) 225
- Answer: 1

Solution:

Total number of students in Mechanical branch = (25/100) × 8000 = 2000

Total number of students in CS branch = (15/100) × 8000 = 1200

Required difference = (2000 - 1200)/4 = 800/4 = 200



Q62. How much more percentage of students are in Mechanical as compared to students in ECE?

1) 78%

2) 45%

3) 58%

4) 50%

5) 68%

Answer: 3

Solution:

Total number of students in Mechanical = (25/100) × 8000 = 2000

Total number of students in ECE = $(20/100) \times 8000 = 1600$

Required percentage = (2000 - 1600)/1600 × 100 = 25%

Q63. What is the total number of students in CS ,IT and Automobile together?

1) 4100 2) 4200 3) 4300 4) 4400 5) 4500 Answer: 4 Solution: Total number of students in CS = $(15/100) \times 8000 = 1200$ Total number of students in IT = $(22/100) \times 8000 = 1760$ Total number of students in Automobile = $(18/100) \times 8000 = 1440$ Required answer = 1200 + 1760 + 1440 = 4400Q64. What is the respective ratio between the number of students in CS and the number of students in Automobile? 1) 3 : 2

2)7:6



Total number of students in CS = $(15/100) \times 8000 = 1200$

Required percentage = (2000/1200) × 100 = 166.66% ≈ 167%

Directions(66 – 70): The following bar graph shows the marks scored by 5 students in different subjects. The number given in the brackets show the total marks for that subject.



Q66. What is the percentage of marks scored by all the three students in science?





 \therefore Required percentage = (330/550) × 100 = 60%

Q69. The total marks obtained by all the three students in Science is approximate what percentage more than the total marks obtained by all the three students in Hindi?

Solution:

total marks obtained by all the three students in Science = 90 + 94 + 86 = 270

total marks obtained by all the three students in Hindi = 72 + 60 + 50 = 182

 \therefore Required percentage = (270 - 182)/182 × 100

⇒(88/182) × 100

⇒48.35% ≈ 48%



Q70. Which of the following statement is correct?

1)Neha scored the lowest percentage of marks.

2)Preeti scored highest percentage of marks.

3) The difference between the total number of marks betwenn Neha and Preeti is 80.

4) The marks scored by Preeti in Social science is less than the average scored by all of them in Social science.

5)None of the above.

Answer: 4

Solution:

marks scored by Preeti in Social science = 66

average scored by all of them in Social science= 59 + 76 + 66 = 201/3 = 67

Direction(71-75):Study the line graph given below carefully and answer the following questions:

Following graph shows the number of Mobile Phones manufactured and sold by a company over the years (in crore)





Q71. What is the average number of Mobile Phone sold over the years?

- 1) 46 crores
- 2) 47 crores
- 3) 40 crores
- 4) 48 crores
- 5) 44 crores

Answer: 5

Solution:

Number of Mobile phones sold over the years = 35 + 30 + 50 + 45 + 60 = 220 crores

 \therefore Required average = 220/5 = 44 crores.

Q72. What is the respective ratio of the difference between the number of mobile phones manufactured and sold in the year 2019 to the difference between the number of Mobile Phones manufactured and sold in the year 2016?

- 1) 5 : 8
- 2) 5 : 9
- 3) 9 : 8
- 4) 3 : 5
- 5) 9 : 7
- Answer: 4

Solution:

Number of mobile phones manufactured and sold in the year 2019= 60-45 = 15 Crores

difference between the number of Mobile Phones manufactured and sold in the year 2016 = 60 - 35= 25 crores

 \therefore Required ratio = 15 : 25= 3 : 5

Q73.What is the respective ratio of the number of Mobile Phones manufactured in the year 2017 to the number of Mobile Phones manufactured in the year 2019?

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SAFALTA.com 1) 8 : 9 2) 4 : 5 3) 4 : 7 4) 3 : 5 5) 3 : 2 Answer: 2 Solution: Number of Mobile Phones manufactured in the year 2017= 40 crores Number of Mobile Phones manufactured in the year 2019= 60 Crores Required Ratio = 40:60=2:3Q74. What is the percent decrease in number of Mobile phones sold in the year 2017 from the previous year? 1) 25% 2) 33.33% An Initiative by **3HC33ICI** 3) 20.67% 4) 22.5% 5) 28.25% Answer: 2 Solution: Number of Mobile phones sold in the year 2017= 40 crores Number of Mobile phones sold in the year 2016= 60 crores ∴Required percentage = [(60 – 40)/60] × 100 = 33.33%

Q75.What is the difference between the number of Mobile Phones manufactured and number of Mobile Phones sold over all the years?

1) 100 crores

2) 125 crores



3) 120 crores

4) 105 crores

5) 110 crores

Answer: 1

Solution:

Number of Mobile phones manufactured over all the years= 60 + 40 + 85 + 60 + 75 = 320 Crores

Number of Mobile Phones sold over all the years = 35 + 30 + 50 + 45 + 60 = 220 crores

∴Required difference = 320 – 220 = 100 crores

Directions(76- 80): Study the following information carefully and answer the related questions. Following First bar graph represents the data regarding difference between monthly expenditure and monthly savings of five employees in three different months and second bar graph represents the 40% of monthly income of these employees.







Q76. In October, Expenditure of B and D are more than their savings, If B gives 35% of his savings into charity and D gives 40% of his savings into charity, then what is the ratio of remaining amount saved by D in October?

1)53 : 58 2)45 : 49 3) 91 : 48 4)81 : 38 5) 88 : 91 Answer: 3

Employee	Monthly Income	Difference between expenditure and savings		
		August	September	October
А	(20000/40) × 100 =	10000	6000	20000
	50000			
В	(25600/40) × 100 =	4000	16000	8000
	64000			
С	(17600/40) × 100 =	4000	16000	8000
	44000			
D	(16000/40) × 100 =	10000	4000	8000
	40000			
E	(19200/40) × 100 =	2000	8000	12000
	48000			



In October, Expenditure of B + Savings of B = 64000 Expenditure of B - Savings of B = 8000 Savings of B = 56000/2 = 28000 Then , remaining amount saved by $B = (100 - 35)/100 \times 28000 = 18200$ In October, Expenditure of D + Savings of D = 40000 Expenditure of D - Savings of D = 8000 Savings of B = 32000/2 = 16000 Then , remaining amount saved by $B = (100 - 40)/100 \times 16000 = 9600$ ∴Required ratio = 18200 : 9600 \Rightarrow 91 : 48 Q77. Expenditure of C in August , September and October are in the ratio 10 : 15 : 13 respectively, if C saves Rs 18000 in October, then his total savings in September is approximately what percent of his total savings in August? An Initiative by 314233101 1)75%

2)62%

3) 68%

4)45%

5) 58%

Answer: 5

Employee	Monthly Income	Difference between expenditure and savings		
		August	September	October
A	(20000/40) × 100 = 50000	10000	6000	20000
В	(25600/40) × 100 = 64000	4000	16000	8000
С	(17600/40) × 100 = 44000	4000	16000	8000



D	(16000/40) × 100 = 40000	10000	4000	8000
E	(19200/40) × 100 = 48000	2000	8000	12000

Savings of C in October = 18000

Then, expenditure of C in October = 44000 - 18000 = 26000

Expenditure of C in August = (26000/13) × 10 = 20000

Then, Savings of C in August = 44000 – 20000 = 24000

Expenditure of C in September = $(26000/13) \times 15 = 30000$

Then, Savings of C in September = 44000 – 30000 = 14000

∴Required percentage = (14000/24000) × 100 = 58.33% ≈ 58%

Q78. Expenditure of D in September and savings of C in October are equal, and expenditure of C in October and savings of D in September are in the ratio 13 : 11 respectively. What is the average of savings of D in September and expenditure of C in October taken together?

1)24000 2)15000 3) 19000 4)12000 5) 20000 Answer: 1

Employee	Monthly Income	Difference between expenditure and savings		
		August	September	October
A	(20000/40) × 100 = 50000	10000	6000	20000
В	(25600/40) × 100 = 64000	4000	16000	8000
С	(17600/40) × 100 = 44000	4000	16000	8000
D	(16000/40) × 100 = 40000	10000	4000	8000
E	(19200/40) × 100 = 48000	2000	8000	12000



Let expenditure of D in September = Rs x = Savings of C in October And savings of D in September = Rs y Then, expenditure of C in October = 13y/11 Now, Income of D So, x + y = 40000 X = 40000 - yAnd Income of C, x + (13y/11) = 44000X = 44000 - (13y/11)X = (484000 - 13y)/11 Now put the value of x 40000 - y = (484000 - 13y)/11440000 - 11y = 484000 - 13y2y = 44000Y = 22000the average of savings of D in September and expenditure of C in October taken together = {22000 + (13 × 22000)/11}/2

⇒ (22000 + 26000)/2

⇒ 24000

Q79. In August, If only savings of C is more than their expenditure, then total expenditure of all employees taken together in August are approximately what percent of their savings in the same month?

1)75%

2)150%

3) 90%

4)100%

5) 120%

Answer: 5



Employee	Monthly Income	Difference between expenditure and savings		
		August	September	October
А	(20000/40) × 100 =	10000	6000	20000
	50000			
В	(25600/40) × 100 =	4000	16000	8000
	64000			
С	(17600/40) × 100 =	4000	16000	8000
	44000			
D	(16000/40) × 100 =	10000	4000	8000
	40000			
E	(19200/40) × 100 =	2000	8000	12000
	48000			

In August:

Savings of A = (50000 - 10000)/2 = 20000

Expenditure of A = 50000 - 20000 = 30000

Savings of B = (64000 - 4000)/2 = 30000

Expenditure of B = 64000 - 30000 = 34000

Savings of C = (44000 + 4000)/2 = 24000

Expenditure of C = 44000 - 24000 = 20000

Savings of D = (40000 - 10000)/2 = 15000

Expenditure of D = 40000 - 15000 = 25000

Savings of E = (48000 - 2000)/2 = 23000

Expenditure of A = 48000 - 23000 = 25000

Then, total savings = 20000 + 30000 + 24000 + 15000 + 23000 = 112000

And total expenditure = 30000 + 34000 + 20000 + 25000 + 25000 = 134000

 \therefore Required percentage = (134000/112000) × 100

⇒ 119.64% ≈ 120%

Q80. In September ,40% savings of E is given to his mother and remaining Rs 12000 is saved by him. If B's expenditure is Rs 20000 more than savings of E in September, then what is the respective ratio of expenditure of E to the savings of B in September?

1)9 : 5

2)5:8

An Initiative by 37733101



4)6:7

5) 8 : 5

Answer: 3

Solution:

Employee	Monthly Income	Difference between expenditure and savings		
		August	September	October
А	(20000/40) × 100 =	10000	6000	20000
	50000			
В	(25600/40) × 100 =	4000	16000	8000
	64000			
С	(17600/40) × 100 =	4000	16000	8000
	44000			
D	(16000/40) × 100 =	10000	4000	8000
	40000			
E	(19200/40) × 100 =	2000	8000	12000
	48000			

In september,

Savings of E = $(12000/60) \times 100 = 20000$ Then, expenditure of E = 48000 - 20000 = 28000Now, expenditure of B = 20000 + 20000 = 40000Then savings of B = 64000 - 40000 = 24000 \therefore Required ratio = 28000 : 24000 $\Rightarrow 7 : 6$

Directions(81–85): The following bar graph shows the marks scored by 5 students in different subjects. The number given in the brackets show the total marks for that subject.

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Q81. What is the percentage of marks scored by all the three students in science?



4)7.5%



 \therefore Required percentage = (330/550) × 100 = 60%

Q84. The total marks obtained by all the three students in Science is approximate what percentage more than the total marks obtained by all the three students in Hindi?

Solution:

total marks obtained by all the three students in Science = 90 + 94 + 86 = 270

total marks obtained by all the three students in Hindi = 72 + 60 + 50 = 182

 \therefore Required percentage = (270 – 182)/182 × 100

⇒(88/182) × 100

⇒48.35% ≈ 48%



Q85. Which of the following statement is correct?

1)Neha scored the lowest percentage of marks.

2)Preeti scored highest percentage of marks.

3) The difference between the total number of marks betwenn Neha and Preeti is 80.

4) The marks scored by Preeti in Social science is less than the average scored by all of them in Social science.

5)None of the above.

Answer: 4

Solution:

marks scored by Preeti in Social science = 66

average scored by all of them in Social science= 59 + 76 + 66 = 201/3 = 67

∴The marks scored by Preeti in Social science is less than the average scored by all of them in Social science

Directions(86-90): Study the following information carefully to answer the questions given below it:







Q86. The number of girls from Mechanical is approximately what percent of total number of girls from all the Branches together?

1) 21%

2) 42 %

- 3) 38 %
- 4) 19%

5) 26%

Answer: 4

Solution:

Total number of girls from Mechanical = 160

Total number of girls from all the departments = 240 + 160 + 180 + 140 + 130 = 850

Required percentage = $(160/850) \times 100 = 18.82\% \approx 19\%$

Q87. What is the difference between the total number of boys and the total number of girls from all the branches together?

^{2) 80} An Initiative by 31HZ 353IC					
3) 78					
4) 70					
5) 12					
Answer: 4					
Solution:					
Total number of boys from all the branches = 130 + 240 + 140 + 120 + 150 = 780					
Total number of girls from all the Branches = 240 + 160 + 180 + 140 + 130 = 850					
Required difference = 850 – 780 = 70					
Q88. What is the average number of boys from all the branches together?					
1) 121					
2) 142					
3) 156					
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5) 126

Answer: 3

Solution:

Total number of boys from all the branches = 130 + 240 + 140 + 120 + 150 = 780

Required average = 780/5 = 156

Q89. The number of boys from IT branch is approximately what percent of the total number of boys from all the branches together?

1) 23% 2) 42 % 3) 28 % 4) 31% 5) 36% Answer: 1 Solution: Total number of boys from IT branch = 180 Total number of boys from all the branches = 130 + 240 + 140 + 120 + 150 = 780 Required percentage = (180/780) × 100 = 23.07% ≈ 23% Q90.What is the respective ratio of number of girls from CS branch to the number of girls from Chemical branch? 1)21:29 2) 13 : 19 3) 13 : 24 4)24:13 5)19:13

Answer: 4

Solution:

Total number of girls from CS branch = 240



Total number of girls from Chemical branch = 130

Required ratio = 240 : 130 = 24 : 13

Directions(91 – 95): Study the following information carefully and answer the given questions.

Given below line graph shows total number of students (Girls + Boys) in six different years in a college, also shows total number of Boys:



Q91. Average number of girls in the given years (2010 – 2015) in college is what percent less than total students in the year 2016, if the ratio between the total students in year 2016 to the total students in 2011 is 4: 5?

1) 200/7%

2) 75/7%

3) 150/7%

4) 100/7%

5) None of these

Answer: 1



Solution:

Year	Total students	Boys	Girls
2010	500	300	200
2011	350	150	200
2012	600	350	250
2013	450	300	150
2014	550	350	200
2015	400	200	200

Average number of girls from 2010 to 2015

 $\Rightarrow (200 + 200 + 250 + 150 + 200 + 200)/6$

⇒ 1200/6 = 200

Now, the ratio between 2016 and 2011 is 4 : 5

Total students in 2016 = 350 × (4/5) = 280

 \therefore Required ratio = (280 - 200)/280 × 100 = 200/7%

An Initiative by 3대로 3 3대에

Q92. 60% of total boys in year 2012 and 80% of total girls in year 2015 appeared in exam. If 30% of appeared boys in exam in year 2012 and 40% of appeared girls in exam in 2015 passed the exam, then find the ratio between number of total girls in year 2014 to number of passed boys in 2012 and passed girls in 2015 together?

- 1) 141:200
- 2) 127:200
- 3) 150:187
- 4) 127:100
- 5) 200 : 127

Answer: 5

Year	Total students	Boys	Girls
2010	500	300	200
2011	350	150	200



2012	600	350	250
2013	450	300	150
2014	550	350	200
2015	400	200	200

Boys passed in year 2012 = 350 × (60/100) × (30/100) = 63

Girls passed in year 2015 = 200 × (80/100) × (40/100) = 64

Total girls in 2014 = 200

Required ratio = 200 : (64 + 63) = 200 : 127

Q93. Average number of girls in the given years (2010 - 2015) in college is what percent less than total students in the year 2010?

1) 40%

2) 60%

- 3) 50%
- 4) 30%

5) 35%

Answer: 2

Solution:

Year	Total students	Boys	Girls
2010	500	300	200
2011	350	150	200
2012	600	350	250
2013	450	300	150
2014	550	350	200
2015	400	200	200

Average number of girls from 2010 to 2015

⇒(200 + 200 + 250 + 150 + 200 + 200)/6

⇒ 1200/6 = 200

Total students in 2010 = 500

∴Required ratio = [(500 – 200)/500] × 100 = 60 %

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Q94. What is the difference between the total number of Boys and the number of girls over the years (2010 – 2015)?

1)350

2)460

3)400

4)450

5) 500

Answer: 4

Sol.

Year	Total students	Boys	Girls
2010	500	300	200
2011	350	150	200
2012	600	350	250
2013	450	300	150
2014	550	350	200
2015	400	200	200

Total boys = 300 + 150 + 350 + 300 + 350 + 200 = 1650

Total girls = 200 + 200 + 250 + 150 + 200 + 200 = 1200

∴Difference = 1650 – 1200 = 450

Q95. What was the percent decrease of girls in the year 2013 from the previous year?

1) 50%

2) 60%

3) 40%

4) 70%

5) 75%

Answer: 3

Sol.

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Total girls in 2012 = 250

Total girls in 2013 = 450 - 300 = 150

∴Required percentage = [(250 – 150)/250] ×100 = 40%

Directions(96 – 100): Refer to the following pie charts carefully and answer the given questions.







Q96. Number of smart phones (both VIVO and OPPO) sold by store E is what percent more than the number of OPPO smart phones sold by store C.

1)125%

- 2) 200%
- 3) 100%
- 4) 250%
- 5) 150%

Answer: 2

Solution:

Number of smart phones (both VIVO and OPPO) sold by store $E = 12000 \times (20/100) = 2400$

Number of OPPO smart phones sold by store $C = 5000 \times (16/100) = 800$

∴Required percentage = [(2400 - 800)/800] × 100 =(1600/800) × 100 = 200%

Q97. What is the central angle corresponding to number of smart phones (both VIVO and OPPO) sold by store A?

- 1)86.4⁰
- 2) 76.4⁰
- 3) 89.4⁰
- 4) 56.4⁰
- 5) 89.4⁰

Answer: 1

Solution:

Number of smart phones (both VIVO and OPPO) sold by store A = 24%

Now, 100% = 360⁰

⇒1% = 360⁰/100



Q98. What is the average number of OPPO smart phones sold by store C,D and E?

1)750

2) 1000

3) 800

4) 1200

5) 900

Answer: 2

Solution:

Number of OPPO smart phones sold by store $C = 5000 \times (16/100) = 800$

Number of OPPO smart phones sold by store $D = 5000 \times (20/100) = 1000$

Number of OPPO smart phones sold by store $E = 5000 \times (24/100) = 1200$

Required average = (800 + 1000 + 1200)/3 = 3000/3 = 1000

Smart method

Average percentage of OPPO smart phones = (16 + 20 + 24)/3 = 20%

∴ Average number = 20% of 5000 = 5000 × (20/100) = 1000

Q99. What is the difference between number of smart phones (both VIVO and OPPO) sold by store D and total number of VIVO smart phones sold by store B and E?

1)750

2) 1000

3) 800

4) 1010

5) 900

Answer: 4

An Initiative by 314333161



Solution:

Number of smart phones (both VIVO and OPPO) sold by store $D = 12000 \times (23/100) = 2760$

Total number of VIVO smart phones sold by store B = 15% of 12000 – 25% of 5000 = 1800 – 1250 = 550

Total number of VIVO smart phones sold by store E = 20% of 12000 – 24% of 5000 = 2400 – 1200 = 1200

∴Required Difference = 2760 – (550 + 1200) = 2760 – 1750 = 1010

Q100. Number of VIVO smart phones sold by store C is what percent of the number of phones (Both OPPO and VIVO) sold by store A? (Approximate value)



Answer: 4

Solution:

Number of VIVO smart phones sold by store C = 18% of 12000 – 16% of 5000 = 2160 – 800 = 1360

Number of phones (Both OPPO and VIVO) sold by store A = $12000 \times (24/100) = 2880$

∴Required percentage = (1360/2880) × 100 = 47.22% ≈ 47%

Directions(101 –105): Read the bar graph carefully and answer the following questions.

The bar graph shows the number of students from two different schools who qualified in an exam in six different years



Q101.What was the approximate percent increase in the number of students who qualified in the exam from school B in the year 2018 as compared to the previous year?

1) 40% 2) 50% 3) 60% 4) 25% 5) 20%

Answer: 1

Solution:

Number of stduents qualified from school B in 2018 = 70

Number of stduents qualified from school B in 2017 = 50

∴Required percent = (70 – 50) / 50 × 100 = 40%

Q102.What was the respective ratio between the number of students who qualified in the exam from school A in the year 2019 and the number of students who qualified in the exam from school B in the year 2016?

1) 3 : 2

2) 3 : 4

3) 5 : 2

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Answer:1

Number of students qualified from school A in 2019 = 120

Number of students qualified from school B in 2016 = 80

 \therefore Required ratio = 120 : 80 = 3 : 2

Q 103. What was the difference between the total number of students who qualified in the exam in the year 2019 from both the schools together and the total number of students from school B who qualified in exam over all the years together?

1) 400

2) 250

3) 260

4) 660

Answer: 3

Solution:

Total number of students qualified in 2019 = 120 + 80 = 200

Total number of students qualified from school B in all the years = 90 + 80 + 50 + 70 + 80 + 90

= 460

 \therefore Required difference = 460 – 200 = 260

Q104.Total number of students who qualified in the exam from school A over all the years was approximately what percentage of the total number of students who qualified in the exam from both the schools together in the years 2017 and 2019 together?

1) 125%
 2) 185%
 3) 255%
 4) 155%
 Answer: 4
 Solution:



Total number of students qualified from school A in all the years = 75 + 85 + 70 + 45 + 120 + 100

= 495

Total number of students qualified from both the schools in 2017 and 2019 = 70 + 50 + 120 + 80

= 320

∴Required percentage = 495/320 × 100 = 154.69% ≈ 155%

Q105.If 60 percent of the total students who qualified in the exam from both the schools together over all the years are males. Then what is the total number of females who qualified in the exam over all the years from both the schools together?

1) 382

2) 425

- 3) 352
- 4) 380
- Answer: 1

Solution:

Total students from all schools in all the years = (75 + 90) + (85 + 80) + (70 + 50) + (45 + 70) + (120 + 80) + (100 + 90) = 955

Number of Males = 60/100 × 955 = 573

∴ Number of Females = 955 – 573 = 382

Directions(106-110): Read the pie-charts carefully and answer the following questions.

The pie-chart 1 shows the percentage distribution of the total number of students in DPS in various cities (A, B, C, D, E, and F) and the pie-chart 2 shows the percentage distribution of the number of girls in DPS in same cities.



Total students = 3000 (boys + girls)



Total girls = 1200



Q106. For which city is the number of Boys the minimum?

1) City A

2) City B

3) City C



4) City F

Ans. 3)

Solution:

City A,

Total students = 12/100 × 3000 = 360

 \Rightarrow Number of Girls = 20/100 × 1200 = 240

 \Rightarrow Number of Boys = 360 - 240 = 120

City B,

Total students = $22/100 \times 3000 = 660$

 \Rightarrow Number of Girls = 15/100 × 1200 = 180

 \Rightarrow Number of Boys = 660 - 180 = 480

City C,

Total students = 10/100 × 3000 = 300

 \Rightarrow Number of Girls = 16/100 × 1200 = 192

 \Rightarrow Number of Boys = 300 - 192 = 108

City D,

Total students = 18/100 × 3000 = 540

 \Rightarrow Number of Girls = 19/100 × 1200 = 228

 \Rightarrow Number of Boys = 540 - 228 = 312

City E,

Total students = 24/100 × 3000 = 720

 \Rightarrow Number of Girls = 22/100 × 1200 = 264

 \Rightarrow Number of Boys = 720 - 264 = 456

City F,

Total students = 14/100 × 3000 = 420

 \Rightarrow Number of Girls = 8/100 × 1200 = 96

 \Rightarrow Number of Boys = 420 - 96 = 324

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 \therefore The minimum number of boys is in city C.

Q 10	07. How	many bo	ys are tł	here in the	city E?
-		,	,		,

1) 412

2) 356

3) 428

4) 456

Answer.4)

Solution:

Total students = 24/100 × 3000 = 720

 \Rightarrow Number of Girls = 22/100 × 1200 = 264

 \therefore Number of Boys = 720 - 264 = 456

Q108. For city D what is the respective ratio of boys and girls?

1) 36 : 19

- 2) 26 : 19
- 3) 52 : 19

4)26:38

Answer.2)

Solution:

Total students = 18/100 × 3000 = 540

- \Rightarrow Number of Girls = 19/100 × 1200 = 228
- \Rightarrow Number of Boys = 540 228 = 312
- ∴Respective Ratio = 312 : 228 = 26 : 19

Q109. For city C, the number of girls is what percent more or less than the number of boys?

1) 77.77 % more

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2) 77.77 % less
3) 67.77 % more
4) 67.77 % less
Answer.1)
Solution:
Total students = 10/100 × 3000 = 300
\Rightarrow Number of Girls = 16/100 × 1200 =192
\Rightarrow Number of Boys = 300 – 192 = 108
∴Required percentage = (192 – 108)/108 × 100 = 77.77 % more

Q110. What is the difference between the central angle made by total students in City D and Girls in city A if the number of boys and girls is to be plotted on a single pie-chart?



The bar graph shows the total Sale of Jeans manufactured by Nike and Adidas through flipkart.





Q111. What is the difference between the total sale of Nike jeans and the total sale of Adidas jeans in all days together?



Q112. The sale of Nike jeans on Monday is approximately what percent of the total sale of Nike jeans in all the days together?

1) 12%

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2) 16%
3) 17 %
4) 20%
Answer.3)
Solution:
Sales of Nike jeans on Monday = 65000
Total sales of Nike jeans = 65000 + 50000 + 95000 + 45000 + 85000 + 35000 = 375000
∴Required percentage = 65000/375000× 100 = 17.33% ≈ 17%

Q113. What is the respective ratio of the sale of Nike jeans on Wednesday to the sale of Adidas jeans on Saturday?

1) 19 : 7

- 2) 29 : 7
- 3) 19 : 27
- 4) 19 : 17

Answer.1)

Solution:

Sales of Nike jeans on Wednesday = 95000

Sales of Adidas jeans on Saturday = 20000

∴Required ratio = 95000 : 35000 = 19 : 7

Q114. The sale of Adidas jeans on Tuesday and Friday together is approximately what percent of the sale of Adidas jeans on Monday, Wednesday and Thursday together?

1) 52%

2) 46%

3) 57%

4) 60%

Answer.3)

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Solution:

Sales of Adidas jeans on Tuesday and Friday = 80000 + 60000 = 140000

Sales of Adidas jeans on Monday, Wednesday, and Thursday = 70000 + 120000 + 55000

= 245000

∴Required percent = 140000/245000× 100 = 57%

Q115. What is the average sale of Adidas all the days together?

- 1) 87500
- 2) 67500
- 3) 87000
- 4) 84000
- Answer.2)
- Solution:

Total sales of Adidas jeans = 70000 + 80000 + 120000 + 55000 + 60000 + 20000 = 405000

Required average = 405000/6 = 67500

Directions (116-120): The bar graph shows the total Sale of Jeans manufactured by Nike and Adidas through flipkart.

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Q116. What is the difference between the total sale of Nike jeans and the total sale of Adidas jeans in all days together?

1) 30000 2) 25000 3) 35000 4) 40000 Answer.1) Solution: Total sales of Nike jeans = 65000 + 50000 + 95000 + 45000 + 85000 + 35000 = 375000 Total sales of Adidas jeans = 70000 + 80000 + 120000 + 55000 + 60000 + 20000 = 405000

∴Required difference = 405000 – 375000 = 30000

Q117. The sale of Nike jeans on Monday is approximately what percent of the total sale of Nike jeans in all the days together?

1) 12%

2) 16%



Q118. What is the respective ratio of the sale of Nike jeans on Wednesday to the sale of Adidas jeans on Saturday?

1) 19 : 7

2) 29 : 7

- 3) 19 : 27
- 4) 19 : 17

Answer.1)

Solution:

Sales of Nike jeans on Wednesday = 95000

Sales of Adidas jeans on Saturday = 20000

∴Required ratio = 95000 : 35000 = 19 : 7

Q119. The sale of Adidas jeans on Tuesday and Friday together is approximately what percent of the sale of Adidas jeans on Monday, Wednesday and Thursday together?

1) 52%

2) 46%

3) 57%

4) 60%

Answer.3)

Solution:

An Initiative by **3HC33ICI**



Sales of Adidas jeans on Tuesday and Friday = 80000 + 60000 = 140000

Sales of Adidas jeans on Monday, Wednesday, and Thursday = 70000 + 120000 + 55000

= 245000

∴Requiredpercent = 140000/245000× 100 = 57%

Q120. What is the average sale of Adidas all the days together?

1) 87500

2) 67500

3) 87000

4) 84000

Answer.2)

Solution:

Total sales of Adidas jeans = 70000 + 80000 + 120000 + 55000 + 60000 + 20000 = 405000

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Required average = 405000/6 = 67500
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Directions (121 – 125) : Read the following paragraph carefully and answer the questions given below.

The data in the paragraph given below shows the number of players in a school who plays three different games Badminton, Handball and Chess.

Total players who plays only Badminton in the school are 20% of total number of players in the school.. Total number of players who plays both Badminton and Handball is 250 out of which 48% players also plays Chess. Total players who plays only Chess is 125/2% of total number of players who plays all the three games and total players who plays only Chess is 12 ½% of total number of players in the school. Total number of players who plays Badminton and Chess in the academy are 395 and 270.

Q121. What is the ratio of total players who plays Badminton along with at least one more game and total players who plays Chess along with at least one more game?

1) 44 : 39



- 2) 39 : 555
- 3) 55 : 39
- 4) 37 : 27
- 5) 27 : 37
- Answer: 3 Solution:

Let total number of players in the school be 100x

Total players who plays only Badminton = $(20/100) \times 100x = 20x$

Total number of players who plays both Badminton and Handball = 250

Total number of players who plays all the three games together = $(48/100) \times 250 = 120$

Total number of players who plays Badminton and Handball but not Chess = 250 – 120 = 130

Total payers who plays only Chess = $(125/200) \times 120 = 75$

Total number of players in the academy = $75 \times (200/25) = 600$

Total players who plays only Badminton = $(20/100) \times 600 = 120$

Total number of players who plays Badminton = 395

Total number of players who plays Chess = 270

Total number of players who plays both Badminton and Chess but not Handball = 395 - (120 + 130 + 120) = 25

Total number of players who plays both Handball and Chess but not Badminton = 270 - (25 + 120 + 75) = 50

Total players who plays only Handball = 600 – (120 + 130 + 25 + 120 + 75 + 50) = 80





Total players who plays Badminton along with at least one more game = 120 + 130 + 25 = 275

Total players who plays Chess along with at least one more game = 25 + 120 + 50 = 195

∴Required ratio = 275 : 195 = 55 : 39

Q122. Total number of players who plays Handball in the school is more/less than by what number from the total number of Badminton players in the school?





Total number of players who plays Chess = 270

Total number of players who plays both Badminton and Chess but not Handball = 395 - (120 + 130 + 120) = 25

Total number of players who plays both Handball and Chess but not Badminton = 270 - (25 + 120 + 75) = 50

Total players who plays only Handball = 600 – (120 + 130 + 25 + 120 + 75 + 50) = 80



Total number of Handball players in school = 130 + 120 + 50 + 80 = 380

Total number of Badminton players in school = 130 + 120 + 120 + 25 = 395

 \therefore Required difference = 395 – 380 = 15

Q123. Sum of total number of players who plays only Badminton and total number of players who plays only Handball is what percent of total number of players in the school?

1) 50%

2) 30%

3) 66 2/3%

4) 33 1/3%

5) 20%

Answer: 4



Solution:

Let total number of players in the school be 100x Total players who plays only Badminton = (20/100) × 100x = 20x Total number of players who plays both Badminton and Handball = 250 Total number of players who plays all the three games together = (48/100) × 250 = 120 Total number of players who plays Badminton and Handball but not Chess = 250 – 120 = 130 Total payers who plays only Chess = (125/200) × 120 = 75 Total number of players in the academy = 75 × (200/25) = 600 Total players who plays only Badminton = (20/100) × 600 = 120 Total number of players who plays Badminton = 395

Total number of players who plays Chess = 270

Total number of players who plays both Badminton and Chess but not Handball = 395 – (120 + 130 + 120) = 25

Total number of players who plays both Handball and Chess but not Badminton = 270 – (25 + 120 + 75)= 50

Total players who plays only Handball = 600 – (120 + 130 + 25 + 120 + 75 + 50) = 80



Total number of players who plays only badminton = 120



Total number of players who plays only Handball = 80

Total number of players in the school = 600

 \therefore Required percent = (120 + 80)600 × 100

 \Rightarrow (200/600) × 100

⇒ 33 1/3%

Q124. What is the difference between total number of players in the school who plays at least two games and total number of players in the school who plays exactly one game?

1) 50

2) 30

- 3) 60
- 4) 35

5) 20

Answer: 1 Solution:

Let total number of players in the school be 100x

Total players who plays only Badminton = (20/100) × 100x = 20x

Total number of players who plays both Badminton and Handball = 250

Total number of players who plays all the three games together = $(48/100) \times 250 = 120$

Total number of players who plays Badminton and Handball but not Chess = 250 - 120 = 130

Total payers who plays only Chess = (125/200) × 120 = 75

Total number of players in the academy = $75 \times (200/25) = 600$

Total players who plays only Badminton = $(20/100) \times 600 = 120$

Total number of players who plays Badminton = 395

Total number of players who plays Chess = 270

Total number of players who plays both Badminton and Chess but not Handball = 395 - (120 + 130 + 120) = 25

Total number of players who plays both Handball and Chess but not Badminton = 270 - (25 + 120 + 75) = 50



Total players who plays only Handball = 600 – (120 + 130 + 25 + 120 + 75 + 50) = 80



Total number of players in the school who plays at least two games = 130 + 120 + 25 + 50 = 325

Total number of players in the school who plays exactly one game = 120 + 80 + 75 = 275

 \therefore Required difference = 325 – 275 = 50

Q125. Out of total players who plays Badminton in the school, what percent of players also plays at least one more game from Handball and Chess?

1) 50%

2) 70%

- 3) 60%
- 4) 40%
- 5) 20%
- Answer: 2 Solution:

Let total number of players in the school be 100x

Total players who plays only Badminton = $(20/100) \times 100x = 20x$

Total number of players who plays both Badminton and Handball = 250



Total number of players who plays all the three games together = $(48/100) \times 250 = 120$

Total number of players who plays Badminton and Handball but not Chess = 250 - 120 = 130

Total payers who plays only Chess = $(125/200) \times 120 = 75$

Total number of players in the academy = $75 \times (200/25) = 600$

Total players who plays only Badminton = $(20/100) \times 600 = 120$

Total number of players who plays Badminton = 395

Total number of players who plays Chess = 270

Total number of players who plays both Badminton and Chess but not Handball = 395 - (120 + 130 + 120) = 25

Total number of players who plays both Handball and Chess but not Badminton = 270 - (25 + 120 + 75) = 50

Total players who plays only Handball = 600 – (120 + 130 + 25 + 120 + 75 + 50) = 80



Total players who plays Badminton = 395



Total players who plays Badminton along with one more game from Handball and Chess = 130 + 120 + 25 = 275

∴Required percent = (275/395) × 100 = 69.62% ≈ 70%

Directions (126-130) : Study the following bar graph carefully and answer the questions below:

Bar graph shows number of employees working in three different companies in six different years



Q126. What was approximate percentage decrease in number of employees in Company B in the year 2017 as compared to the previous year?

1) 36%

- 2) 38%
- 3) 40%
- 4) 44%

5) 52%

Answer: 1



Solution:

Employees in Company B in the year 2017 = 11,500

Employees in Company B in the year 2016 = 18,000

Required percentage = [(18,000 – 11,500)/18,000] × 100= 36.11% ≈ 36%

Q127. What is the respective ratio between the number of employees in company A in the year 2020 and the number of employees in company C in the year 2019?

- 1) 3 : 2
- 2) 3 : 4
- 3) 3 : 5
- 4) 5 : 4
- 5) 2 : 5
- Answer: 2

Solution:

Numbers of employees in company A in 2020 = 9,000

Number of employees in company C in 2019 = 12,000

Required Ratio = 9000 : 12000 = 3 : 4

Q128. What was the average number of employees in company B over all the years together?

- 1) 22,650
- 2) 11,780
- 3) 12,450
- 4) 12,750
- 5) 13,350

Answer: 4

Solution:



Number of employees in company B over all the years = 8,000 + 18,000 + 11,500 + 12,000 + 13,000 + 14,000 = 76,500

∴Required average = 76,500/6 = 12,750

Q129. If $33\frac{1}{3}\%$ of the total number of employees in the year 2019 in all the companies together is female, what was the total number of male employees in the same year in all the companies together?

1) 20,000

2) 25,000

3)26,000

4) 24,000

5) 13,000

Answer: 3

Solution:

Total number of employees in the year 2019 in all the companies = 14,000 + 13,000 + 12,000 = 39,000

Hence, $33\frac{1}{3}\%$ of the total number of employees are females = 39,000 × (1/3) = 13,000

: Total number of male employees in 2019 in all the companies = 39,000 – 13,000 = 26,000

Q130. Total number of employees in Company A over all the years together was approximately what percent of the total number of employees in company C in the year 2018 and 2019 together?

1) 253%

2) 224%

3) 220%

4) 234%

5) 265%



Answer: 4

Solution:

Total number of employees in Company A over all the years = 12,000 + 7,500 + 13,500 + 9,500 + 14,000 + 9,000 = 65,500

Total number of employees in company C in the year 2018 and 2019 = 16,000 + 12,000 = 28,000

∴Required percentage = (65,500/28,000) × 100=233.92% ≈ 234%

Direction(131-135):Study the line graph given below carefully and answer the following questions:

Following graph shows the number of cars manufactured and sold by a company over the years (in lakhs)



Q131. What is the average number of cars sold over the years?

1) 80 lakhs

2) 92 lakhs



3) 86 lakhs

4) 90 lakhs

5) 82 lakhs

Answer: 5

Solution:

Number of cars sold over the years = 80 + 65 + 85 + 80 + 100 = 410 lakhs

 \therefore Required average = 410/5 = 82 lakhs

Q132. What is the respective ratio of the difference between the number of cars manufactured and sold in the year 2019 to the difference between the number of cars manufactured and sold in the year 2015?



Solution:

Difference between the number of cars manufactured and sold in the year 2019 = 125 - 100 = 25 lakhs

Difference between the number of cars manufactured and sold in the year 2015 = 120 - 80 = 40 lakhs

 \therefore Required ratio = 25 : 40= 5 : 8

Q133.What is the respective ratio of the number of cars manufactured in the year 2017 to the number of cars manufactured in the year 2019?

1) 8 : 9



Q135.What is the difference between the number of cars manufactured and number of cars sold over all the years?

1) 100 lakhs



- 2) 125 lakhs
- 3) 120 lakhs
- 4) 105 lakhs
- 5) 110 lakhs

Answer: 4

Solution:

Number of cars manufactured over all the years = 120 + 80 + 100 + 90 + 125 = 515 lakhs

Number of cars sold over all the years = 80 + 65 + 85 + 80 + 100 = 410 lakhs

 \therefore Required difference = 515 – 410 = 105 lakhs

Direction(136-140): Refer to the pie chart and answer the given questions

Following pie chart shows data regarding number of school students (male and female) from different schools – A, B, C, D and E.





Q136. Male students from school C is approximately what percent more than the female students from the school B?





Q137. What is the approximate average number of male students from school B, C and E together?

1) 1367

- 2) 1467
- 3) 1267
- 4) 1567
- 5) 1167

Answer: 1

Solution:

Total students in school B = (21/100) × 12000 = 2520

Girls in school B = (24/100) × 5000 = 1200

Boys in school B = 2520 – 1200 = 1320

Total students in school C= $(20/100) \times 12000 = 2400$

Girls in school C = (22/100) × 5000 = 1100

Boys in school C = 2400 – 1100 = 1300

Total students in school E = (19/100) × 12000 = 2280

Girls in school E = (16/100) × 5000 = 800

Boys in school E = 2520 – 1200 = 1480

Number of male students from school B, C and E = 1320 + 1300 + 1480 = 4100

∴Required average = 4100/3= 1366.66 ≈ 1367

Q138. What is the difference between the total number of male students from school A and B and Female students from school C and D?

1) 2050

2) 2510

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- 3) 1080
- 4) 1280
- 5) 3020
- Answer: 3

Solution:

Total students from School A = $[(23/100) \times 12000] = 2760$ Female students from school A = $[(20/100) \times 5000] = 1000$

Male students from school A = 2760 - 1000 = 1760

Total students from School B = [(21/100) × 12000] = 2520

Female students from School B = $[(24/100) \times 5000] = 1200$

Male students from school B = 2520 - 1200 = 1320

Female students from school C = $[(22/100) \times 5000] = 1100$

Female students from School D = $[(18/100) \times 5000] = 900$

Total number of male students from school A and B = 1760 + 1320 = 3080

Female students from school C and D = 1100 + 900 = 2000

 \therefore Required difference = 3080 - 2000 = 1080

Q139. What is the ratio between the total number of students (male and female) from school A and D together to total number of female students from school A and D?

1) 5 : 2

2) 3 : 2

- 3) 12 : 5
- 4) 12 : 11
- 5) 2 : 5

Answer: 3

Solution:



Total number students (male and female) from school A = $(23/100) \times 12000 = 2760$ Total number students (male and female) from school D = (17/100) = 2040Total number of female students from school A = $(20/100) \times 5000 = 1000$ Total number of female students from school D = $(18/100) \times 5000 = 900$ Required ratio = (2760 + 2040) : (1000 + 900)= 4800 : 2000

= 12 : 5

Q140.The total number of female students from school D and E together is approximately what percent of male students from school A?

1) 97%				
2) 80%				
3) 94%				
4) 91%				COM.
5) 79%		An	Initiative I	by अमर उजाल

Answer: 1

Solution:

Total number of female students from school $D = (18/100) \times 5000 = 900$

Total number of female students from school $E = (16/100) \times 5000 = 800$

Total students from school A = $(23/100) \times 12000 = 2760$

Female students from School A = $(20/100) \times 5000 = 1000$

Male students from school A = 2760 - 1000 = 1760

Required percentage = {(900 + 800)/1760} × 100= 96.59% ≈ 97%

Directions(141-145):Read the table carefully and answer the following questions. The table shows the marks obtained by five students in five different subjects in a school and the maximum marks of each subject.



Subject Student	English (150)	Science (200)	Mathematics (180)	Social science (100)	Hindi (120)
Vivek	112	82	158	48	91
Mahesh	128	162	92	59	106
Neha	96	120	118	67	88
Priya	79	124	138	86	90
Anup	84	104	151	48	85

Q141. What are the average marks obtained by all the students together in Science?

1) 125.2

2) 128.4

3) 118.4

4) 119.6

5) 116.6

Answer: 3

Solution:

Marks obtained by all the students in Science = 82 + 162 + 120 + 124 + 104 = 592 \therefore Required average = 592/5

= 118.4

Q142. What is the respective ratio of total marks obtained by Vivek and Mahesh in English to the marks obtained by Neha in the same subject?

1) 9:5

- 2) 7:4 3) 5 : 3
- 4) 5 : 2
- 5) 3 : 2

Answer: 4

Solution:

```
Marks obtained by Vivek and Mahesh in English = 112 + 128 = 240
Marks obtained by Neha in English = 96
∴Required Ratio = 240 : 96
```

= 5 : 2

Q143. What is Anup's overall approximate percentage in the Examination?

1) 57%

2) 75%

3) 73%

4) 69%

5) 63%

Answer: 5

Solution:

Marks obtained by Anup in all the subjects = 84 + 104 + 151 + 48 + 85 = 472Maximum marks of all subjects = 150 + 200 + 180 + 100 + 120 = 750 \therefore Required percentage = (472/750) × 100

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= 62.933% ≈ 63%

Q144. What is the respective ratio of total marks obtained by Neha and Mahesh in Social science to the marks obtained by Vivek and Anup in the same subject?

1) 21 : 16 2) 21 : 13 3) 23 : 16 4) 19 : 15 5) 29 : 15 Answer: 1 Solution: Marks obtained by Neha and Mahesh in Social science = 67 + 59 = 126Marks obtained by Vivek and Anup in Social science = 48 + 48 = 96 \therefore Required Ratio = 126 : 96= 21 : 16 O145 What is the difference between Priva's everall percentage in the Even

Q145. What is the difference betweenPriya's overall percentage in the Examination and Mahesh overall percentage in the examination?

1) 10%

2) 4%

3) 8%

4) 12%

5) 2%

Answer: 2

Solution:

Maximum marks of all subjects = 150 + 200 + 180 + 100 + 120 = 750Marks obtained by Priya in all the subjects = 79 + 124 + 138 + 86 + 90 = 517 \Rightarrow Percentage marks of Priya= (517/750) × 100 Marks obtained by Mahesh in all the subjects = 128 + 162 + 92 + 59 + 106 = 547 \Rightarrow Percentage marks of Mahesh = (547/750) × 100 \therefore Required difference = [(547 - 517)/750] × 100 = 4%

Directions(146-150):Read the pie-charts carefully and answer the following questions. The pie – charts show theDiscipline wise break up of the number of candidates appeared in an Interview of various institutionsand discipline wise break up of the number of candidates selected.



TOTAL NUMBER OF CANDIDATES APPEARED IN AN INTERVIEW = 18000



TOTAL NUMBER OF CANDIDATES SELECTED AFTER INTERVIEW = 7500



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Q146. What was the ratio between the number of candidates appeared in the interview of SEBI and the number of candidates selected of LIC?

- 1) 6 : 5
- 2) 9 : 5
- 3) 5:6
- 4) 7: 5
- 5) 5 : 7
- Answer: 1

Solution:

Number of candidates appeared in the interview of SEBI = $(6/100) \times 18000 = 1080$ Number of candidates selected for LIC = $(12/100) \times 7500 = 900$



∴Required ratio = 1080 : 900= 6 : 5

Q147. The total number of candidates appeared in the interview of RBI and LIC was what percent of the number of candidates appeared for interview of IBPS?

1) 96.66% 2) 86.66% 3) 76.66% 4) 66.66% 5) 56.66% Answer: 2 **Solution**: Total number of candidates appeared in interview of RBI and LIC = $(12/100) \times 18000 + (14/100) \times 18000 = 2160 + 2520 = 4680$ Number of candidates appeared for IBPS = $(30/100) \times 18000 = 5400$ \therefore Required percentage = $(4680/5400) \times 100$ = 86.66%

Q148. What was the difference between the number of candidates selected for NABARD and the number of candidates selected for SEBI?

1) 600

- 2) 500
- 3) 900
- 4) 750
- 5) 400

Answer: 4

Solution:Number of candidates selected from NABARD = (20/100) × 7500 = 1500Number of candidates selected from SEBI = (10/100) × 7500 = 750

 \therefore Required difference = 1500 - 750 = 750

Q149. For which organization was the difference in the number of candidates selected to the number of candidates appeared in the interview the maximum? 1) RBI

2) NABARD

3) IBPS

4) SBI

5) LIC

Answer: 3

Solution:

Difference in number of candidates selected to number of candidates appeared in the interview of –

RBI = (12/100) × 18000 - (8/100) × 7500 = 2160 - 600 = 1560

NABARD = (18/100) × 18000 - (20/100) × 7500 = 3240 - 1500 = 1740

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IBPS = (30/100) × 18000 – (28/100) × 7500 = 5400 – 2100 = 3300
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SBI = (20/100) × 18000 - (22/100) × 7500 = 3600 - 1650 = 1950
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LIC = (14/100) × 18000 - (12/100) × 7500 = 2520 - 900 = 1620

 \div Maximum difference between number of candidates appeared and selected is for IBPS.



Q150. What was the total number of candidates selected for NABARD and SBI together?

- 1) 4230
- 2) 2240
- 3) 2200
- 4) 3150
- , 5) 2650
- , Answer: 4

Solution:

Total number of candidates selected for NABARD = $(20/100) \times 7500 = 1500$ Total number of candidates selected for SBI = $(22/100) \times 7500 = 1650$ \therefore Required answer = 1500 + 1650 = 3150





Q151. What is the difference between the total number of COVID-19 patients in cities A and B in January, March, and June?

1) 425

- 2) 480
- 3) 420
- 4) 315

5) 400

Answer: 5

Solution:

Number of covid-19 patients in city A in January, March and June = 400 + 600 + 850 = 1850Number of covid-19 patients in city B in January, March and June = 900 + 650 + 700 = 2250 \therefore Required difference = 2250 - 1850 = 400


Q152. In July, if the number of COVID-19 patients increased by 20% in city A and in city B by 30% as compared to those in May, then what is the difference between the number of COVID-19 patients in July between city A and city B?

1) 495

2) 480

3) 420

4) 315

5) 490

Answer: 1

Solution:

Number of COVID-19 patients in July in city A = $900 \times (120/100) = 1080$ Number of COVID-19 patients in July in city B = $450 \times (130/100) = 585$ \therefore Required difference = 1080 - 585 = 495

Q153. What is the difference between the total COVID-19 patients together in city A and city B?

1) 150

2) 70

3) 200

4) 350

5) 420

Answer: 1

Solution:

COVID-19 patients together in city A = 400 + 800 + 600 + 550 + 900 + 850 = 4100COVID-19 patients together in city B = 900 + 750 + 650 + 500 + 450 + 700 = 3950∴Required difference = 4100 - 3950 = 150

Q154. What is the ratio of the total number of COVID-19 patients in city A in January and February together to the total number of COVID-19 patients in city B in February and March?

1) 6 : 7 2) 5 : 6

3)4:3

4) 9 : 13

5) 5 : 8

Answer: 1

Solution:

Total number of COVID-19 patients in city A in January and February together = 400 + 800 = 1200

Total number of COVID-19 patients in city B in February and March together = 750 + 650 = 1400

∴Required Ratio = 1200 : 1400

= 6:7

Q155.What is the average number of COVID 19 patients in city B in January, April, and June? 1) 500

2) 600



3) 720 4) 700 5) 750

Answer: 4

Solution:

Number of COVID 19 patients in city B in January, April and June = 900 + 500 + 700 = 2100 \therefore Required average = 2100/3 = 700

Directions(156-160):Read the graph carefully and answer the following questions.

The bar graph shows the data related to the number of Shoes sold by two stores (A and B) during 5 years.



Q156. If the respective ratio between the total number of Shoes sold by stores A and B together in 2015 and that in 2020 is 3 : 4 ,what is the total number of shoes sold by stores A and B together in 2020?

- 1) 1800
- 2) 1600
- 3) 1500
- 4) 1200
- 5) 1000
- Answer: 5

Solution:

Total number of Shoes sold by stores A in 2015 = 300

Total number of Shoes sold by stores B in 2015 = 450

⇒Total number of Shoes sold by stores A and B together in 2015 = 300 + 450 = 750∴Total number of Shoes sold by stores A and B together in $2020 = (750/3) \times 4 = 1000$

Q157. The number of shoes sold by store Ain 2018 is decreased by what percent from that of in 2017?



1) 20% 2) 25% 3) 10% 4) 12% 5) 30% Answer: 1 Solution: Number of shoes sold by store A in 2017 = 400 Number of shoes sold by store A in 2018 = 320 : Required percent = $(400 - 320)/400 \times 100$ = 20% Q158. What is the difference between the total numbers of Shoes sold by store A in 2018 and 2019 together and the total number of shoes sold by store B in 2016 and 2017 together? 1) 20 2) 25 3) 10 4) 12 5) 30 Answer: 3 Solution: Total numbers of Shoes sold by store A in 2018 and 2019 = 320 + 240 = 560 Total number of shoes sold by store B in 2016 and 2017 = 200 + 350 = 550 \therefore Required difference = 560 - 550 = 10 Q159. What is the average number of shoes sold by store B in all over the years? 1) 292 2) 208 3) 236 4) 336 5) 308 Answer: 4 Solution: Number of shoes sold by store B in all the years = 450 + 200 + 350 + 360 + 320 = 1680 \therefore Required average = 1680/5 =336 Q160.The number of Shoes sold by Store A in 2015 is what percent of the number of shoes sold by store B in 2016? 1) 150% 2) 80% 3) 100% 4) 200% 5) 125% Answer: 1 Solution:



Shoes sold by Store A in 2015 = 300 Shoes sold by store B in 2016 = 200 \therefore Required percent = (300/200) × 100 = 150%

Directions(161 – 165): Read the information carefully and answer the following questions. An organization consists of 12000 employees working in different departments viz:HR, marketing,IT, Production, and Accounts. The ratio of male to female in the organization is 7 : 5 respectively. Fifteen percent of the males work in HR department. Twenty percent of females work in the accounts department. The ratio of males to females working in the HR department is 3 : 2 respectively. One-tenth of the females work in the IT department. Thirty percent of males work in the production department. The number of females working in the production department is fifty percent of the males working the same. The remaining females work in the marketing department. The total number of employees working in IT department is1800.Twenty percent of the males work in the marketing department and the remaining work in the accounts department.

Q161. The number of males working in the Production department is what percent of the total number of males in the organization?

- 1) 17.5%
- 2) 22.5%
- 3) 20%
- 4) 12.5%
- 5) 25%

Answer: 1

Solution:

An Initiative by 314C3311C1

Total number of employees = 12000 ⇒Number of male employees = 12000 × (7/12) = 7000 ⇒Number of female employees = 12000 × (5/12) = 5000 Number of males in HR department = $(15/100) \times 7000 = 1050$ ⇒Number of females in HR department = $1050 \times (2/3) = 700$ Number of females in IT department = $(1/10) \times 5000 = 500$ ⇒Number of males in IT department = 1800 - 500 = 1300Number of males in Production department = $(30/100) \times 7000 = 2100$ ⇒Number of females in Production department = $(50/100) \times 2100 = 1050$ Number of males in marketing = $(20/100) \times 7000 = 1400$ ⇒Number of females in marketing = 5000 - (700 + 1000 + 500 + 1050) = 1750Number of females in Accounts department = $(20/100) \times 5000 = 1000$

Department	Male	Female
HR	1050	700
IT	1300	500
Production	2100	1050
Marketing	1400	1750
Accounts	1150	1000
Total	7000	5000



Number of males working in the Production department = 2100 Total number of males in the organization = 12000 ∴Required percentage = (2100/12000) × 100 = 17.5%

Q162. How many males work in the accounts department?

1) 1750

2) 1150

3) 2000

4) 1250

5) 1500

Answer: 2

Solution:

Total number of employees = 12000 \Rightarrow Number of male employees = 12000 × (7/12) = 7000 \Rightarrow Number of female employees = 12000 × (5/12) = 5000 Number of males in HR department = $(15/100) \times 7000 = 1050$ \Rightarrow Number of females in HR department = 1050 × (2/3) = 700 Number of females in IT department = $(1/10) \times 5000 = 500$ \Rightarrow Number of males in IT department = 1800 – 500 = 1300 Number of males in Production department = $(30/100) \times 7000 = 2100$ \Rightarrow Number of females in Production department = (50/100) × 2100 = 1050 Number of males in marketing = $(20/100) \times 7000 = 1400$ \Rightarrow Number of females in marketing = 5000 - (700 + 1000 + 500 + 1050) = 1750 Number of females in Accounts department = $(20/100) \times 5000 = 1000$ ⇒Number of Males in Accounts department = 7000 – (1050 + 1300 + 2100 + 1400) = 1150

Department	Male	Female
HR	1050	700
IT	1300	500
Production	2100	1050
Marketing	1400	1750
Accounts	1150	1000
Total	7000	5000

∴Required answer = 1150

Q163. The total number of employees working in the Production department is what percent of the total number of employees in the organization?

1) 27.5% 2) 22.5% 3) 8.75% 4) 26.25% 5) 17.5% Answer: 4 Solution: Total number of employees = 12000



⇒Number of male employees = $12000 \times (7/12) = 7000$ ⇒Number of female employees = $12000 \times (5/12) = 5000$ Number of males in HR department = $(15/100) \times 7000 = 1050$ ⇒Number of females in HR department = $1050 \times (2/3) = 700$ Number of females in IT department = $(1/10) \times 5000 = 500$ ⇒Number of males in IT department = 1800 - 500 = 1300Number of males in Production department = $(30/100) \times 7000 = 2100$ ⇒Number of females in Production department = $(50/100) \times 2100 = 1050$ Number of males in marketing = $(20/100) \times 7000 = 1400$ ⇒Number of females in marketing = 5000 - (700 + 1000 + 500 + 1050) = 1750Number of females in Accounts department = $(20/100) \times 5000 = 1000$

Department	Male	Female
HR	1050	700
IT	1300	500
Production	2100	1050
Marketing	1400	1750
Accounts	1150	1000
Total	7000	5000

Total number of employees working in the Production department = 2100 + 1050 = 3150 \therefore Required percentage = $(3150/12000) \times 100 = 26.25\%$

Q164. The number of females working in the Accounts department is what percent of the total number of females in the organization?

An Initiative by **3HC33ICI** 1) 15% 2) 22% 3) 20% 4) 12.5% 5) 25% Answer: 3 Solution: Total number of employees = 12000 \Rightarrow Number of male employees = 12000 × (7/12) = 7000 \Rightarrow Number of female employees = 12000 × (5/12) = 5000 Number of males in HR department = $(15/100) \times 7000 = 1050$ \Rightarrow Number of females in HR department = 1050 × (2/3) = 700 Number of females in IT department = $(1/10) \times 5000 = 500$ \Rightarrow Number of males in IT department = 1800 – 500 = 1300 Number of males in Production department = $(30/100) \times 7000 = 2100$ \Rightarrow Number of females in Production department = (50/100) × 2100 = 1050 Number of males in marketing = $(20/100) \times 7000 = 1400$ \Rightarrow Number of females in marketing = 5000 – (700 + 1000 + 500 + 1050) = 1750 Number of females in Accounts department = $(20/100) \times 5000 = 1000$ \Rightarrow Number of Males in Accounts department = 7000 – (1050 + 1300 + 2100 + 1400) = 1150 Department Male Female



HR	1050	700
IT	1300	500
Production	2100	1050
Marketing	1400	1750
Accounts	1150	1000
Total	7000	5000

Number of females working in the Accounts department = 1000 The total number of females in the organization = 5000 \therefore Required percentage = (1000/5000) × 100 = 20%

Q165. What is the total number of females working in the HR and marketing departments together?

1) 1500

2) 2200

3) 2400

4) 2850

5) 2450

Answer: 5

Solution:

Total number of employees = 12000

⇒Number of male employees = $12000 \times (7/12) = 7000$ ⇒Number of female employees = $12000 \times (5/12) = 5000$ Number of males in HR department = $(15/100) \times 7000 = 1050$ ⇒Number of females in HR department = $1050 \times (2/3) = 700$

Number of females in IT department = (1/10) × 5000 = 500

 \Rightarrow Number of males in IT department = 1800 – 500 = 1300

Number of males in Production department = $(30/100) \times 7000 = 2100$

 \Rightarrow Number of females in Production department = (50/100) × 2100 = 1050

Number of males in marketing = $(20/100) \times 7000 = 1400$

 \Rightarrow Number of females in marketing = 5000 - (700 + 1000 + 500 + 1050) = 1750

Number of females in Accounts department = $(20/100) \times 5000 = 1000$

\Rightarrow Number of Males in Accounts department = 7000 – (1050 + 1300 + 2100 + 1400) = 1150
--

Department	Male	Female
HR	1050	700
IT	1300	500
Production	2100	1050
Marketing	1400	1750
Accounts	1150	1000
Total	7000	5000

Total number of females working in the HR = 700 Total number of females working in the Marketing = 1750 \therefore Required answer = 700 + 1750 = 2450



Directions(166 – 170): Study the following information carefully and answer the given questions.

Given below line graph shows total number of students (Girls + Boys) in six different years in a college, also shows total number of Boys:



Q166. Average number of girls in the given years (2010 - 2015) in college is what percent less than total students in the year 2016, if the ratio between the total students in year 2016 to the total students in 2011 is 4: 5?

- 1) 200/7%
- 2) 75/7%
- 3) 150/7%
- 4) 100/7%
- 5) None of these

Answer: 1

Solution:



Year	Total students	Boys	Girls
2010	500	300	200
2011	350	150	200
2012	600	350	250
2013	450	300	150
2014	550	350	200
2015	400	200	200

Average number of girls from 2010 to 2015

 $\Rightarrow (200 + 200 + 250 + 150 + 200 + 200)/6$

⇒ 1200/6 = 200

Now, the ratio between 2016 and 2011 is 4 : 5

Total students in 2016 = 350 × (4/5) = 280

∴Required ratio = (280 – 200)/280 × 100 = 200/7%

Q167. 60% of total boys in year 2012 and 80% of total girls in year 2015 appeared in exam. If 30% of appeared boys in exam in year 2012 and 40% of appeared girls in exam in 2015 passed the exam, then find the ratio between number of total girls in year 2014 to number of passed boys in 2012 and passed girls in 2015 together?

- 1) 141:200
- 2) 127:200
- 3) 150:187
- 4) 127:100
- 5) 200 : 127

Answer: 5

Solution

Year	Total students	Boys	Girls
2010	500	300	200
2011	350	150	200
2012	600	350	250
2013	450	300	150



2014	550	350	200
2015	400	200	200

Boys passed in year 2012 = 350 × (60/100) × (30/100) = 63

Girls passed in year 2015 = 200 × (80/100) × (40/100) = 64

Total girls in 2014 = 200

Required ratio = 200 :(64 + 63) = 200 : 127

Q168. Average number of girls in the given years (2010 - 2015) in college is what percent less than total students in the year 2010?

1) 40%

2) 60%

- 3) 50%
- 4) 30%
- 5) 35%

Answer: 2

Solution:

Year	Total students	Boys	Girls
2010	500	300	200
2011	350	150	200
2012	600	350	250
2013	450	300	150
2014	550	350	200
2015	400	200	200

Average number of girls from 2010 to 2015

 $\Rightarrow (200 + 200 + 250 + 150 + 200 + 200)/6$

⇒ 1200/6 = 200

Total students in 2010 = 500

∴Required ratio = [(500 – 200)/500] × 100 = 60 %

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Q169. What is the difference between the total number of Boys and the number of girls over the years (2010 – 2015)?

1)350

2)460

3)400

4)450

5) 500

Answer: 4

Sol.

Year	Total students	Boys	Girls
2010	500	300	200
2011	350	150	200
2012	600	350	250
2013	450	300	150
2014	550	350	200
2015	400	200	200

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Total boys = 300 + 150 + 350 + 300 + 350 + 200 = 1650

Total girls = 200 + 200 + 250 + 150 + 200 + 200 = 1200

∴Difference = 1650 – 1200 = 450

Q170. What was the percent decrease of girls in the year 2013 from the previous year?

- 1) 50%
- 2) 60%
- 3) 40%

4) 70%

5) 75%

Answer: 3



Sol.

Total girls in 2012 = 250

Total girls in 2013 = 450 - 300 = 150

∴Required percentage = [(250 – 150)/250] ×100 = 40%

Directions(171 – 175): Study the following table carefully and answer the questions given below.

The table given below shows the working employees in different banks in 2020 and the ratio of working men and women:

Banks	Total employees	Manager	Clerk	Male :Female	
SBI	50,000	28,000	22,000	A ^{3:2}	M
Canara	20,000	15,000	5,000 An Initiat	3:5 ive by 3147.33	Rel
BOB	25,000	10,000	15,000	4:1	
Axis	36,000	30,500	5,500	7:4	
IOB	40,000	22,000	18,000	1:1	
PNB	48,000	39,000	9,000	4:5	

Q171. What is the difference between the total number of female working in PNB as clerk and the total number of male working in BOB as clerk?

1) 5,000

2) 6,000

3) 7,000



4) 8,000

5) 9,000

Answer: 3

Solution:

Total number of female clerk in PNB = 9000 × $\frac{5}{9}$ = 5,000

Total number of male clerk in BOB = $15000 \times \frac{4}{5} = 12,000$

∴Difference = 12,000 – 5,000 = 7,000



Q172. What is the average of the number of managers in SBI, Axis and IOB?(Approximately)



Q173. What is the ratio of the male clerk together in PNB and Axis Bank to the male clerk together in SBI and Canara?

- 1) 5 : 13
- 2) 4 : 11
- 3) 13 : 5
- 4) 100 : 201
- 5) 201 : 100

Answer: 4

Solution:

Male clerk in PNB Bank = $9000 \times \frac{4}{9} = 4,000$

Male clerk in Axis Bank = $5500 \times \frac{7}{11} = 3,500$

Male clerk in SBI Bank = $22000 \times \frac{3}{5} = 13,200$

Male clerk in Canara Bank = $5000 \times \frac{3}{8} = 1,875$

Total male in PNB and Axis Bank = 4000 + 3500 = 7,500

Total male in SBI and Canara Bank = 13,200 + 1875 = 15,075

⇒100 : 201

Q174. Number of male managers in Canara and BOB are equal and the ratio of male manager and female manager in BOB is 4:1. If the number of male managers in IOB is 78 $\frac{4}{7}$ % more than the number of female manager in Canara Bank, find the female manager in IOB?

1) 11,000

2) 12,500

3) 9,500

An Initiative by **3IFC 35IE**



4) 9,800

5) 10,000

Answer: 3

Solution:

Total managers in BOB = 10,000

Male manager in BOB = $(4/5) \times 2000 = 8,000$

According to question, number of male managers in BOB and Canara Bank are equal.

Hence, number of male manager in Canara = 8,000

And number of female manager in Canara = 15000 – 8000 = 7,000

As we know, $78\frac{4}{7}\% = \frac{11}{14}$

Number of male manager in IOB is 11/14 more than number of female manager in Canara bank,

Number of male manager in IOB = $\frac{25}{14} \times 7000 = 25 \times 500 = 12,500$

Given, total number of manager in IOB = 22,000

 \therefore Number of female manager in IOB = 22000 – 12500 = 9,500

Q175. The number of employees in SBI was increased by 25% from the previous year and in 2019 the number of female employees is 3700 less than the number of male employees. Find the number of female employees in SBI in 2019?

- 1) 22,500
- 2) 21,850
- 3) 18,150
- 4) 16, 750
- 5) 15,500



Answer: 3

Solution:

The number of employees in SBI in 2020 = 50,000

Number of employees in SBI in 2019 = $\frac{100}{125}$ × 50,000 = 40,000

Let the number of female employees in 2019 = x

Number of male employees in 2019 = x + 3700

Hence, x + x + 3700 = 40,000

⇒2x = 40,000 - 3700

⇒2x = 36,300

⇒x = 18,150

Directions(176 – 180): Study the following graph carefully to answer the following questions:

Number of Candidates recruited in three different organisations in six different years:





Q176. What was the average number of candidates recruited in the NABARD over all the years together?(approximate value)





Q177. Number of candidates recruited in RBI in the year 2016 was what percentage of candidates recruited in NABARD in the year 2020?

1)70%

2) 40%

3) 60%

- 4) 50%
- 5) 75%

Answer: 4

Solution:

Candidates recruited in RBI in year 2016 = 200

Candidates recruited in NABARD in year 2020 = 400

 \therefore Required percentage = (200/400) × 100 = 50%

Q178. If 40% of candidates recruited in SEBI in the year 2018 were females then what is the number of males recruited in SEBI in that year?

- 1)84
- 2) 138
- 3) 136
- 4) 128
- 5) 126

Answer: 5

Solution:

Total number of candidates recruited in NABARD in year 2018 = 210

Number of females = $210 \times (40/100) = 84$



:. Total number of male candidates recruited in NABARD in year 2018 = 210 - 84 = 126

Q179. What was the respective ratio between the number of candidates recruited for NABARD in the year 2016 and the number of candidates recruited in SEBI in the year 2020?

- 1)1:2
- 2) 2 : 1
- 3) 5 : 2
- 4) 1 : 3
- 5) 5 : 3

Answer: 1

Solution:

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Number of candidates recruited for NABARD in t	the year 2016 = 120	
Number of candidates recruited for SEBI in the y	year 2020 = 240 .COM	
∴ Required ratio = 120 : 240 = 1 : 2	An Initiative by 3मर उजाल	

Q180. What was approximate percentage decrease in number of candidates recruited in RBI in the year 2019 as compared to the previous year?

1)52%

- 2) 59%
- 3) 69%
- 4) 49%
- 5) 45%

Answer: 2

Solution:



Number of candidates recruited in RBI in the year 2019 = 120

Number of candidates recruited in RBI in the year 2018 = 290

∴Required percentage = (290 – 120)/290 × 100 = 58.62% ≈ 59%

Directions(181 – 185): Refer to the following pie charts carefully and answer the given questions.







Q181. Number of smart phones (both VIVO and OPPO) sold by store E is what percent more than the number of OPPO smart phones sold by store C.





Q182. What is the central angle corresponding to number of smart phones (both VIVO and OPPO) sold by store A?

1)86.40

2) 76.4⁰

3) 89.4⁰

4) 56.4⁰

5) 89.4⁰

Answer: 1

Solution:

Number of smart phones (both VIVO and OPPO) sold by store A = 24%

Now, $100\% = 360^{\circ}$ $\Rightarrow 1\% = 360^{\circ}/100$ $\therefore 24\% = 24 \times 3.6^{\circ} = 86.4^{\circ}$ Q183. What is the average number of OPPO smart phones sold by store C,D and E? 1)750 2) 1000 3) 800 4) 1200 5) 900 Answer: 2 Solution: Number of OPPO smart phones sold by store C = 5000 × (16/100) = 800 Number of OPPO smart phones sold by store D = 5000 × (20/100) = 1000 Number of OPPO smart phones sold by store E = 5000 × (24/100) = 1200

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Required average = (800 + 1000 + 1200)/3 = 3000/3 = 1000

Smart method

Average percentage of OPPO smart phones = (16 + 20 + 24)/3 = 20%

: Average number = 20% of 5000 = 5000 × (20/100) = 1000

Q184. What is the difference between number of smart phones (both VIVO and OPPO) sold by store D and total number of VIVO smart phones sold by store B and E?

1)750 2) 1000 3) 800 4) 1010 5) 900 Answer: 4 Solution:

Number of smart phones (both VIVO and OPPO) sold by store $D = 12000 \times (23/100) = 2760$

Total number of VIVO smart phones sold by store B = 15% of 12000 – 25% of 5000 = 1800 – 1250 = 550

Total number of VIVO smart phones sold by store E = 20% of 12000 – 24% of 5000 = 2400 – 1200 = 1200

∴Required Difference = 2760 – (550 + 1200) = 2760 – 1750 = 1010

Q185. Number of VIVO smart phones sold by store C is what percent of the number of phones (Both OPPO and VIVO) sold by store A? (Approximate value)



3) 42%

4)47%

5) 37%

Answer: 4

Solution:

Number of VIVO smart phones sold by store C = 18% of 12000 - 16% of 5000 = 2160 - 800 = 1360

Number of phones (Both OPPO and VIVO) sold by store $A = 12000 \times (24/100) = 2880$

∴Required percentage = (1360/2880) × 100 = 47.22% ≈ 47%

Directions(186 – 190): Read the pie chart and table carefully and answer the following questions.

The pie chart shows the percentage distribution of four-wheelers manufactured from seven different manufacturing companies has been given. The table shows the ratio of petrol cars and diesel cars in different companies.

Total cars manufactured from 7 companies = 75 crores





	,	
Toyota	22 : 23	
Volkswagen	13 : 12	
Hyundai	8:7	
General motors	28 : 27	
Ford	27:23	
Nissan	7:8	
Fiat	38:37	

Q186. How many petrol cars are manufactured by Hyundai and General motors'together? (inCrores)

1) 15.6

2) 14.4

3) 18.6

4)14.2

5) None of these

Answer: 1

Solution:

Petrol cars Manufactured by Hyundai = $[8/15 \times (75 \times 18/100)] = 7.2$ crores Petrol cars manufactured by General motors = $[28/55 \times (75 \times 22)/100] = 8.4$ crores \therefore Total cars manufactured by Hyundai and General Motors' = 7.2 + 8.4 = 15.6 crores

Q187. By what percent (approximately) is the Petrol car Manufactured by Fiat less than the Diesel cars manufactured by Volkswagen?

1) 65 %

- 2) 68%
- 3) 72%

4<mark>)</mark> 75%

5<mark>)</mark> 79%

Answer: 3

Solution:

Petrol cars manufactured by Fiat = $[38/75 \times (75 \times 5)/100] = 1.9$ crores Diesel cars manufactured by Volkswagen = $[12/25 \times (75 \times 19)/100] = 6.84$ crores \therefore Required percentage = $(6.84 - 1.9)/6.84 \times 100 = 72.22\%$

Q188.What is the difference between the number of Petrol cars manufactured by Ford and Diesel cars manufactured by General Motors? (in crores)

1) 3.645

2) 4.225

3) 3.956

4) 4.558

5) None of these

Answer: 1

Solution:

Petrol cars manufactured by Ford = $(27/50) \times (75 \times 11)/100$ = 4.455 crores Diesel cars manufactured by General Motors = $(27/55) \times (75 \times 22)/100$ = 8.1 crores \therefore RequiredDifference = 8.1 - 4.455 = 3.645 crores

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Q189.What is the number of Diesel cars manufactured by in Toyota, Volkswagen and Hyundai together? (Crores)

1) 18.74

2) 17.74

3) 17.88

4) 18.88

5) None of these

Answer: 2

Solution:

Diesel cars manufactured by Toyota = $(23/45) \times (75 \times 12/100) = 4.6$ crores Diesel cars manufactured by Volkswagen = $(12/25) \times (75 \times 19/100) = 6.84$ crores Diesel cars manufactured byHyundai = $(7/15) \times (75 \times 18/100) = 6.3$ crores \therefore Diesel cars manufactured by in Toyota, Volkswagen and Hyundai together = (4.6 + 6.84 + 6.3) = 17.74 crores **Q190.** What is the central angle corresponding to the number oftotal cars manufactured by company General motors? 1) 74.6°

1)74.0

2) 79.2°

3) 78.2° 4) 76.2°

5) None of these

Answer: 4

Solution:

Total cars manufactured by General Motors (in %) = 22% We know, $100\% = 360^{\circ}$ $\Rightarrow 1\% = 3.6^{\circ}$

∴ Required central angle = 22 × 3.6° = 79.2°

Directions(191 – 195): Read the information carefully and answer the following questions. In an engineering college, 1200 students are studying engineering in any one of the branches out of the five different branches i.e. Mechanical, Electrical, Automobile, Chemical, and Electronics. The ratio between boys and girls in college is 9 : 7 respectively. $\frac{23}{105}$ of the

total girls are in Mechanical branch and $\frac{16}{105}$ of the total girls are in Electronics branch. The total number of students in Electrical branch is 325. The total number of students studying in Automobile branch is 210. Ratio between the number of boys and girls studying Electronics is 3:2.8/27 of the total number of boys studying in Electrical. The ratio between the number of boys and the number of girls in Automobile is 10 : 11. The difference between the number of girls in Chemical is 25 and the number of boys is more than the number of girls in Chemical branch.

Q191. What is the total number of students studying in Mechanical and Chemical together? 1) 320

2) 160

3)465

4) 300

5) 480



Answer :3 Solution:

Number of boys = (1200 × 9)/16 = 675
⇒ Number of girls = 1200 – 675 = 525
Girls in mechanical = 23/105 × 525 = 115
Girls in electronics = 16/105 × 525 = 80
\Rightarrow Boys in electronics = $3/2 \times 80 = 120$
Boys in electrical = $8/27 \times 675 = 200$
\Rightarrow Girls in electrical = 325 – 200 = 125
Boys in automobile = 10/21 × 210 = 100
⇒ Girls in automobile = 210 – 100 = 110
Number of girls in Chemical = 525 – (115 + 125 + 110 + 80) = 95
\Rightarrow Boys in chemical = 95 + 25 = 120
Number of boys in mechanical = 675 – (200 + 100 + 120 + 120) = 135

Total number of students in Mechanical = 135 + 115 = 250Total number of students in Chemical = 120 + 95 = 215 \therefore Required number of students = 250 + 215 = 465

Q192.What is the respective ratio between the number of boys in Automobile to number of Girls in Electrical?

1)3:2 2)4:5 3)1:2 4)3:5 An Initiative by **3HC35IICII** 5)4:7 Answer: 2 Solution: Number of boys = $(1200 \times 9)/16 = 675$ \Rightarrow Number of girls = 1200 - 675 = 525 Girls in mechanical = $23/105 \times 525 = 115$ Girls in electronics = $16/105 \times 525 = 80$ \Rightarrow Boys in electronics = $3/2 \times 80 = 120$ Boys in electrical = $8/27 \times 675 = 200$ \Rightarrow Girls in electrical = 325 – 200 = 125 Boys in automobile = $10/21 \times 210 = 100$ \Rightarrow Girls in automobile = 210 - 100 = 110 Number of girls in Chemical = 525 - (115 + 125 + 110 + 80) = 95 \Rightarrow Boys in chemical = 95 + 25 = 120 Number of boys in mechanical = 675 - (200 + 100 + 120 + 120) = 135Number of boys in Automobile = 100

Number of girls in Electrical = 125 ∴ Required ratio = 100 : 125 = 4 : 5



Q193.What is the difference between the number of boys in Electronics and the number of girls in Mechanical?

1)8 2) 16 3) 10 4) 30 5)5 Answer: 5 Solution: Number of boys = $(1200 \times 9)/16 = 675$ \Rightarrow Number of girls = 1200 - 675 = 525 Girls in mechanical = $23/105 \times 525 = 115$ Girls in electronics = $16/105 \times 525 = 80$ \Rightarrow Boys in electronics = $3/2 \times 80 = 120$ Boys in electrical = $8/27 \times 675 = 200$ \Rightarrow Girls in electrical = 325 – 200 = 125 Boys in automobile = $10/21 \times 210 = 100$ \Rightarrow Girls in automobile = 210 - 100 = 110 Number of girls in Chemical = 525 - (115 + 125 + 110 + 80) = 95 \Rightarrow Boys in chemical = 95 + 25 = 120 Number of boys in mechanical = 675 - (200 + 100 + 120 + 120) = 135Number of boys in Electronics = 120 Number of girls in Mechanical = 115 ∴Required difference = 120 – 115 = 5 Q194.In which branch is the number of girls the highest and the number of boys the lowest respectively? 1)Electrical and Automobile 2)Mechanical and Electronics 3) Electrical and electronics 4) Chemical and mechanical 5) Mechanical and Chemical Answer: 1 Solution: Number of boys = $(1200 \times 9)/16 = 675$ \Rightarrow Number of girls = 1200 - 675 = 525 Girls in mechanical = $23/105 \times 525 = 115$ Girls in electronics = $16/105 \times 525 = 80$ \Rightarrow Boys in electronics = $3/2 \times 80 = 120$ Boys in electrical = $8/27 \times 675 = 200$ \Rightarrow Girls in electrical = 325 – 200 = 125 Boys in automobile = $10/21 \times 210 = 100$ \Rightarrow Girls in automobile = 210 - 100 = 110 Number of girls in Chemical = 525 - (115 + 125 + 110 + 80) = 95 \Rightarrow Boys in chemical = 95 + 25 = 120 Number of boys in mechanical = 675 - (200 + 100 + 120 + 120) = 135

135



The highest number of girls is in Electrical i.e. 125 The lowest number of boys is in Automobile i.e. 100' ∴The highest number of girls is in Electrical and the lowest number of boys is in Automobile.

Q195.Number of girls in Electronics is what percentage of the number of boys in Electrical?

1) 25% 2) 40% 3)80% 4) 30% 5)70% Answer: 2 Solution: Number of boys = $(1200 \times 9)/16 = 675$ \Rightarrow Number of girls = 1200 - 675 = 525 Girls in mechanical = $23/105 \times 525 = 115$ Girls in electronics = $16/105 \times 525 = 80$ \Rightarrow Boys in electronics = $3/2 \times 80 = 120$ Boys in electrical = $8/27 \times 675 = 200$ \Rightarrow Girls in electrical = 325 – 200 = 125 Boys in automobile = $10/21 \times 210 = 100$ \Rightarrow Girls in automobile = 210 - 100 = 110 Number of girls in Chemical = 525 - (115 + 125 + 110 + 80) = 95 \Rightarrow Boys in chemical = 95 + 25 = 120 Number of boys in mechanical = 675 - (200 + 100 + 120 + 120) = 135An Initiative by **3HC33ICI** Number of girls in Electronics = 80

Number of girls in Electronics = 80Numer of boys in Electrical = 200 \therefore Required percentage= $80/200 \times 100 = 40\%$

Directions(196 – 200): Read the bar graph carefully and answer the following questions. The bar graphshows the number of students from two different schools who qualified in an exam in six different years



Q196.What was the approximate percent increase in the number of students who qualified in the exam from school B in the year 2018 as compared to the previous year?

- 1) 40%
- 2) 50% 3) 60%
- 4) 25%
- 5) 20%
- Answer: 1

Solution:

Number of stduents qualified from school B in 2018 = 70 Number of stduents qualified from school B in 2017 = 50 \therefore Required percent = (70 - 50) / 50 × 100 = 40%

Q197.What was the respective ratio between the number of students who qualified in the exam from school A in the year 2019 and the number of students who qualified in the exam from school B in the year 2016?

1) 3 : 2
2) 3 : 4
3) 5 : 2
4) 1 : 2
Answer : 1
Number of students qualified from school A in 2019 = 120
Number of students qualified from school B in 2016 = 80
∴Required ratio = 120 : 80 = 3 : 2

Q 198. What was the difference between the total number of students who qualified in the exam in the year 2019 from both the schools together and the total number of students from school B who qualified in exam over all the years together?



1) 400 2) 250 3) 260 4) 660 Answer: 3 Solution: Total number of students qualified in 2019 = 120 + 80 = 200 Total number of students qualified from school B in all the years = 90 + 80 + 50 + 70 + 80 + = 460

 \therefore Required difference = 460 – 200 = 260

Q199.Total number of students who qualified in the exam from school A over all the years was approximately what percentage of the total number of students who qualified in the exam from both the schools together in the years 2017 and 2019 together?

1) 125% 2) 185% 3) 255%

90

4) 155%

Answer: 4

Solution:

Total number of students qualified from school A in all the years = 75 + 85 + 70 + 45 + 120 + 100

= 495

Total number of students qualified from both the schools in 2017 and 2019 = 70 + 50 + 120 + 80

= 320

: Required percentage = $495/320 \times 100 = 154.69\% \approx 155\%$

Q200.If 60 percent of the total students who qualified in the exam from both the schools together over all the years are males. Then what is the total number of females who qualified in the exam over all the years from both the schools together?

1) 382 2) 425 3) 352 4) 380 Answer: 1 Solution: Total students from all schools in all the years = (75 + 90) + (85 + 80) + (70 + 50) + (45 + 70) +(120 + 80) + (100 + 90) = 955Number of Males = $60/100 \times 955 = 573$ \therefore Number of Females = 955 - 573 = 382

Directions(201-205): Read the pie-charts carefully and answer the following questions. The pie-chart 1 shows the percentage distribution of the total number of students in DPS in various cities (A, B, C, D, E, and F) and the pie-chart 2 shows the percentage distribution of the number of girls in DPS in same cities.



Total students = 3000 (boys + girls)



Total girls = 1200



Q201. For which city is the number of Boys the minimum? 1) City A 2) City B 3) City C 4) City F Ans. 3) Solution: City A, Total students = 12/100 × 3000 = 360



 \Rightarrow Number of Girls = 20/100 × 1200 = 240 \Rightarrow Number of Boys = 360 - 240 = 120 City B, Total students = 22/100 × 3000 = 660 \Rightarrow Number of Girls = 15/100 × 1200 = 180 \Rightarrow Number of Boys = 660 - 180 = 480 City C, Total students = $10/100 \times 3000 = 300$ \Rightarrow Number of Girls = 16/100 × 1200 = 192 \Rightarrow Number of Boys = 300 - 192 = 108 City D, Total students = 18/100 × 3000 = 540 \Rightarrow Number of Girls = 19/100 × 1200 = 228 \Rightarrow Number of Boys = 540 - 228 = 312 City E, Total students = 24/100 × 3000 = 720 \Rightarrow Number of Girls = 22/100 × 1200 = 264 \Rightarrow Number of Boys = 720 - 264 = 456 City F, Total students = $14/100 \times 3000 = 420$ \Rightarrow Number of Girls = 8/100 × 1200 = 96 \Rightarrow Number of Boys = 420 - 96 = 324 ∴The minimum number of boys is in city C. **Q 202.** How many boys are there in the city E? 1) 412 2) 356 3) 428 4) 456 Answer.4) Solution: Total students = $24/100 \times 3000 = 720$ \Rightarrow Number of Girls = 22/100 × 1200 = 264 : Number of Boys = 720 - 264 = 456Q203. For city D what is the respective ratio of boys and girls? 1) 36 : 19 2) 26 : 19 3) 52 : 19 4)26:38 Answer.2) Solution: Total students = 18/100 × 3000 = 540 \Rightarrow Number of Girls = 19/100 × 1200 = 228 \Rightarrow Number of Boys = 540 - 228 = 312 ∴Respective Ratio = 312 : 228 = 26 : 19



Q204. For city C, the number of girls is what percent more or less than the number of boys? 1) 77.77 % more 2) 77.77 % less 3) 67.77 % more 4) 67.77 % less Answer.1) **Solution:** Total students = $10/100 \times 3000 = 300$ \Rightarrow Number of Girls = $16/100 \times 1200 = 192$ \Rightarrow Number of Boys = 300 - 192 = 108 \therefore Required percentage = $(192 - 108)/108 \times 100 = 77.77$ % more

Q205. What is the difference between the central angle made by total students in City D and Girls in city A if the number of boys and girls is to be plotted on a single pie-chart? 1) 28.2° 2) 36° 3)17.2° 4) 7.2° Answer. 2 **Solution:** Total number of students in city D = 18/100 × 3000 = 540 Number of girls in city A = 20/100 × 1200 = 240 We know, 3000 is plotted on a chart having an angle of 360° \Rightarrow Central angle corresponding to total students in city D = 540/3000 × 360° = 64.8° \Rightarrow Central angle corresponding to the number of girls in city A = 240/3000 × 360° = 28.8° \therefore Required difference = 64.8° - 28.8° = 36°

Directions(206 – 210): Read the bar graph carefully and answer the following questions. The bar graph shows the total Sale of Jeans manufactured by Nike and Adidas through flipkart.



Q206. What is the difference between the total sale of Nike jeans and the total sale of Adidas jeans in all days together?

- 1) 30000
- 2) 25000
- 3) 35000
- 4) 40000

Answer.1)

Solution:

Total sales of Nike jeans = 65000 + 50000 + 95000 + 45000 + 85000 + 35000 = 375000Total sales of Adidas jeans = 70000 + 80000 + 120000 + 55000 + 60000 + 20000 = 405000∴Required difference = 405000 - 375000 = 30000

Q207. The sale of Nike jeans on Monday is approximately what percent of the total sale of Nike jeans in all the days together?

1) 12% 2) 16% 3) 17 % 4) 20% Answer.3) **Solution**: Sales of Nike jeans on Monday = 65000 Total sales of Nike jeans = 65000 + 50000 + 95000 + 45000 + 85000 + 35000 = 375000 ∴Required percentage = 65000/375000× 100 = 17.33% ≈ 17%

Q208. What is the respective ratio of the sale of Nike jeans on Wednesday to the sale of Adidas jeans on Saturday?

1) 19 : 7 2) 29 : 7



3) 19 : 27 4) 19 : 17 Answer.1) **Solution**: Sales of Nike jeans on Wednesday = 95000 Sales of Adidas jeans on Saturday = 20000

∴Required ratio = 95000 : 35000 = 19 : 7

Q209. The sale of Adidas jeans on Tuesday and Friday together is approximately what percent of the sale of Adidas jeans on Monday, Wednesday and Thursday together? 1) 52%

, 2) 46%

, 3) 57%

, 4) 60%

Answer.3)

		Solution				
Sales and	Age group	Total students	Number of female students	of Adidas jeans on Tuesday Friday = 80000 + 60000 =		
Sales	20 – 25 years	2400	1125	140000 of Adidas jeans on Monday,		
-				Wednesday, and Thursday = 70000 + 120000 + 55000 245000 ∴Requiredpercent = 140000/245000× 100 = 57%		
Q210.	What is the avera	ge sale of Ad	idas all the days toget	itiative by SIFE351ICII her?		
1) 8750	00	-				
2) 6750	00					
3) 8700	00					
4) 8400	00					

4) 84000

Answer.2)

Solution:

Total sales of Adidas jeans = 70000 + 80000 + 120000 + 55000 + 60000 + 20000 = 405000 Required average = 405000/6 = 67500

Directions(211 – 215): Given below is the table which shows the total students in a University of different age group and the number of female on that age group:


25 – 30 years	1560	946
30 – 35 years	1948	874
35 – 40 years	1780	649
40 – 45 years	2120	1100
45 – 50 years	2250	998



- 2)2094
- 3)1975
- 4)2175
- 5)1867

Answer: 2

Solution:

Total students of age group 30-35 years = 1948

Female students of age group 30-35 years = 874

Male students of age group 30-35 years = 1948 – 874 = 1074

Total students of age group 40-35 years = 2120

Female students of age group 40-35 years = 1100



Male students of age group 40-35 years = 2120 - 1100 = 1020

Total malestudents = 1074 + 1020 = 2094

Hence, option 2) is correct.

Q.212) In which among the following age group the difference between the male students to female students is highest?

1)20-25 years

2)25-30 years

3)30-35 years

4)35-40 years

5)45-50 years

Answer: 4

Solution:

Total students in age group 20-25 years = 2400

Female students in age group 20-25 years = 1125

Male students in age group 20-25 years = 2400 - 1125 = 1275

Difference between male and female students = 1275 – 1125 = 150

Total students in age group 25-30 years = 1560

Female students in age group 25-30 years = 946

Male students in age group 25-30 years = 1560 – 946 = 614

Difference between male and female students = 946 – 614 = 332

Total students in age group 30-35 years = 1948

Female students in age group 30-35 years = 874

Male students in age group 30-35 years = 1948 – 874 = 1074

Difference between male and female students = 1074 - 874 = 200

Total students in age group 35-40 years = 1780



Female students in age group 35-40 years = 649 Male students in age group 35-40 years = 1780 – 649 = 1131 Difference between male and female students = 1131 – 649 = 482 Total students in age group 40-45 years = 2120 Female students in age group 40-45 years = 1100 Male students in age group 40-45 years = 2120 – 1100 = 1020 Difference between male and female students = 1100 – 1020 = 80 Total students in age group 45-50 years = 2250 Female students in age group 45-50 years = 298 Male students in age group 45-50 years = 2250 – 998 = 1252 Difference between male and female students = 1252 – 998 = 254 Hence, the difference between the male students to female students is highest in age group 35-40 years.

Hence, option 4) is correct.

Q.213) what is the average of the male students from all the age groups?

1)1542

2)1124

3)1061

4)2010

5)1074

Answer: 3

Solution:

Total students in age group 20-25 years = 2400

Female students in age group 20-25 years = 1125

Male students in age group 20-25 years = 2400 - 1125 = 1275



Total students in age group 25-30 years = 1560 Female students in age group 25-30 years = 946 Male students in age group 25-30 years = 1560 - 946 = 614Total students in age group 30-35 years = 1948 Female students in age group 30-35 years = 874 Male students in age group 30-35 years = 1948 – 874 = 1074 Total students in age group 35-40 years = 1780 Female students in age group 35-40 years = 649 Male students in age group 35-40 years = 1780 - 649 = 1131Total students in age group 40-45 years = 2120 Female students in age group 40-45 years = 1100 Male students in age group 40-45 years = 2120 - 1100 = 1020 Total students in age group 45-50 years = 2250 Female students in age group 45-50 years = 998Male students in age group 45-50 years = 2250 – 998 = 1252 Total male students = 1275 + 614 + 1074 + 1131 + 1020 + 1252 = 6366 : Average = $\frac{6366}{6}$ = 1061

Hence, option 3) is correct.

Q.214) Male students between 45-50 years are how much percent more or less than the female students between 35-40 years? (Approx)

- 1)12%
- 2) 89%
- 3) 84%
- 4) 78%
- 5) 93%



Answer: 5

Solution:

Total students in age group 45-50 years = 2250

Female students in age group 45-50 years = 998

Male students in age group 45-50 years = 2250 – 998 = 1252

Female students in age group 35-40 years = 649

Difference = 1252 - 649 = 603

Now,

 $\therefore Required \ percentage = \frac{603}{649} \times 100 \approx 93\%$

Hence, option 5) is correct.

Q.215) Male students between 20-25 years are how much more or less than the female students between 25-30 years?

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2)273 An Initia	tive by अमरउजाला
3)229	
4)351	
5)294	
Answer: 1	
Solution:	
Total students in age group 20-25 years = 2400	
Female students in age group 20-25 years = 1125	
Male students in age group 20-25 years = 2400 – 1125 = 1275	
Female students in age group 25-30 years = 946	
∴Difference = 1275 – 946 = 329	
Hence, option 1) is correct.	
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Directions(216 – 220): Study the following information carefully and answer the given questions.

Given below line graph shows total number of TV manufactured by MI company (Normal TV + Smart TV) in six different years and also shows total number of Smart TV:



Q.216) Number of Normal TVs manufactured by MI in the year 2010, 2011 and 2012 is how much less than total number of TV manufactured by MI in the year 2016, if the ratio between the total number of TV manufactured by MI in year 2016 to the total number of TV manufactured by MI in year 2016 to the total number of TV manufactured by MI in year 2011 is 10 : 9?

- 1) 65,000
- 2) 45,000
- 3) 35,000
- 4) 50,000
- 5) None of these



Answer: 1

Solution:

Total number of Normal TV manufactured by MI in the year 2010, 2011 and 2012

⇒(35000 + 30000 + 50000)

⇒ 1,15,000

Ratio between the total TV manufactured in year 2016 to the total TV manufactured in 2011 is 10 : 9

Hence, total Manufactured TVs in 2016 = 45,000 × (10/9) = 50,000

∴Required difference = 1,15,000 – 50,000 = 65,000

Q.217) 20% of total smart TVs manufactured by MI in year 2012 and 20% of total normal TVs manufactured by MI in year 2015 were found defective. What is the ratio of non defective smart TV in year 2012 to non-defective Normal TV in year 2015?





Q.218) Average number of total number of smart TVs manufactured by MI in the given years is what percent (approximate) less than total number of TVs manufactured by MI in the year 2010?

- 1) 40%
- 2) 54%
- 3) 50%
- 4) 30%

5) None of these

Answer: 2

Solution

Average of total number of smart TVs from 2010 to 2015

⇒ (25000 + 15000 + 30000 + 30000 + 45000 + 20000)/6

⇒ 1,65,000/6 = 27,500

Total Number of TV manufactured by MI in 2010 = 60,000

Required percentage = $[(60,000 - 27,500)/60,000] \times 100 \approx 54 \%$

Hence, option 2) is correct.

Q.219) What is the difference between the total number of smart TVs and the total number of normal TVs manufactured by MI over the years?

- 1) 35,000
- 2) 45,000
- 3) 40,000
- 4) 15,000

5) None of these

Answer: 4

Solution:

total number of smart TV = 25000 + 15000 + 30000 + 30000 + 45000 + 20000= 165,000

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Total Number of Normal TV= 35000 + 30000 + 50000 + 20000 + 30000 + 15000 = 1,80,000

Difference = 1,80,000 - 1,65,000 = 15,000

Hence, option 4) is correct.

Q.220) What was the percent decrease in smart TVs manufactured by MI in the year 2011 from the previous year?

- 1) 50%
- 2) 60%
- 3) 40%
- 4) 75%
- 5) None of these

Answer: 3

- Solution:
- Number of smart TVs manufactured in 2010 = 25,000
- Number of smart TVs manufactured in 2011 = 15,000

: Required percentage = $(25000 - 15000)/2500 \times 100 = (10/25) \times 100 = 40\%$

Hence, option 3) is correct.

Directions(221 – 225): Study the following information carefully and answer the following questions.

Following Pie chart and table shows distribution of employees in various banks.





BANK	MALE : FEMALE
SBI	11:9
PNB	5:3
BOB	15:13
UCO	3:1
OBC	5:3
HDFC	1:1
ICICI	3:2
BOI	2:1

Q.221)What is the ratio between the number of female employees in SBI and number of male employees in OBC?

- 1) 2:3
- 2) 5:9
- 3) 7:5
- 4) 6:5

5) None of these

Answer:4

Solution:

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Female employees in SBI = (20/100) × (9/20) × 20,000 = 1800

Male employees in OBC = (12/100) × (5/8) × 20,000 = 1500

: Required ratio = 1800 : 1500 = 6 : 5

Hence, option 4) is correct.

Q222) Number of male employees in HDFC is what percent of total number of employees in all the bank?

- 1) 10%
- 2) 8%
- 3) 5%
- 4) 4%
- 5) None of these
- Answer:4

Solution:

Male employees in HDFC = $(8/100) \times (1/2) \times 20000 = 800$

Total employees in all the banks = 20,000

Required percentage = (800/20,000) × 100 = 4%

Hence, option 4) is correct.

Q223). What is the ratio between total number of male employees in SBI and PNB together and the total number of female employees in these two banks respectively?

- 1) 3:5
- 2) 7:5
- 3) 3:4
- 4) 7:6

5) None of these



Answer:2

Solution:

Male employees in SBI = $(20/100) \times (11/20) \times 20000 = 2200$ Male employees in PNB = $(16/100) \times (5/8) \times 20000 = 2000$ Female employees in SBI = $(20/100) \times (9/20) \times 20000 = 1800$ Female employees in PNB = $(16/100) \times (3/8) \times 2000 = 1200$ \therefore Required ratio = (2200 + 2000) : (1800 + 1200) = 4200: 3000 = 7: 5Hence, option 2) is correct.

Q.224) Total number of male employees is what percent of the total number of employees in all the banks?





Total male employees in all Banks = 2200 + 2000 + 1500 + 1200 + 1500 + 800 + 1200 + 1600 = 12000

∴Required percentage = (12000/2000) × 100 = 60%

Hence, option 1) is correct.

Q.225) Number of Male employees in UCO bank is equal to the number of female employees in which bank?

- 1) ICICI
- 2) PNB
- 3) BOB
- 4) BOI
- 5) None of these
- Answer:2
- Solution:

Male employees in UCO = $(8/100) \times (3/4) \times 20000 = 1200$

Female employees in PNB = 16/100 × 3 / 8 × 2000 = 1200

Hence, option 2) is correct.

Directions(226 – 230): Study the following information carefully and answer the given questions.

Following bar graph show number of boys and girls in five classes.





Q.226) Total number of girls from class IX is approximately what percent of the total number of girls from all the classes together?

1) 17.65%

An Initiative by **347233161**

2) 18.45%

3) 16.65%

4) 15.75%

5) None of these

Answer:1

Solution:

Girls in Class IX = 30

Girls in all classes = 20 + 30 + 45 + 30 + 45 = 170

∴Required percentage = (30/170) × 100 = 17.65%

Hence, option 1) is correct.



Q227) What is the difference between the total number of boys and the total number of girls from all the classes together?

1) 45 2) 60 3) 46 4) 50 5) None of these Answer:2 Solution: Total number of boys = 35 + 40 + 50 + 45 + 60 = 230 Total number of girls = 20 + 30 + 45 + 30 + 45 = 170 \therefore Required difference = 230 - 170 = 60 Hence, option 2) is correct. Q.228) What is the average number of boys from all the classes except class X? An Initiative by 314333161 1) 45 2) 60 3) 40 4) 50 5) None of these Answer: 1 Solution: Total number of boys except class X = 35 + 40 + 45 + 60 = 180Required average = 180/4 = 45Hence, option 2) is correct.



Q.229) The number of boys from class X is approximately what percent of total number of boys from all the classes together?

1) 20%

2) 22%

3) 24%

4) 26%

5) None of these

Answer:2

Solution:

Total number of Boys from Class X = 50

Total number of boys = 35 + 40 + 50 + 45 + 60 = 230

Required percentage = $50 / 230 \times 100 \approx 22\%$

Hence, option 2) is correct.

Q.230)What is the respective ratio of number of girls from Class VIII to the number of girls from class XII?

- 1) 5:9
- 2) 4:3
- 3) 5:7

4) 4:9

5) None of these

Answer: 4

Solution:

Girls in class VIII = 20

Girls in class XII = 45

Required ratio = 20: 45 = 4: 9



Hence, option 4) is correct.

Directions (231–235): A wedding ceremony Is to be organised which includes expenses on three categories - Videography , Catering and Venue. The price of these things is different in different months from September to December (both included) which is given in following information.

Total cost of all three things in November is Rs 2,00000 which is Rs 40,000 than in October . Ratio of cost of Videography to Venue in November is 15 : 17 and in September total cost of Catering and Venue is Rs Rs 1,10000.

Videography: The price of Videography is 50% more in october than that of in September and in December it is Rs 35000 less than that in October.

Catering: In November price is Rs 40,000 and ratio of price in September, October and December is 4 : 7 : 5.

Venue: It costs Rs 20,000 less in October than in November, in which it costs Rs 25000 more than that in December and average cost taken for all four months together is Rs 75000.

Q231. What is the average cost of Catering and Videography taken together in October and November?

1) 55000 2) 60000 3) 67500 4) 50500 5) 52500 Answer: 5 **Solution:** Total cost of all three in November = 200000 - 40000 = 160000 Total cost of all three in October = 200000 - 40000 = 160000 Videography in November : Venue in November = 15 : 17 In september , Catering + Venue = 110000 For Videography: Let in September = x Then , October = (150/100) × x = 1.5x





October = $7y = 7 \times 5000 = 35000$ December = $5y = 5 \times 5000 = 25000$ November = 40000We know, in October 1.5x + 65000 + 35000 = 160000 $\Rightarrow 1.5x = 60000$ $\Rightarrow X = 40000$ So, For Videography: Let in September = x = 40000Then , October = $(150/100) \times x = 1.5x = 1.5 \times 40000 = 60000$ December = 1.5x - 35000 = 60000 - 35000 = 25000

Videography in November = = 75000

	Videography	Catering	Ven <mark>u</mark> e	Total
September	40000	20000	90000	150000
October	60000	35000	65000	160000
November	75000	40000 An	85000	200000
December	25000	25000	60000	110000
Total	200000	120000	300000	

∴Required average = (60000 + 35000) + (40000 + 75000)/2

⇒ 52500

Q232. If in month of January, the prices of Videography increased by 20% then by what percent will it become less/more than Venue cost in December?

1) 30% less

2) 25% more

3)25% less

4) 50% less

5) 50% more

Answer: 4



Solution:

	Videography	Catering	Venue	Total
September	40000	20000	90000	150000
October	60000	35000	65000	160000
November	75000	40000	85000	200000
December	25000	25000	60000	110000
Total	200000	120000	300000	

Videography in January = 25000 × (120/100) = 30000

Venue cost in December = 60000

∴Required percent = (60000 – 30000)/60000 × 100 = 50% less

Q233. In which given month should the wedding ceremony be organized such that the expense of all three things is minimum?

1) October

2) September

- 3)November
- 4) December

5) Either October or November

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Answer: 4 Solution:

	Videography	Catering	Venue	Total
September	40000	20000	90000	150000
October	60000	35000	65000	160000
November	75000	40000	85000	200000
December	25000	25000	60000	110000
Total	200000	120000	300000	

December = 25000 + 25000 + 60000 = 110000

Q234. What is the ratio of Catering costs in October and November together to Venue cost in September?

1) 9:7

2) 5 : 6

3)4:5



4) 7.0

5) 2 : 3

Answer: 2

Solution:

	Videography	Catering	Venue	Total
September	40000	20000	90000	150000
October	60000	35000	65000	160000
November	75000	40000	85000	200000
December	25000	25000	60000	110000
Total	200000	120000	300000	

Catering costs in October and November = 35000 + 40000 = 75000

Venue cost in September = 90000

∴Required ratio = 75000 : 90000

⇒5:6

Q235. What is the difference between the expenses on Videography in all months taken together and Catering for the same?

- 1) 80000
- 2) 70000
- 3)60000
- 4) 50000
- 5) 40000

Answer: 1

Solution:

	Videography	Catering	Venue	Total
September	40000	20000	90000	150000
October	60000	35000	65000	160000
November	75000	40000	85000	200000
December	25000	25000	60000	110000
Total	200000	120000	300000	

∴Required difference = 200000 – 120000 = 80000

An Initiative by 314333101



Directions (236 – 240) : Following graph shows percentage increase in profit of top 5 Automobile Companies over previous year fro given 3 years.

(Assume that percentage profit = ((Income - Expenditure)/Expenditure) × 100)



Q236. If the expenditure and percentage profit of Kia and Tata were same in the year 2016, then what is the ratio of profit of Kia in year 2019 to the profit of Tata in year 2019?

1) 396: 391

2) 391: 381

3)397:381

4)399: 387

5) 383: 381

Answer: 1 Solution:

Let the expenditure of Kia and Tata in year 2016 be E

Profit = (Profit percentage × Expenditure)

As expenditure and percentage profits of Kia and Tata were same , profits were also be same.

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Let profits of Kia and Tata in year 2016 be P Profit of Kia in year 2017 = (110/100) × P Profit of Kia in year 2018 = (108/100) × (110/100) × P Profit of Kia in year 2019 =(104/100) × (108/100) × (110/100) × P Profit of Tata in year 2017 = (115/100) × P Profit of Tata in year 2018 = (104/100) × (115/100) × P Profit of Tata in year 2019 =(102/100) × (104/100) × (115/100) × P \therefore Required ratio =((104/100) × (108/100) × (110/100) × P)/((102/100) × (104/100) × (115/100) × P) \Rightarrow (104 × 108 × 110)/(102 × 104 × 115) \Rightarrow 396: 391

Q237. If the profits of Toyota and Honda in year 2016 were Rs 1000 crore each, then what is the difference between total profit earned by Toyota in years 2017,2018 and 2019 together and total profit earned by Honda in years 2017, 2018 and 2019 together?

1) 117.141 crore

2) 109.151 crore

3)111.149 crore

4)115.149 crore

5) 113.148 crore

Answer: 5 Solution:

Profit earned by Toyota in year $2017 = (116/100) \times 1000 = 1160$ crore

Profit earned by Toyota in year $2018 = (103/100) \times 1160 = 1194.8$ crore

Profit earned by Toyota in year 2019 = (105/100) × 1194.8 = 1254.54 crore

Total profit earned by Toyota in years 2017, 2018 and 2019 together = 1160 + 1194.8 + 1254.54 = 3609.34 crore

Profit earned by Honda in year $2017 = (112/100) \times 1000 = 1120$ crore

Profit earned by Honda in year $2018 = (102/100) \times 1120 = 1142.4$ crore

Profit earned by Honda in year 2019 = (108/100) × 1142.4 = 1233.792 crore



Total profit earned by Honda in years 2017, 2018 and 2019 together = 1120 + 1142.4 + 1233.792 = 3496.192 crore

∴Required difference = 3609.34 – 3496.192 = 113.148 crore

Q238. If the percentage profits of Tata and Ford in year 2017 were same and the ratio of expenditure of Tata and Ford in year 2017 was 5 : 4 , then what was the ratio of profits of Tata and Ford in year 2018?

1) 29 : 21 2) 21 : 17 3) 26 : 21 4)25:21 5) 21 : 17 Answer: 3 Solution: Let percentage profits of Tata and Ford be p% Let expenditure of Tata and ford In year 2017 be 5E and 4E respectively Profit of Tata in $2017 = (p/100) \times 5E$ Profit of Tata in 2018 = (104/100) × (p/100) × 5E Profit of Ford in $2017 = (p/100) \times 4E$ Profit of Ford in 2018 = (105/100) × (p/100) × 4E : Required ratio = $(104/100) \times (p/100) \times 5E/(105/100) \times (p/100) \times 4E$ $\Rightarrow (104 \times 5)/(105 \times 4)$ ⇒26:21 Q239. If the profit of Kia in year 2019 was Rs 154440 crore, then what was the profit of Kia in year 2016? 1) Rs 105000 Crore 2) Rs 125000 Crore 3) Rs 135000 Crore 4)Rs 150000 Crore



5) Rs 175000 Crore

Answer: 2 Solution:

Let profit of Kia in year 2016 be P

Profit of Kia in year 2017 = (110/100) × P

Profit of Kia in year 2018 = (108/100) × (110/100) × P

Profit of Kia in year 2019 =(104/100) × (108/100) × (110/100) × P

Now according to question,

(104/100) × (108/100) × (110/100) × P = 154440

 \Rightarrow P =Rs 125000 Crore

Q240..If Ford, Toyota and Honda have profit of Rs 20000 crore each in year 2017, then what is the average profit of Ford, Toyota and Honda together in year 2019?

1) Rs 10500 Crore

- 2) Rs 21764 crore
- 3) Rs 32764 crore

4)Rs 25868 crore

5) Rs 19868 crore

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Answer: 2
Solution:
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Profit of Ford in year 2018 = $(105/100) \times 20000 = \text{Rs} 21000 \text{ crore}$ Profit of Ford in year 2019 = $(103/100) \times 21000 = \text{Rs} 21630 \text{ crore}$ Profit of Toyota in year 2018 = $(103/100) \times 20000 = \text{Rs} 20600 \text{ crore}$ Profit of Toyota in year 2019 = $(105/100) \times 20600 = \text{Rs} 21630 \text{ crore}$ Profit of Honda in year 2018 = $(102/100) \times 20000 = \text{Rs} 20400 \text{ crore}$ Profit of Honda in year 2019 = $(108/100) \times 20400 = \text{Rs} 22032 \text{ crore}$ \therefore Required average profit = (21630 + 21630 + 22032)/3 \Rightarrow Rs 21764 crore



Directions (241 – 245): Following graph shows the number of notes of three denominations (Rs 100, Rs 200and Rs 500) with 5 persons.



Q241. What is the total amount with Ravi of all 3 given denomination notes together?

- 1) Rs 4000
- 2)Rs 6000

3)Rs 8000

4)Rs 9000

5) Rs 5000

Answer: 2 Solution:

Total amount with Ravi of all 3 given denominations notes together = 100 × 14 + 200 × 8 + 500 × 6

⇒1400 + 1600 + 3000

⇒Rs 6000

Q242. What is the difference between total number of Rs 200 notes with all 5 persons together and total number of Rs 500 notes with all 5 persons together?

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1) 15 2)10 3)20 4)24 5) 14 Answer: 5 Solution: Total number of Rs 200 notes with all 5 persons together = 6 + 10 + 12 + 8 + 14 = 50Total number of Rs 500 notes with all 5 persons together = 4 + 8 + 10 + 6 + 8 = 36 \therefore Required difference = 50 - 36 = 14Q243. What is the difference between total amount of all 3 denominations notes with Snadeep and

total amount of all 3 denomination notes with Neelam?

1) Rs 400 2)Rs 800 3)Rs 1200 An Initiative by **344233161** 4)Rs 600 5) Rs 500 Answer: 4 Solution: Total amount of all 3 denomination notes with Sandeep = $100 \times 10 + 200 \times 14 + 500 \times 8 = \text{Rs} 7800$ Total amount of all 3 denomination notes with Neelam = $100 \times 12 + 200 \times 10 + 500 \times 8 = \text{Rs} 7200$ \therefore Required difference = 7800 - 7200 = Rs 600 Q244. Total number of notes of all 3 denominations with Sneha is what percent of the total number of notes of all 3 denominations with Ravi? 1) 40% 2)150% 3)50% 4)100%



5) 75%

Answer: 2 Solutions:

Total number of notes of all 3 denominations with Sneha = 20 + 12 + 10 = 42

Total number of notes of all 3 denominations with Ravi = 14 + 8 + 6 = 28

 \therefore Required percentage = (42/28) × 100 = 150%

Q245. What is the ratio of total number of notes of all 3 denominations with Amit and Neelam together to the total number of notes of all 3 denominations with Ravi and Sandeep?

1) 3 : 7 2)4 : 5 3)3 : 5 4)4 : 7 5) 4 : 3

Answer: 2 Solution:

Total number of notes of all 3 denominations with AMit and neelam together = 8 + 6 + 4 + 12 + 10 + 8 = 48

Total number of notes of all 3 denominations with Ravi and Sandeep together = 14 + 8 + 6 + 10 + 14 + 8 = 60

∴Required ratio = 48 : 60

 \Rightarrow 4 : 5

Directions (246 – 250): Following graph shows income and expenditure of 7 bollywood movies in year 2019(in crores).

(Note: Profit percentage = ((Income – Expenditure(/Expenditure) × 100)





Q246. What is the average of numerical value of percentage profit on movie having highest percentage profit and that on movie having lowest percentage profit?





Percentage profit on movie Malang = $(450 - 300)/300 \times 100 = 50\%$

⇒X = 10

∴required average = (Highest profit percent + Lowest profit percent) /2

⇒ (100 + 20)/2

⇒60

Q247. What is the percentage profit calculated on Tanhaji and Chappak together?

1) 60%

2)80%

3)50%

4)40%

5) 25%

Answer: 4 Solution:

Total income of Tanhaji and Chappak together = 500 + 200 = 700 crore

Total expenditure of Tanhaji and Chappak together = 400 + 100 = 500 crore

⇒X = 10

: Required percentage profit = $(700 - 500)/500 \times 100$

⇒200/500×100

⇒40%

Q248. What is the ratio of profit on Bharat and Thappad together to the profit on Housefull 3 and Malang together?

1) 5 : 4

2)7:4

3)8:5

4)5 : 9

5) 5 : 8

Answer: 5



Solution:

Profit on Bharat = 400 - 250 = 150 crore Profit on Thappad = 600 - 500 = 100 crore Profit on Housefull 3 = 650 - 400 = 250 crore Profit on Malang = 450 - 300 = 150 crore ∴Required ratio = (150 + 100) : (250 + 150) ⇒250 : 400 ⇒5:8 Q249. Profit on Saaho is what percent of profit on Housefull 3? 1) 150% 2)120% 3)100% 4)80% 5) 60% An Initiative by अमर उजाल Answer: 2 Solution: Profit on Saaho = 800 - 500 = 300 crore Profit on Housefull 3 = 650 - 400 = 250 crore \therefore Required percentage = (300/250) × 100 = 120% Q250. What is the percentage profit calculated on Tanhaji, Chappak and Saaho all together? 1) 50% 2)20% 3)40% 4)30% 5) 60% Answer: 1 Solution:



Income of Tanhaji, Chappak and Saaho together = 500 + 200 + 800 = 1500 crore

Expenditure on Tanhaji, Chappak and Saaho together = 400 + 100 + 500 = 1000 crore

 \therefore Required percentage = (1500 - 1000)/1000 × 100

⇒ 50%

Directions (251 - 255): Study the following bar graph that shows the number of passengers travelling in train in three different routes (in thousands).



Q251. Find the increase in the total number of passengers travelling in South Eastern line and North Eastern line from 2018 – 19 to 2019 – 20?

1) 5 lakh

2)3 lakh

3)4.5 lakh

4)2.5 lakh

5) 3.5 lakh



Answer: 5 Solution:

Total number of passengers travelling in South - Eastern in 2018 - 19 = 650000Total number of passengers travelling in North - Eastern in 2018 - 19 = 750000Total number of passengers travelling in South - Eastern in 2019 - 20 = 900000Total number of passengers travelling in North - Eastern in 2019 - 20 = 850000 \therefore Required difference = (900000 + 850000) - (650000 + 750000)

⇒350000 = 3.5 lakh

Q252. What is the ratio of the total number of passengers travelling in North – Western line and South – Eastern Line in 2015 – 16 to the number of passengers travelling in North - Western line and North Eastern Line in 2018 – 19?

1) 1 : 1

2)1:2

- 3)1:3
- 4)2 : 1
- 5) 3 : 1

Answer: 1 Solution:

Total number of passengers travelling in North – Western line in 2015 – 16 = 500000

Total number of passengers travelling in South – Eastern line in 2015 – 16 = 700000

Total number of passengers travelling in North – Western line in 2018 – 19 = 450000

Total number of passengers travelling in North – Eastern line in 2018 – 19 = 750000

∴Required ratio = (500000 + 700000) : (450000 + 750000)

```
⇒1200000 : 1200000
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⇒1:1

Q253.What is the approximate percentage increase in the number of passengers using all the three lines from 2016 - 17 to 2019 - 20?

1) 24%

An Initiative by 3PFC 35R



2)10%

3)20%

4)5%

5) 15%

Answer: 4 Solution:

The number of passengers using all the three lines in 2016 - 2017 = 600000 + 800000 = 2200000

The number of passengers using all the three lines in 2019 – 2020 = 550000 + 900000 + 850000 = 2300000

∴Required percentage = (2300000 – 2200000)/ 2200000 × 100 = 4.54% ≈ 5%

Q254.In which year the difference between the number of people travelling in North Western line and North Eastern Line was the Lowest?

- 1) 2015 16
- 2)2016 17
- 3)2017 18
- 4)2018 19

5) 2019 - 20

Answer: 1 Solution:

Difference between the number of people travelling in North Western line and North Eastern Line in 2015 - 16 = 600000 - 500000 = 100000

Difference between the number of people travelling in North Western line and North Eastern Line in 2016 - 17 = 800000 - 600000 = 200000

Difference between the number of people travelling in North Western line and North Eastern Line in 2017 - 18 = 1000000 - 750000 = 250000

Difference between the number of people travelling in North Western line and North Eastern Line in 2018 - 19 = 750000 - 450000 = 300000

Difference between the number of people travelling in North Western line and North Eastern Line in 2019 - 20 = 850000 - 550000 = 300000

An Initiative by अमर उजाला



Q255. What is the ratio of the number of passengers travelling in South - Eastern line and North – Eastern line in 2016 – 17 to the number of passengers travelling in North – Western line and South – Eastern line in 2018 – 19?

1) 11 : 9

2)13 : 11

3)16:11

4)16:21

5) 11 : 16

Answer: 3

Solution:

Number of passengers travelling in South - Eastern line in 2016 – 17 = 800000

Number of passengers travelling in North – Eastern line in 2016 – 17 = 800000

Number of passengers travelling in North – Western line in 2018 – 19 = 450000

number of passengers travelling in South – Eastern line in 2018 – 19 = 650000

∴Required ratio = (800000 + 800000) : (450000 + 650000)

⇒ 1600000 : 110<mark>0</mark>000

⇒16:11

Directions (256 – 260): Read the data carefully and answer the following questions.

Below given pie chart shows the percentage break up of officer grade bank employees from various banks.

An Initiative by 3147333161





Below given pie chart shows the percentage break up of Clerical grade bank employees from various banks.



Q256. What is the ratio of the total number of officers from SBI and PNB to that of IDBI and BOI together?
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1) 31 : 29
2)13 : 42
3)47 : 11
4)46 : 21
5) 41 : 30
Answer: 5 Solution:
Officer from SBI = (22/100) × 40000 = 8800
Officer from PNB = (19/100) × 40000 = 7600
Officer from IDBI = (17/100) × 40000 = 6800
Officer from BOI = (13/100) × 40000 = 5200
∴Required ratio = (8800 + 7600) : (6800 + 5200)
⇒16400:12000
⇒41:30 SAFALA COM
Q257. Total employees from IOB are approximately what percent more than that of BOB?
2)25%
2)120/
3)12%
4)18%
5) 5%
Answer: 5 Solution:
Officer from BOB = (15/100) × 40000 = 6000
Clerk from BOB = (16/100) × 65000 = 10400
Total employees from BOB = 10400 + 6000 = 16400
Officer from IOB = (14/100) × 40000 = 5600
Clerk from IOB = (18/100) × 65000 = 11700

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Total employees from BOB = 5600 + 11700 = 17300

∴Required percentage = (17300 – 16400)/16400 × 100

⇒5.48% ≈ 5%

Q258. What is the difference between the average number of officer to the average number of clerk from PNB, BOB and IOB?

1) 2700

2)5300

3)4500

4)5000

5) 3600

Answer: 2 Solution:

Officer from PNB = (19/100) × 40000 = 7600

Officer from $BOB = (15/100) \times 40000 = 6000$

Officer from $IOB = (14/100) \times 40000 = 5600$

Average = (7600 + 6000 + 5600)/3

⇒ 19200/3

 $\Rightarrow 6400$

Clerk from PNB = (20/100) × 65000 = 13000

Clerk from BOB = (16/100) × 65000 = 10400

Clerk from IOB = (18/100) × 65000 = 11700

Average = (13000 + 10400 + 11700)/3

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⇒35100/3
```

⇒11700

 \therefore Required difference = 11700 - 6400 = 5300

Q259. What is the central angle formed by the number of officers from BOB and IDBI?

1) 152.4⁰

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SAFALTA.com 2)115.2° 3)126.20 4)135.8° 5)145.6° Answer: 2 Solution: Total percentage = 15 + 17 = 32%: Required degree = $(32/100) \times 360 = 115.2^{\circ}$ Q260. The total number of clerks from IDBI is what percent of the total number of officers from BOI? 1) 125% 2)110% 3)100% 4)75% 5)80% Answer: 1 An Initiative by अमर उजाला Solution: Clerks from IDBI = $(10/100) \times 65000 = 6500$ Officers from BOI = (13/100) × 40000 = 5200

∴Required percentage = (6500/5200) × 100 = 125%

Directions (261–265): In the following pie chart number of players sold to the 5 teams in the recent PKL (Pro Kabbadi League) auction is given in degree.

Total players (Foreign + Indian) sold to 5 teams = 180



Q261. If U Mumba spend total of Rs 120 crore to buy players for its team and average amount spend by Patna Pirates on each player is 80% of the average amount spend by U Mumba on each player, then find the total amount (in crore) spent by Patna pirates on its players?

1) Rs 115 crore

An Initiative by 31472 331101

2)Rs 128 crore

3)Rs 110 crore

4)Rs 148 crore

5)Rs 152 crore

Answer: 2 Solution:

Total players sold to U Mumba = $180 \times (60/360) = 30$

Average amount spent by U Mumba on each player = 120/30 = 4 crore

Total players sold to Patna Pirates = 180 × (80/360) = 40

∴Total amount spent by Patna Pirates = 40 × ((80/100) × 4) = Rs 128 crore

Q262. If the ratio of Foreign players to the number of Indian Players sold to UP Yoddha is 5 : 7 and the ratio of number of Foreign players to number of Indian Players sold to Patna Pirates is 2 : 3 then



the ratio of foreign players sold to UP Yoddha and number of Indian players sold to Patna Pirates to the number of Indian Players sold to Patna Pirates and number of foreign players sold to UP Yoddha is?

1) 29 : 51

2)52 : 47

3)41 : 37

4)49 : 51

5)47:51

Answer: 4

Solution:

Total players sold to UP yoddha = $180 \times (120/360) = 60$

Foreign players sold to UP yoddha = $60 \times 5/12 = 25$

Indian players sold to UP yoddha = $60 \times 7/12 = 35$

Total players sold to Patna Pirates = $180 \times (80/360) = 40$

Foreign players sold to Patna Pirates = 40 × 2/5 = 16

Indian players sold to Patna Pirates = $40 \times 3/5 = 24$

 \therefore Required ratio = (25 + 24):(35 + 16)

⇒ 49 : 51

Q263. If the number of Indian players sold to Puneri Paltan are 80% of the number of total players sold to Bengal warriors, then the number of Indian players sold to Puneri paltan is what percent of the number of total palyers sold to U Mumba in the auction?

1) 25%

2)60%

3)50%

4)40%

5)30%

Answer: 4 Solution:

Total number of players sold to Bengal warriors = $(30/360) \times 180 = 15$

An Initiative by 3147333161



Number of Indian players sold to Puneripaltan = $(80/100) \times 15 = 12$

Total players sold to U Mumba = $180 \times (60/360) = 30$

 \therefore Required percentage = (12/30) × 100

⇒ 40%

Q264. In last year PKL auction only 100 players participated .If out of these 20% players sold to Patna Pirates and 10% players sold to Bengal Warriors , then find the difference between the number of players sold to Patna Pirates and Bengal Warriors together in this year's auction and number of players sold to Patna Pirates and Bengal Warriors together in last year's PKL auction?

1) 25 2)60 3)50 4)40 5)30 Answer: 1 Solution: Number of players sold to Patna Pirates and Bengal Warriors in this year auction = 180 × (110/360) = 55 Number of players sold to Patna Pirates and Bengal Warriors in Last year auction = 100 × (30/100) = 30

 \therefore Required difference = 55 - 30 = 25

Q265. Average Number of players sold to Patna Pirates , Bengal Warriors and PuneriPaltan is what percent more/less than the average number of players sold to U Mumba and UP Yoddha?

1) 25%

2)60%

3)50%

4)62 2/3%

5)33 1/3%

Answer: 5 Solution:



Total players sold to Patna Pirates = $180 \times (80/360) = 40$ Total number of players sold to Bengal warriors = $(30/360) \times 180 = 15$ Total number of players sold to PuneriPaltan = $(70/360) \times 180 = 35$ Average = (40 + 15 + 35)/3 = 30Total players sold to U Mumba = $180 \times (60/360) = 30$ Total players sold to UP yoddha = $180 \times (120/360) = 60$ Average = (60 + 30)/2 = 45 \therefore Required percent = $(45 - 30)/45 \times 100$ $\Rightarrow (15/45) \times 100 = 33 1/3\%$

Directions (266 - 270): Line chart given below shows number of employees recruited in five different companies in a year. Study the following graph carefully and answer the questions given below it.



Q266. Find the average number of employees recruited in the company A , B and D together?

1) 9500

2) 10500

3) 11150

4) 8550



5) 9700

Answer: 1

Solution:

Total employees recruited in company A = 5500 + 4000 = 9500

Total employees recruited in company B = 6000 + 5500 = 11500

Total employees recruited in company D = 5000 + 2500 = 7500

Total employees recruited in company A, B and D together = 9500 + 11500 + 7500 = 28500

 \therefore Required average = 28500/3 = 9500

Q267. The number of male employees recruited in company D is what percent of the total number male employees recruited in all the companies together?

1) 40%

2) 15%

- 3) 30%
- 4) 25%

5) 20%

Answer: 2

Solution:

Total male employees recruited in company D = 5000

Total number of male employees recruited in all the companies together = 5500 + 6000 + 4000 + 5000 + 4500 = 25000

: Required percentage = (5000/25000) × 100 = 20%

Q268. Find the ratio between total number of employees recruited in company C and E together to the total number of mal employees recruited in all the companies together?

- 1) 27 : 43
- 2) 27 : 50
- 3) 31 : 50
- 4) 27 : 47

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5) 29 : 50

Answer: 2

Solution:

Total employees recruited in company C = 4000 + 2000 = 6000

Total employees recruited in company E = 4500 + 3000 = 7500

Total number of male employees recruited in all the companies together = 5500 + 6000 + 4000 + 5000 + 4500 = 25000

: Required ratio = 6000 + 7500 : 25000

⇒13500 : 25000

⇒ 27 : 50

Q269. Number of Male employees recruited in Company A and D together is what percent of the number of female employees recruited in company C and E?

1) 28%
2) 35%
3) 21%
4) 25%
5) 42%
Answer: 3
Solution:
Total male employees recruited in company A = 5500
Total male employees recruited in company D = 5000
Total female employees recruited in company C = 2000
Total female employees recruited in company E = 3000
∴ Required percent = (5500 + 5000)/(2000 + 3000) × 100 = 21%
Q270. Find the difference between total number of male and female employees recruited in all the companies together?

1) 7000

2) 9500



- 3) 7500
- 4) 8000
- 5) 9000
- Answer: 4

Solution:

Total number of male employees recruited in all the companies together = 5500 + 6000 + 4000 + 5000 + 4500 = 25000

Total number of Female employees recruited in all the companies together = 4000 + 5500 + 2000 + 2500 + 3000 = 17000

∴ Required difference = 25000 – 17000 = 8000

Directions (271 – 275): Given below pie chart shows percentage distribution of number of students who take admission in Graphic Era University and Dehradun University in five different streams in the year 2019. Read the data carefully and answer the question.





Q271. If total students who take admission in Graphic Era University is 20% more than that of total students who take admission in Dehradun University and difference between total students who take admission in Civil stream in both University is 700, then find total students who take admission in IT stream in Graphic University?





⇒ X = 50

Therfore , total students who take admission in Dehradun University = 100 × 50 = 5000

And total students who take admission in Graphic Era University $= 120 \times 50 = 6000$

∴Total students who take admission in IT stream in Graphic University = (20/100) × 6000 = 1200

Q272. If total studetns who take admission in IT stream in Graphic Era University is 20% less than that of total students who take admission in same stream in Dehradun University, then find total students who take admission in Electronics stream in Graphic Era University is what percent more or less than total students who take admission in CS stream in Dehradun University?

- 1) 10 % more
- 2) 30% more
- 3) 30% less
- 4) 20% more
- 5) 20% less
- Answer: 4

Solution:

Let toal students who take admission in Graphic Era University be x and Dehradun University is y Total students who take admission in IT stream in Graphic Era University = $x \times (20/100) = x/5$ Total students who take admission in IT stream in Dehradun University = $y \times (30/100) = 3y/10$

Now according to question,

⇒(3y/10) × (80/100) = x/5

Total students who take admission in Electronics stream in Graphic Era University = $(6y/5) \times (15/100)$ = 9y/50

Total students who take admission in CS stream in Dehradun University = $y \times (15/100) = 3y/20$

: required percentage ={ [(9y/50) - (3y/20)]/(3y/20)} × 100

⇒20% more

Q273. If ratio between total students who take admission in Dehradun University to Graphic Era University is 5 : 6 and total students who take admission in IT stream in both the Universities is 2700 then find the difference of students who take admission in both Universities in CS stream? SAFALTA (1) 210
2) 220
3) 230
4) 240
5) 250
Answer: 1

Solution:

Let the students who take admission in Graphic Era University and Dehradun University is 6x and 5x Total students who take admission in IT stream in Graphic Era University = $6x \times (20/100) = 6x/5$ Total students who take admission in IT stream in Dehradun University = $5x \times (30/100) = 3x/2$ Now according to question,

 \Rightarrow (6x/5) + (3x/2) = 2700

⇒(12x + 15x)/10 = 2700

⇒x = 27000/27

⇒ x = 1000

 \therefore the students who take admission in Graphic Era University and Dehradun University is 6000 and 5000

Required difference = $6000 \times (16/100) - 5000 \times (15/100)$

 \Rightarrow 960 - 750

⇒210

Q274. Number of students who take admission in Mechanical Stream in Graphic Era University is 340 more than that of Mechanical Stream students of Dehradun University and sum of total students who take admission in Civil stream in both Universities is 2300, then find total number of students who take admission in both the Universities?

1) 14500

2) 14000

3) 13000

4) 11000

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5) 10000

Answer: 4

Solution:

Let the total students who take admission in Graphic Era University and Dehradun University be x and y

Now according to question,

 $\Rightarrow X \times (24/100) - y \times (22/100) = 340$ $\Rightarrow (6x/25) - (11y/50) = 340$ $\Rightarrow 12x - 11y = 17000 \dots (i)$ And also, $\Rightarrow X \times (25/100) + y \times (16/100) = 2300$ $\Rightarrow (x/4) + (4y/25) = 2300$ $\Rightarrow 25x + 16y = 230000 \dots (ii)$ From (i) and (ii) we get $\Rightarrow X = 6000$ And y = 5000

: total number of students who take admission in both the Universities = 6000 + 5000 = 11000

Q275. If ratio of total students who take admission in Graphic Era University to Dehradun University is 4 : 3, then find the ratio of students who take admission in CS and IT stream together in Graphic Era University to total students who take admission in Civil and Mechancial Stream together in Dehradun University?

1) 29: 22 2) 24: 17

- 3) 25: 19
- 4) 24: 19

5) 18: 13

Answer: 4



Solution:

Let total students who take admission in Graphic Era University to Dehraudn University is 4x and 3x

Total students who take admission in CS and IT stream in Graphic Era University = $4x \times [(20 + 16)/100]$

= 36x/25

Total students who take admission in Civil and Mechanical stream in Dehradun University = $3x \times [(16 + 22)/100]$

⇒57x/50

 \therefore Required Ratio = 36x/25 : 57x/50

⇒ 24 : 19

Directions (276 – 280) : Refer to the following graph and answer the given questions.

Data related to the number of shoes sold by two stores (A and B)during five years:



Q276. What is the difference between the total number of shoes sold by store A in 2018 and 2019 together and total number of shoes sold by store B in 2014 and 2015 together?

1) 4500

2) 4050

3) 4150



1) 9500



- 2) 13200
- 3) 12500
- 4) 10500
- 5) 11250
- Answer: 4

Solution:

Total number of shoes sold by store A in 2014 = 3500

Total number of shoes sold by store B in 2014 = 4000

total number of shoes sold by stores A and B together in 2014 = 3500 + 4000 = 7500

 \therefore total number of shoes sold by stores A and B together in 2020 = 7500 \times (7/5) = 10500

Q279. Find the difference between total number of Shoes sold by Store A and B in all the years together?

1) 4500 2) 4050 3) 6500 4) 6550 5) 4900 Answer: 3 Solution: Total number of shoes sold by store A in all the years = 3500 + 3000 + 6000 + 5000 + 4500 + 6500 =

28500 = 28500

Total number of shoes sold by store B in all the years = 4000 + 2500 + 9000 + 4500 + 8000 + 7000 = 35000

 \therefore Required difference = 35000 - 28500 = 6500.

Q280. Find the ratio between total number of shoes sold by store A and B together in 2016 to the total number of shoes sold by store A and B together in 2018?

1) 5 : 3

2) 6 : 5



∴ Required ratio = 15000 : 12500

 \Rightarrow 6 : 5

Direction (281 – 285) : Refer to the graph and answer the given question.

Number of tickets sold by two websites Goibibo and makemytrip on five days to people travelling to Mumbai on particular airlines:



Q281. Total number of tickets sold by both the websites Goibibo and makemytrip together on Tuesday is what percent more than that sold by both websites together on Monday?

1) 125%

2) 75%



- 3) 25%
- 4) 50%
- 5) 100%

Answer: 5

Solution:

Total number of tickets sold by both the websites Goibibo and makemytrip together on Tuesday = 6000 + 3000 = 9000

Total number of tickets sold by both the websites Goibibo and makemytrip together on Monday = 2500 + 2000 = 4500

∴Required percent = (9000 – 4500)/4500 × 100 = 100%

Q282. What is the average number of tickets sold by goibibo on Sunday, Tuesday and Thursday?

1) Rs 4500

- 2) Rs 4000
- 3) Rs 4150
- 4) Rs 5250
- 5) Rs 4900

Answer: 2

Solution:

Total number of tickets sold by goibibo on Sunday = 1500

Total number of tickets sold by goibibo on Tuesday = 6000

Total number of tickets sold by goibibo on Thursday = 4500

∴Required average = (1500 + 6000 + 4500)/3

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⇒ 12000/3 = 4000
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Q283. What is the difference between the total number of tickets sold on Monday and Tuesday by goibibo and the total number of tickets sold on the same days together by makemytrip?

1) 3500

2) 4050

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- 3) 4150
- 4) 5250
- 5) 4900

Answer: 1

Solution:

total number of tickets sold on Monday and Tuesday by goibibo = 2500 + 6000 = 8500

total number of tickets sold on Monday and Tuesday by makemytrip = 2000 + 3000 = 5000

 \therefore Required difference = 8500 - 5000 = 3500

Q284. What is the respective ratio between the total number of tickets sold by both the websites together on Monday and that on Tuesday?

1) 9:7

- 2) 9:11
- 3) 7 : 9
- 4) 11 : 9

5) 13 : 11

Answer: 4

Solution:

Total number of tickets sold by goibibo and makemytip on Monday = 1500 + 4000 = 5500

Total number of tickets sold by goibibo and makemytip on Tuesday = 2500 + 2000 = 4500

∴ Required ratio = 5500 : 4500

⇒11:9

Q285. Number of tickets sold by makemytrip decreased by what percent from Sunday to Monday?

- 1) 40%
- 2) 25%
- 3) 20%
- 4) 50%
- 5) 45%

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Answer: 4

Solution:

Total number of tickets sold by makemytrip on Sunday = 4000

Total number of tickets sold by makemytrip on Monday = 2000

: Required percent = $(4000 - 2000)/4000 \times 100 = 50\%$

Directions (286 – 290) : Study the following graph carefully toanswer the questions that follow:

Cost of three different fruits (in rupees per kg) in five different cities.



Q286. In which city is the difference between the cost of one kg of Apple and cost of one kg of Pappaya second Highest?

- 1) Delhi
- 2) Kolkata
- 3) Mumbai
- 4) Jaipur
- 5) Chennai
- Answer: 2

Solution:



difference between the cost of one kg of Apple and cost of one kg of Pappaya in delhi = 120 - 100 = Rs 20

difference between the cost of one kg of Apple and cost of one kg of Pappaya in Kolkata = 120 - 80= Rs 40

difference between the cost of one kg of Apple and cost of one kg of Pappaya in Mumbai = 160 - 110 = Rs 50

difference between the cost of one kg of Apple and cost of one kg of Pappaya in Jaipur = 150 - 130 = Rs 20

difference between the cost of one kg of Apple and cost of one kg of Pappaya in Chennai = 100 - 90= Rs 10

∴ Required answer = Kolkata

Q287. Cost of one kg ofGraphes in Kolkata is what percent of the cost of two kgs of Apple in mumbai?

1) 40%

- 2) 50%
- 3) 30%

4) 20%

5) 25%

Answer: 5

Solution:

Cost of one kg ofGraphes in Kolkata = Rs 80

cost of two kgs of Apple in mumbai = 160 × 2 = Rs 320

∴ Required percent = (80/320) × 100 = 25%

Q288. What total amount wil Rahul pay to the shopkeeper for purchasing 4 kgs of Apple and 3 kgs of Pappaya in Chennai?

1) Rs 500

2) Rs 560

3) Rs 660

4) Rs 525



5) Rs 490

Answer: 3

Solution:

4 kgs of Apple in chennai = 4×90 = Rs 360

3 kgs of Pappaya in chennai = 3 × 100 = Rs 300

: Total amount = 360 + 300 = Rs 660

Q289. Viaks had to purchase 30 kg of Apple from Jaipur , shopkeeper gave him discount of 10% per kg. what amount did he pay to the shopkeeper after the discount?

- 1) Rs 4500
- 2) Rs 4050
- 3) Rs 4150
- 4) Rs 5250
- 5) Rs 4900
- Answer: 2

Solution:

Cost of one kg Apple in Japiur = Rs 150

After 10% discount = 150 × (90/100) = Rs 135

: Cost of 30 kg Apple in Jaipur after discount = 135 × 30 = Rs 4050

Q290. What is the respective ratio between the cost of one kg of Pappaya from Kolkata and the cost of one og grapher from Jaipur?

- 1) 3 : 4
- 2) 4 : 5
- 3) 7 : 5
- 4) 4 : 7
- 5) 9 : 4

Answer: 2

Solution:

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cost of one kg of Pappaya from Kolkata = Rs 80

cost of one Kg graphes from Jaipur = Rs 100

 \therefore Required ratio = 80 : 100

⇒4:5

Directions(291 – 295): Degree- wise breakup of employees working in various departnement of an organisation an dthe ratio to men to women.



Respective ratio of men to women in each department

Department	Men	Women
Production	5	4
HR	20	13
IT	5	4
Marketing	7	10
Accounts	15	17

Q291. What is the number of men working in the marketing department?

1) 240

2) 360

3) 420



5) 500

Answer: 3

Solution:

Total number of employees working in marketing department = (61.2/360) × 6000 = 1020

 \therefore Total number of men working in the marketing department = $1020 \times (7/17) = 420$

Q292. What is the respective ratio of the number of women working in the Marketing department and the number of men working in the Hr department?

- 1) 3 : 4
- 2) 4 : 5
- 3) 7 : 5
- 4) 4 : 7
- 5) 9 : 4
- Answer: 1

Solution:

Total number of employees working in marketing department = $(61.2/360) \times 6000 = 1020$

Total number of women working in the marketing department = $1020 \times (10/17) = 600$

Total number of employees working in HR department = (79.2/360) × 6000 = 1320

Total number of men working in the HR department = $1320 \times (20/33) = 800$

∴Required ratio = 600 : 800

 \Rightarrow 3 : 4

Q293. The number of men working in the IT department of the Organisation is approximately what percent of the total number of employees working in that department?

1) 24%

2) 56%

3) 40%

4) 72%



5) 50%

Answer: 2

Solution:

total number of employees working in IT department = (97.2/360) × 6000 = 1620

total number of men working in the IT department of the Organisation = (5/9) × 1620 = 900

∴ Required percentage = (900/1620) × 100= 55.55% ≈ 56%

Q294. The number of women working in the Production department of the Organisation is what percent of the total number of employees working in all the department together?

1) 4% 2) 6% 3) 4% 4) 7% 5) 8% Answer: 5 Solution: Total number of employees working in Production department = (64.8/360) × 6000 = 1080 Total number of women working in the Production department = $1080 \times (4/9) = 480$ Totla number of employees working in organisation = 6000 \therefore required percentage = (480/6000) \times 100 = 8% Q295. What is the total number of women working in the organisation? 1) 2450 2) 2830 3) 2520 4) 2480 5) 3320 Answer: 2 Solution:



Total number of women working in Production department = $(64.8/360) \times 6000 \times (4/9) = 480$ Total number of women working in HR department = $(79.2/360) \times 6000 \times (13/33) = 520$ Total number of women working in IT department = $(97.2/360) \times 6000 \times (4/9) = 720$ Total number of women working in Marketing department = $(61.2/360) \times 6000 \times (10/17) = 600$ Total number of women working in Accounts department = $(57.6/360) \times 6000 \times (17/32) = 510$ \therefore total number of women working in the organisation = 480 + 520 + 720 + 600 + 510 = 2830

Directions(296 -300): Data given shows the total number of books available in the college library is 60,000, Ratio of technical (Mechanical and Automobile) to non-technical books (Bsc, Bcom, BA and Bed) is 2: 3.Out of total technical books (Mechanical and automobile) the number of books for Mechanical are 40% more than the number of books for Automobile.30% of total non-technical books (Bsc, Bcom, BA and Bed) are for Bsc and Bcom and out of this 33 1/3% are for Bcom course. The ratio of the number of books for BA to the number of books for Bed is 11: 10.

Q296. The number of books available for Bcom course is how much percent more or less than the number of books available for Automobile course?





Number of Bsc and Bcom course books = $(30/100) \times 36000 = 10800$ Number of Bcom course books = $10800 \times (1/3) = 3600$ Number of Bcomcourse books = 10800 - 3600 = 7200Number of BA and Bed course books = 36000 - 10800 = 25200

Number of BA course books = 25200 × (11/21) = 13200

Number of Bed course books = $25200 \times (10/21) = 12000$

∴Required percentage = (3600/10000) × 100 = 36%

Q297. Find the ratio of the total number of books available for Mechanical and Bed course to the total number of books available for BA and BSc course?

1) 67 : 72

2) 51 : 65

3) 65 : 51

- 4) 72 : 67
- 5) 51 : 92

Answer: 3

Solution:

Total books in library = 6000

Technical books = 60000 × 2/5 = 24000

Non-technical books = $60000 \times 3/5 = 36000$

Let the number of automobile course books = 100x

So mechanical course books = 140x (40% more than automobile books)

Therefore,

Number of automobile books in library = $(24000/240x) \times 100x = 10000$

Then Mechanical books = 14000

Number of Bsc and Bcom course books = $(30/100) \times 36000 = 10800$

Number of Bcom course books = $10800 \times (1/3) = 3600$

Number of Bcom course books = 10800 - 3600 = 7200

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Number of BA and Bed course books = 36000 - 10800 = 25200

Number of BA course books = 25200 × (11/21) = 13200

Number of Bed course books = $25200 \times (10/21) = 12000$

∴Required ratio = (14000 + 12000) : (13200 + 7200)

⇒26000 : 20400

 $\Rightarrow 65:51$

Q298. The number of books available for Bcom course is what percent of the number of books available for Bed course?

- 1) 24%
- 2) 30%
- 3) 40%
- 4) 72%
- 5) 50%
- Answer: 2

Solution:

Total books in library = 6000 Technical books = 60000 × 2/5 = 24000 Non-technical books = 60000 × 3/5 = 36000 Let the number of automobile course books = 100x So mechanical course books = 140x (40% more than automobile books) Therefore, Number of automobile books in library = (24000/240x) × 100x = 10000 Then Mechanical books = 14000 Number of Bsc and Bcom course books = (30/100) × 36000 = 10800 Number of Bcom course books = 10800 × (1/3) = 3600 Number of Bcom course books = 10800 – 3600 = 7200 Number of BA and Bed course books = 36000 – 10800 = 25200



Number of BA course books = 25200 × (11/21) = 13200

Number of Bed course books = $25200 \times (10/21) = 12000$

: Required percentage = $(3600/12000) \times 100 = 30\%$

Q299. Total number of books for Bed course is what percent of the number of books available for Technical course?

1) 24%

- 2) 36%
- 3) 40%

4) 72%

5) 50%

Answer: 5

Solution:

Total books in library = 6000

Technical books = 60000 × 2/5 = 24000

Non technical books = $60000 \times 3/5 = 36000$

Let the number of automobile course books = 100x

So mechanical course books = 140x (40% more than automobile books)

Therefore,

Number of automobile books in library = $(24000/240x) \times 100x = 10000$

Then Mechanical books = 14000

Number of Bsc and Bcom course books = (30/100) × 36000 = 10800

Number of Bcom course books = $10800 \times (1/3) = 3600$

Number of Bcom course books = 10800 – 3600 = 7200

Number of BA and Bed course books = 36000 – 10800 = 25200

Number of BA course books = $25200 \times (11/21) = 13200$

Number of Bed course books = $25200 \times (10/21) = 12000$

∴Required percentage = (12000/24000) × 100 = 50%



Q300. What is the difference between the number of books available for Automobile and BA course and the number of books available for Mechanical and Bcom Course?

1) 5600

2) 3600

3) 4000

4) 7200

5) 5000

Answer: 1

Solution:

Total books in library = 6000

Technical books = 60000 × 2/5 = 24000

Non technical books = $60000 \times 3/5 = 36000$

Let the number of automobile course books = 100x

So mechanical course books = 140x (40% more than automobile books)

Therefore,

Number of automobile books in library = $(24000/240x) \times 100x = 10000$

Then Mechanical books = 14000

Number of Bsc and Bcom course books = $(30/100) \times 36000 = 10800$

Number of Bcom course books = $10800 \times (1/3) = 3600$

Number of Bcom course books = 10800 - 3600 = 7200

Number of BA and Bed course books = 36000 - 10800 = 25200

Number of BA course books = 25200 × (11/21) = 13200

Number of Bed course books = $25200 \times (10/21) = 12000$

∴Required differcne = (10000 + 13200) – (14000 + 3600)

⇒23200 - 17600

⇒5600



Directions (301 – 305): Each of two mobile stores A and B sold five types of Smartphone's i.e. Vivo, Oppo, iPhone, Nokia and oneplus. Total number of Smartphones sold by both the stores are 40000 and the ratio between total smartphones sold by store A and store B is 3: 2. The total number of Vivo smartphones sold by store A is 33 1/3% more than the total number of Nokia smartphones sold by the same store. While total iPhone sold by store A is 500 more than the total Nokia smartphones sold by store A.Total Oppo smartphones sold by store A is 66 2/3% more than total Nokia smartphones sold by store A and total one plus smartphones sold by store A is 3500 than total Oppo smartphones sold by store A.Total Nokia smartphones sold by store B is 1000 less than Total Nokia smartphones sold by store A. Total Oppo smartphones sold by store B is 20% less than Total oppo smartphone sold By store A. Ratio of total Vivo smartphones to total Iphones to total one plus sold by store B is 4 : 3 : 3 respectively.

Q301. Total Oppo smartphones sold by store B is what percent less than the total Oppo and Nokia smartphones sold by store A?

1) 56%		
$\frac{2)}{36\%}$		
		4) 72%
5) 50%		
Answer: 5		
Solution		
Total smartphones sold by store A = $40000 \times (3/5) = 24000$		
Total smartphones sold by store $B = 40000 \times (2/5) = 16000$		
Let the number of Nokia smartphones sold by store A = x		
So, total Vivo smartphones sold by store $A = 4/3x$ (33 1/3% more than nokia smartphones)		
Total Iphones sold by store $A = x + 500$		
Total Oppo smartphones sold by store A = $5x/3$ (66 $2/3\%$ more than Nokia smartphones)		
Total one plus smartphones sold by store $A = (5x/3) + 3500$		
Now according to question,		
(X + (4x/3) + (x + 500) + (5x/3) + (5x/3 + 3500)) = 24000		



 $\Rightarrow (3x + 4x + 3x + 1500 + 5x + 5x + 10500) = 72000$ $\Rightarrow 20x = 60000$ \Rightarrow X = 3000 number of Nokia smartphones sold by store A = 3000 total Vivo smartphones sold by store A = 4000 Total Iphones sold by store A = 3500 Total Oppo smartphones sold by store A = 5000 Total one plus smartphones sold by store A = 8500 Total Nokia smartphones sold by store B = 3000 - 1000 = 2000Total oppo smartphones sold by stroe $B = 5000 \times (80/100) = 4000$ Total vivo smartphones sold by store $B = (4/10) \times 10000 = 4000$ Total Iphone sold by store $B = (3/10) \times 10000 = 3000$ Total One plus smartphones sold by store $B = (3/10) \times 10000 = 3000$ ∴ required percnetage = (4000/8000) × 100 = 50% Q302. Find the average of the number of Nokia smartphone sold by store A and store B? An Initiative by JIMC 33 1) 5600 2) 3600 3) 2500 4) 7200 5) 5000 Answer: 3 Solution Total smartphones sold by store A = $40000 \times (3/5) = 24000$ Total smartphones sold by store $B = 40000 \times (2/5) = 16000$

Let the number of Nokia smartphones sold by store A = x

So, total Vivo smartphones sold by store A = 4/3x (33 1/3% more than nokia smartphones)

Total Iphones sold by store A = x + 500



Total Oppo smartphones sold by store A = 5x/3 (66 2/3% more than Nokia smartphones) Total one plus smartphones sold by store A = (5x/3) + 3500Now according to question, (X + (4x/3) + (x + 500) + (5x/3) + (5x/3 + 3500)) = 24000 $\Rightarrow (3x + 4x + 3x + 1500 + 5x + 5x + 10500) = 72000$ $\Rightarrow 20x = 60000$ \Rightarrow X = 3000 number of Nokia smartphones sold by store A = 3000 total Vivo smartphones sold by store A = 4000 Total Iphones sold by store A = 3500 Total Oppo smartphones sold by store A = 5000 Total one plus smartphones sold by store A = 8500 Total Nokia smartphones sold by store B = 3000 - 1000 = 2000Total oppo smartphones sold by stroe $B = 5000 \times (80/100) = 4000$ Total vivo smartphones sold by store $B = (4/10) \times 10000 = 4000$ Total Iphone sold by store $B = (3/10) \times 10000 = 3000$ Total One plus smartphones sold by store $B = (3/10) \times 10000 = 3000$

∴ Required average = (3000 + 2000)/2 = 2500

Q303. Find the difference between the total number of Vivo and one plus smartphones sold by store A and the same items sold by store B?

1) 5600

2) 3600

- 3) 4000
- 4) 5500
- 5) 5000

Answer: 4

Solution:



Total smartphones sold by store $A = 40000 \times (3/5) = 24000$

Total smartphones sold by store $B = 40000 \times (2/5) = 16000$

Let the number of Nokia smartphones sold by store A = x

So, total Vivo smartphones sold by store A = 4/3x (33 1/3% more than nokia smartphones)

Total Iphones sold by store A = x + 500

Total Oppo smartphones sold by store A = 5x/3 (66 2/3% more than Nokia smartphones)

Total one plus smartphones sold by store A = (5x/3) + 3500

Now according to question,

(X + (4x/3) + (x + 500) + (5x/3) + (5x/3 + 3500)) = 24000

 $\Rightarrow (3x + 4x + 3x + 1500 + 5x + 5x + 10500) = 72000$

 $\Rightarrow 20x = 60000$

⇒ X = 3000

number of Nokia smartphones sold by store A = 3000

total Vivo smartphones sold by store A = 4000

Total Iphones sold by store A = 3500

Total Oppo smartphones sold by store A = 5000

Total one plus smartphones sold by store A = 8500

Total Nokia smartphones sold by store B = 3000 - 1000 = 2000

Total oppo smartphones sold by stroe $B = 5000 \times (80/100) = 4000$

Total vivo smartphones sold by store $B = (4/10) \times 10000 = 4000$

Total Iphone sold by store $B = (3/10) \times 10000 = 3000$

Total One plus smartphones sold by store $B = (3/10) \times 10000 = 3000$

∴. Required difference = (4000 + 8500) – (4000 + 3000) = 5500

Q304. Total number of iPhones sold by store A is approximately what percent more than that of the total number of iPhones sold by store B?

1) 17%

2) 36%



- 5) 40%
- 4) 22%
- 5) 19%
- Answer: 1

Solution

Total smartphones sold by store A = $40000 \times (3/5) = 24000$

Total smartphones sold by store $B = 40000 \times (2/5) = 16000$

Let the number of Nokia smartphones sold by store A = x

So, total Vivo smartphones sold by store A = 4/3x (33 1/3% more than nokia smartphones)

Total Iphones sold by store A = x + 500

Total Oppo smartphones sold by store A = 5x/3 (66 2/3% more than Nokia smartphones)

Total one plus smartphones sold by store A = (5x/3) + 3500

Now according to question,

$$(X + (4x/3) + (x + 500) + (5x/3) + (5x/3 + 3500)) = 24000$$

 $\Rightarrow (3x + 4x + 3x + 1500 + 5x + 5x + 10500) = 72000$

⇒ 20x = 60000

number of Nokia smartphones sold by store A = 3000

total Vivo smartphones sold by store A = 4000

Total Iphones sold by store A = 3500

Total Oppo smartphones sold by store A = 5000

Total one plus smartphones sold by store A = 8500

Total Nokia smartphones sold by store B = 3000 – 1000 = 2000

Total oppo smartphones sold by stroe B = $5000 \times (80/100) = 4000$

Total vivo smartphones sold by store $B = (4/10) \times 10000 = 4000$

Total Iphone sold by store $B = (3/10) \times 10000 = 3000$

Total One plus smartphones sold by store $B = (3/10) \times 10000 = 3000$

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 \therefore Required percentage = (500/3000) × 100

= 16.66% ≈ 17%

Q305. Find the ratio of the number of Oppo and Nokia smartphones sold by store A to number of Vivo and one plus smartphones sold by store B?

1) 4 : 3

- 2) 8 :7
- 3) 3 : 2
- 4) 5 : 3

5) 9 : 8

Answer: 2

Solution:

Total smartphones sold by store $A = 40000 \times (3/5) = 24000$

Total smartphones sold by store $B = 40000 \times (2/5) = 16000$

Let the number of Nokia smartphones sold by store A = x

So, total Vivo smartphones sold by store A = 4x/3 (33 1/3% more than nokia smartphones)

Total Iphones sold by store A = x + 500

Total Oppo smartphones sold by store A = 5x/3 (66 2/3% more than Nokia smartphones)

Total one plus smartphones sold by store A = (5x/3) + 3500

Now according to question,

(X + (4x/3) + (x + 500) + (5x/3) + (5x/3 + 3500)) = 24000

 $\Rightarrow (3x + 4x + 3x + 1500 + 5x + 5x + 10500) = 72000$

 $\Rightarrow 20x = 60000$

⇒ X = 3000

number of Nokia smartphones sold by store A = 3000

total Vivo smartphones sold by store A = 4000

Total Iphones sold by store A = 3500

Total Oppo smartphones sold by store A = 5000



Total one plus smartphones sold by store A = 8500 Total Nokia smartphones sold by store B = 3000 - 1000 = 2000Total oppo smartphones sold by stroe B = $5000 \times (80/100) = 4000$ Total vivo smartphones sold by store B = $(4/10) \times 10000 = 4000$ Total Iphone sold by store B = $(3/10) \times 10000 = 3000$ Total One plus smartphones sold by store B = $(3/10) \times 10000 = 3000$ \therefore Required ratio = (5000 + 3000) : (4000 + 3000)

⇒8000 : 7000

⇒8:7

Directions(306 –310): Number of songs recorded by Neha Kakkar in 2018 is 1200.Number of songs recorded by Sunanda Sharma and Dhavani bhanusali in 2020 is 4: 5.Total number of songs recorded in 2019 is 300% more than the songs recorded by Dhavani Bhanusali in 2019.Total songs recorded by SunandaSharma in all three years is 1500.Averagenumber of songs recorded in 2020 is 5/4 th of songs recorded by Dhavani Bhanusali in 2018.Songs recorded by Dhavani bhanusali in 2019 is 300% more than the songs recorded by Dhavani bhanusali in 2018. Total songs recorded in 2018 is 300% more than the songs recorded by Ahavani bhanusali in 2019 and songs recorded by Sunanda Sharma in 2018 is 50% less than the songs recorded by Dhavani Bhanusli in the same year. The ratio of songs recorded by Neha Kakkar and Sunanda Sharma in 2019 is 5: 1

Q306. What is the difference of the average number of songs recorded by Sunanda sharma in 2018 and 2019 and average number of songs recorded by Neha kakkar and Dhavani Bhanusali in 2020?

1) 750

2) 650

- 3) 850
- 4) 950
- 5) 550

Answer: 1

Solution:

Number of songs recorded by Neha kakkar in 2018 = 1200

Number of songs recorded by Dhavani bhanusali in $2019 = 1200 \times (1/2) = 600$

Total songs recorded in 2018 = 600 × (400/100) = 2400



Let the number of songs recorded by Dhavani bhanusali in 2018 is x

X + (50x/100) + 1200 = 2400

 \Rightarrow X = 800

 \therefore number of songs recorded by Dhavani bhanusali and Sunanda sharma in 2018 are 800 and 400

Total number of songs recorded in $2019 = (400/100) \times 600 = 2400$

Number of songs recorded by Neha Kakkar in $2019 = (2400 - 600) \times (5/6) = 1500$

Number of songs recorded by Sunanda sharma in $2019 = (2400 - 600) \times (1/6) = 300$

Total number of songs recorded in $2020 = 3 \times 5/4 \times 800 = 3000$

Total number of songs recorded by Sunanda sharma in 2020 = 1500 – 400 - 300 = 800

Total number of songs recorded by Dhavani bhanusali in $2020 = 800 \times (5/4) = 1000$

Number of songs recorded by Neha kakkar in 2020 = 3000 - 800 - 1000 = 1200

∴ required difference = (1200 + 1000)/2 - (400 + 300)/2

⇒2200/2 - 700/2

⇒1100 - 350

⇒750

Q307. Number of songs recorded by Dhavani Bhanusali in all years is what percent of total songs recorded in 2018?

1) 125%

2) 100%

3) 50%

4) 25%

5) 75%

Answer: 2

Solution:

Number of songs recorded by Neha kakkar in 2018 = 1200

Number of songs recorded by Dhavani bhanusali in $2019 = 1200 \times (1/2) = 600$

Total songs recorded in 2018 = 600 × (400/100) = 2400



Let the number of songs recorded by Dhavani bhanusali in 2018 is x

X + (50x/100) + 1200 = 2400

 \Rightarrow X = 800

 \therefore number of songs recorded by Dhavani bhanusali and Sunanda sharma in 2018 are 800 and 400

Total number of songs recorded in $2019 = (400/100) \times 600 = 2400$

Number of songs recorded by Neha Kakkar in $2019 = (2400 - 600) \times (5/6) = 1500$

Number of songs recorded by Sunanda sharma in $2019 = (2400 - 600) \times (1/6) = 300$

Total number of songs recorded in $2020 = 3 \times 5/4 \times 800 = 3000$

Total number of songs recorded by Sunanda sharma in 2020 = 1500 - 400 - 300 = 800

Total number of songs recorded by Dhavani bhanusali in $2020 = 800 \times (5/4) = 1000$

Number of songs recorded by Neha kakkar in 2020 = 3000 - 800 - 1000 = 1200

∴Required percentage = (800 + 600 + 1000)/ (1200 + 800 + 400) × 100 = 100%

Q308. What is the ratio of total number of songs recorded in 2020 to total number of songs recorded in 2021 if total number of songs recorded in 2021 is 150% of songs recorded in 2019?

1) 5 : 6 2) 6 : 5 An Initiative by STARCSON 3) 7 : 5 4) 9 : 5 5) 11 : 7 Answer: 1 Solution: Number of songs recorded by Neha kakkar in 2018 = 1200 Number of songs recorded by Dhavani bhanusali in 2019 = $1200 \times (1/2) = 600$ Total songs recorded in 2018 = $600 \times (400/100) = 2400$ Let the number of songs recorded by Dhavani bhanusali in 2018 is x X + (50x/100) + 1200 = 2400 $\Rightarrow X = 800$



∴ number of songs recorded by Dhavani bhanusali and Sunanda sharma in 2018 are 800 and 400 Total number of songs recorded in 2019 = $(400/100) \times 600 = 2400$ Number of songs recorded by Neha Kakkar in 2019 = $(2400 - 600) \times (5/6) = 1500$ Number of songs recorded by Sunanda sharma in 2019 = $(2400 - 600) \times (1/6) = 300$ Total number of songs recorded in 2020 = $3 \times 5/4 \times 800 = 3000$ Total number of songs recorded by Sunanda sharma in 2020 = 1500 - 400 - 300 = 800Total number of songs recorded by Dhavani bhanusali in 2020 = $800 \times (5/4) = 1000$ Number of songs recorded by Neha kakkar in 2020 = 3000 - 800 - 1000 = 1200Number of songs recorded in 2021 = $2400 \times (150/100) = 3600$ ∴Required ratio = 3000 : 3600 = 5 : 6Q309. Average number of songs recorded by Neha Kakkar in all the years is what percent more and less than average number of songs recorded in 2019?

- 1) 58.5%
- 2) 87.5%
- 3) 72.5%
- 4) 67.5%

5) 62.5%

Answer: 5

Solution:

Number of songs recorded by Neha kakkar in 2018 = 1200

Number of songs recorded by Dhavani bhanusali in $2019 = 1200 \times (1/2) = 600$

Total songs recorded in 2018 = 600 × (400/100) = 2400

Let the number of songs recorded by Dhavani bhanuslai in 2018 is x

X + (50x/100) + 1200 = 2400

 \therefore number of songs recorded by Dhavani bhanusali and Sunanda sharma in 2018 are 800 and 400

Total number of songs recorded in $2019 = (400/100) \times 600 = 2400$



Number of songs recorded by Neha Kakkar in 2019 = $(2400 - 600) \times (5/6) = 1500$ Number of songs recorded by Sunanda sharma in 2019 = $(2400 - 600) \times (1/6) = 300$ Total number of songs recorded in 2020 = $3 \times 5/4 \times 800 = 3000$ Total number of songs recorded by Sunanda sharma in 2020 = 1500 - 400 - 300 = 800Total number of songs recorded by Dhavani bhanusali in 2020 = $800 \times (5/4) = 1000$ Number of songs recorded by Neha kakkar in 2020 = 3000 - 800 - 1000 = 1200Average number of songs recorded by Neha Kakkar = (1200 + 1500 + 1200)/3 = 1300average number of songs recorded in 2019 = (1500 + 600 + 300)/3 = 800 \therefore Required percentage = $(1300 - 800)/800 \times 100 = 62.5\%$

Q310. Average number of songs recorded by all in all three years is how much more than average number of songs recorded by Sunanda sharma and Dhavani bhanusali in 2019?

1) 2150

- 2) 2050
- 3) 2200
- 4) 3350
- 5) 920

Answer: 1

Solution:

Number of songs recorded by Neha kakkar in 2018 = 1200

Number of songs recorded by Dhavani bhanusali in $2019 = 1200 \times (1/2) = 600$

Total songs recorded in 2018 = 600 × (400/100) = 2400

Let the number of songs recorded by Dhavani bhanusali in 2018 is x

 \Rightarrow X + (50x/100) + 1200 = 2400

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\Rightarrow X = 800
```

∴ number of songs recorded by Dhavani bhanusali and Sunanda sharma in 2018 are 800 and 400

Total number of songs recorded in $2019 = (400/100) \times 600 = 2400$

Number of songs recorded by Neha Kakkar in $2019 = (2400 - 600) \times (5/6) = 1500$



Number of songs recorded by Sunanda sharma in $2019 = (2400 - 600) \times (1/6) = 300$ Total number of songs recorded in $2020 = 3 \times 5/4 \times 800 = 3000$ Total number of songs recorded by Sunanda sharma in 2020 = 1500 - 400 - 300 = 800Total number of songs recorded by Dhavani bhanusali in $2020 = 800 \times (5/4) = 1000$ Number of songs recorded by Neha kakkar in 2020 = 3000 - 800 - 1000 = 1200 \therefore Required difference = (3900 + 2400 + 1500)/3 - (300 + 600)/2 $\Rightarrow 2600 - 450$

⇒2150

Directions (311 -315): In a school of 600 students the girls and the boys are in the ratio of 7: 5 respectively. The students can speak only Hindi or only English or both languages. The number of boys and number of girls who can speak only Hindi is equal and each of which is 20% total number of girls.20% of girls can speak both the language and 36% of boys can speak only English.

Q311. How many girls can speak only English?—

2) 205
3) 220
4) 335
5) 210
Answer: 5
Solution:
Total studnets in school = 600
Total girls = (7/12) × 600 = 350
Total boys = (5/12) × 600 = 250
Number of boys speak only hindi = $350 \times (20/100) = 70$
Number of girls speak only hindi = 350 × (20/100) = 70
Number of girls speak both language = (20/100) × 350 = 70

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Number of boys speak only $English = (36/100) \times 250 = 90$

: Number of girls speak only English = 350 - 70 - 70 = 210

Q312. In all how many boys can speak hindi?

1) 215

2) 160

3) 210

4) 180

5) 210

Answer: 2

Solution:

Total studnets in school = 600

Total girls = $(7/12) \times 600 = 350$

Total boys = (5/12) × 600 = 250

Number of boys speak only hindi = $350 \times (20/100) = 70$

Number of girls speak only hindi = 350 × (20/100) = 70

Number of girls speak both language = $(20/100) \times 350 = 70$

Number of boys speak only English = (36/100) × 250 = 90

Number of boys speak both langauges = 250 - 70 - 90 = 90

 \therefore total number of boys who speak hindi = 70 + 90 = 160

Q313. What approximate percentage of all the students (Boys and Girls) together can speak only hindi?

1) 17%

- 2) 29%
- 3) 32%
- 4) 23%

5) 21%

Answer: 4



Total studnets in school = 600 Total girls = $(7/12) \times 600 = 350$ Total boys = $(5/12) \times 600 = 250$ Number of boys speak only hindi = $350 \times (20/100) = 70$ Number of girls speak only hindi = $350 \times (20/100) = 70$ Number of girls speak both language = $(20/100) \times 350 = 70$ Number of boys speak only English = $(36/100) \times 250 = 90$ Totl number of students who speak only Hindi = 70 + 70 = 140 Total students in school = 600 : required percentage = $(140/600) \times 100 = 23.33\% \approx 23\%$ Q314. In all how many students (Boys and Girls) can speak both the languages? 1) 190 2) 170 3) 220 4) 160 5) 210 Answer: 4 Solution: Total students in school = 600 Total girls = $(7/12) \times 600 = 350$ Total boys = $(5/12) \times 600 = 250$ Number of boys speak only hindi = $350 \times (20/100) = 70$ Number of girls speak only hindi = $350 \times (20/100) = 70$ Number of girls speak both language = $(20/100) \times 350 = 70$ Number of boys speak only English = $(36/100) \times 250 = 90$

: Total number of students can speak both the languages = 70 + 90 = 160



Q315. How many boys can speak either hindi or only English?

1) 145

2) 200

3) 90

4) 225

5) 160

Answer: 5

Solution:

Total studnets in school = 600

Total girls = $(7/12) \times 600 = 350$

Total boys = (5/12) × 600 = 250

Number of boys speak only hindi = $350 \times (20/100) = 70$

Number of girls speak only hindi = $350 \times (20/100) = 70$

Number of girls speak both language = (20/100) × 350 = 70

Number of boys speak only English = (36/100) × 250 = 90

 \therefore Total boys who can speak either only hindi or only english= 70 + 90 = 160

Directions (316 – 320) :Study the following pie chart carefully to answer these questions. Percentage distribution of students in different courses.



Q316. What is the value of half of the difference the number of students in BCOM and MBA?



Solution:

Total number of students in BCOM = $(21/100) \times 7200 = 1512$

Total number of students in MBA = (19/100) × 7200 = 1368

Required difference = (1512 – 1368)/2 = 144/2 = 72

Q317. How much more percentage(approximately) of students are in MBA as compared to students in BSC?

- 1) 78%
- 2) 45%
- 3) 58%
- 4) 50%



5) 68%

Answer: 3

Solution:

Total number of students in MBA = (19/100) × 7200 = 1368

Total number of students in BSC = (12/100) × 7200 = 864

Required percentage = (1368 – 864)/864 × 100 = 58.33% ≈ 58%

Q318. What is the total number of students in BSC ,BCA and BCOM together?

- 1) 3288
- 2) 2685
- 3) 2563
- 4) 3312
- 5) 4123
- Answer: 4

Solution:

Total number of students in BSC = (12/100) × 7200 = 864 and initiative by Collection of the students in BSC = (12/100) × 7200 = 864 and initiative by Collection of the students in BSC = (12/100) × 7200 = 864 and initiative by Collection of the students in BSC = (12/100) × 7200 = 864 and initiative by Collection of the students in BSC = (12/100) × 7200 = 864 and initiative by Collection of the students in BSC = (12/100) × 7200 = 864 and initiative by Collection of the students in BSC = (12/100) × 7200 = 864 and initiative by Collection of the students in BSC = (12/100) × 7200 = 864 and initiative by Collection of the students in BSC = (12/100) × 7200 = 864 and initiative by Collection of the students in BSC = (12/100) × 7200 = 864 and initiative by Collection of the students in BSC = (12/100) × 7200 = 864 and initiative by Collection of the students in BSC = (12/100) × 7200 = 864 and initiative by Collection of the students in BSC = (12/100) × 7200 = 864 and initiative by Collection of the students in BSC = (12/100) × 7200 = 864 and initiative by Collection of the students in BSC = (12/100) × 7200 = 864 and initiative by Collection of the students in BSC = (12/100) × 7200 = 864 and initiative by Collection of the students in BSC = (12/100) × 7200 = 864 and initiative by Collection of the students in BSC = (12/100) × 7200 = 864 and initiative by Collection of the students in BSC = (12/100) × 7200 = 864 and initiative by Collection of the students in BSC = (12/100) × 7200 = 864 and initiative by Collection of the students in BSC = (12/100) × 7200 = 864 and initiative by Collection of the students in BSC = (12/100) × 7200 = 864 and initiative by Collection of the students in BSC = (12/100) × 7200 = 864 and initiative by Collection of the students in BSC = (12/100) × 7200 = 864 and initiative by Collection of the students in BSC = (12/100) × 7200 = 864 and initiative by Collection of the students in BSC = (12/100) × 7200 = 864 and initiative by Collection of the students in BSC = (12/100) × 7200 = 864 and initiative

Total number of students in BCA = (13/100) × 7200 = 936

Total number of students in BCOM = (21/100) × 7200 = 1512

Required answer = 864 + 936 + 1512 = 3312

Q319. What is the respective ratio between the number of students in BCA and the number of students in BTECH?

1)91 : 119

2) 117 : 324

3) 79 : 157

4)119 : 205

5)117 : 162

Answer: 5

Solution:



Total number of students in BCA = (13/100) × 7200 = 936

Total number of students in BTECH = (18/100) × 7200 = 1296

Required ratio = 936 : 1296 = 117 : 162

Q320. Number of students in BA is approximately what percentage of the number of students in BSC?

1) 21%

2) 142 %

3) 78 %

4) 71%

5) 126%

Answer: 2

Solution:

Total number of students in BA = $(17/100) \times 7200 = 1224$

Total number of students in BSC = (12/100) × 7200 = 864

Required percentage = (1224/864) × 100 = 141.66% ≈ 142%

Directions(321-325): Study the following information carefully to answer the questions given belowit:

Total number of Boys and Girls in five different branches

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Q321. The number of girls from Mechanical is approximately what percent of total number of girls from all the Branches together?



3) 78



Required average = 780/5 = 156

Q324. The number of boys from IT branch is approximately what percent of the total number of boys from all the branches together?

1) 23%

2) 42 %

3) 28 %

4) 31%

5) 36%

Answer: 1

Solution:

Total number of boys from IT branch = 180



Total number of boys from all the branches = 130 + 240 + 140 + 120 + 150 = 780

Required percentage = $(180/780) \times 100 = 23.07\% \approx 23\%$

Q325.What is the respective ratio of number of girls from CS branch to the number of girls from Chemical branch?

1)21:29

2) 13 : 19

3) 13 : 24

4)24:13

5)19 : 13

Answer: 4

Solution:

Total number of girls from CS branch = 240

Total number of girls from Chemical branch = 130

Required ratio = 240 : 130 = 24 : 13

Directions(326-330): Study the following information carefully and answer the related questions. Following First bar graph represents the data regarding difference between monthly expenditure and monthly savings of five employees in three different months and second bar graph represents the 40% of monthly income of these employees.







Q326. In October, Expenditure of B and D are more than their savings, If B gives 35% of his savings into charity and D gives 40% of his savings into charity, then what is the ratio of remaining amount saved by B to remaining amount saved by D in October?

1)53 : 58

2)45:49

3) 91 : 48



4)81 : 38

5) 88 : 91

Answer: 3

Solution:

Employee	Monthly Income	Difference between expenditure and savings			
		August	September	October	
А	(20000/40) × 100 =	10000	6000	20000	
	50000				
В	(25600/40) × 100 =	4000	16000	8000	
	64000				
С	(17600/40) × 100 =	4000	16000	8000	
	44000				
D	(16000/40) × 100 =	10000	4000	8000	
	40000				
E	(19200/40) × 100 =	2000	8000	12000	
	48000				

In October,

Expenditure of B + Savings of B = 64000

Expenditure of B - Savings of B = 8000

Savings of B = 56000/2 = 28000

Then , remaining amount saved by B = $(100 - 35)/100 \times 28000 = 18200$

In October,

Expenditure of D + Savings of D = 40000

Expenditure of D - Savings of D = 8000

Savings of B = 32000/2 = 16000

Then , remaining amount saved by $B = (100 - 40)/100 \times 16000 = 9600$

∴Required ratio = 18200 : 9600

 \Rightarrow 91 : 48

Q327. Expenditure of C in August , September and October are in the ratio 10 : 15 : 13respectively, if C saves Rs 18000 in October , then his total savings in September is approximately what percent of his total savings in August?

1)75%

An Initiative by 31433316



2)62%

3) 68%

4)45%

5) 58%

Answer: 5

Solution:

Employee	Monthly Income	Difference between expenditure and savings			
		August	September	October	
A	(20000/40) × 100 = 50000	10000	6000	20000	
В	(25600/40) × 100 = 64000	4000	16000	8000	
С	(17600/40) × 100 = 44000	4000	16000	8000	
D	(16000/40) × 100 = 40000	10000	4000	8000	
E	(19200/40) × 100 = 48000	2000	8000	12000	

Savings of C in October = 18000

Then, expenditure of C in October = 44000 – 18000 = 26000 Initiative by 314 Fe35 51101

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Expenditure of C in August = (26000/13) × 10 = 20000

Then, Savings of C in August = 44000 – 20000 = 24000

Expenditure of C in September = (26000/13) × 15 = 30000

Then, Savings of C in September = 44000 – 30000 = 14000

∴Required percentage = (14000/24000) × 100 = 58.33% ≈ 58%

Q328. Expenditure of D in September and savings of C in October are equal, and expenditure of C in October and savings of D in September are in the ratio 13 : 11 respectively. What is the average of savings of D in September and expenditure of C in October taken together?

1)24000

2)15000

3) 19000

4)12000



5) 20000

Answer: 1

Solution:

Employee	Monthly Income	Difference between expenditure and savings			
		August	September	October	
А	(20000/40) × 100 =	10000	6000	20000	
	50000				
В	(25600/40) × 100 =	4000	16000	8000	
	64000				
С	(17600/40) × 100 =	4000	16000	8000	
	44000				
D	(16000/40) × 100 =	10000	4000	8000	
	40000				
E	(19200/40) × 100 =	2000	8000	12000	
	48000				

Let expenditure of D in September = Rs x = Savings of C in October

And savings of D in September = Rs y

Then, expenditure of C in October = 13y/11

Now, Income of D

So, x + y = 40000

X = 40000 - y

And Income of C, x + (13y/11) = 44000

X = 44000 - (13y/11)

X = (484000 - 13y)/11

Now put the value of x

40000 - y = (484000 - 13y)/11

440000 - 11y = 484000 - 13y

2y = 44000

Y = 22000

∴the average of savings of D in September and expenditure of C in October taken together = {22000 + (13 × 22000)/11}/2

⇒ (22000 + 26000)/2

An Initiative by 314233161



⇒ 24000

Q329. In August, If only savings of C is more than their expenditure, then total expenditure of all employees taken together in August are approximately what percent of their savings in the same month?

1)75%

2)150%

3) 90%

4)100%

5) 120%

Answer: 5

Solution:

Employee	Monthly Income	Difference between expenditure and savings				
		August	September	October		
А	(20000/40) × 100 =	10000	6000	20000		
	50000					
В	(25600/40) × 100 =	4000	1600 <mark>0</mark>	8000		
	64000			COM		
С	(1 <mark>76</mark> 00/40) × 100 =	4000	16000	8000		
	44000	An	Initiative by .	समर र चाला		
D	(16000/40) × 100 =	10000	4000	8000		
	40000					
E	(19200/40) × 100 =	2000	8000	12000		
	48000					

In August:

Savings of A = (50000 - 10000)/2 = 20000

Expenditure of A = 50000 - 20000 = 30000

Savings of B = (64000 - 4000)/2 = 30000

Expenditure of B = 64000 - 30000 = 34000

Savings of C = (44000 + 4000)/2 = 24000

Expenditure of C = 44000 – 24000 = 20000

Savings of D = (40000 - 10000)/2 = 15000

Expenditure of D = 40000 - 15000 = 25000



Savings of E = (48000 - 2000)/2 = 23000

Expenditure of A = 48000 - 23000 = 25000

Then, total savings = 20000 + 30000 + 24000 + 15000 + 23000 = 112000

And total expenditure = 30000 + 34000 + 20000 + 25000 + 25000 = 134000

∴Required percentage = (134000/112000) × 100

⇒ 119.64% ≈ 120%

Q330. In September ,40% savings of E is given to his mother and remaining Rs 12000 is saved by him. If B's expenditure is Rs 20000 more than savings of E in September, then what is the respective ratio of expenditure of E to the savings of B in September?

1)9 : 5

2)5:8

- 3)7:6
- 4)6:7
- 5) 8 : 5

Answer: 3

Solution:

An Initiative by 314233101

Employee	Monthly Income	Difference between expenditure and savings		
		August	September	October
A	(20000/40) × 100 = 50000	10000	6000	20000
В	(25600/40) × 100 = 64000	4000	16000	8000
С	(17600/40) × 100 = 44000	4000	16000	8000
D	(16000/40) × 100 = 40000	10000	4000	8000
E	(19200/40) × 100 = 48000	2000	8000	12000

In september,

Savings of E = (12000/60) × 100 = 20000

Then, expenditure of E = 48000 - 20000 = 28000

Now, expenditure of B = 20000 + 20000 = 40000



Then savings of B = 64000 - 40000 = 24000

∴Required ratio = 28000 : 24000

⇒7:6

Directions (331 -335): Study the following information carefully to answer the questions given below it:



Number of students in three different Colleges over the years.

Q331. What was the average number of students in all the Colleges together in the year 2018?

- 1) 1800
- 2) 1600
- 3) 2600
- 4) 1300

5) 1500

Answer: 4



Total students in College A in 2018 = 2000

Total students in College B in 2018 = 3200

Total students in College C in 2018 = 2600

Required average = 7800/6 = 1300

Q332. Total number of students in college B and college C together in the year 2016 was what percentage of the total number of students in college B and college C together in the year 2019?

- 1) 97.5%
- 2) 86%
- 3) 87.5%
- 4) 92.5%
- 5) 98%
- Answer: 3

Solution:

Total number of students in college B in 2016 =1800

Total number of students in college C in 2016 =2400

Total number of students in college B in 2019 = 3000

Total number of students in college C in 2019 =1800

Required percentage = (1800 + 2400)/(3000 + 1800) × 100 = 87.5%

Q333. How many times the total number of students in all the three colleges A, B and C together was exactly equal among the given years?

- 1) Two
- 2) Three
- 3) Four
- 4) One
- 5) None

Answer: 2

An Initiative by **300 3500**



Total students in 2015 = 2300 + 1500 + 2500 = 6300

Total students in 2016 = 2100 +1800 + 2400 = 6300

Total students in 2019 = 1500 + 3000 + 1800 = 6300

Q334. What was the average number of students in college A over all the years together?

- 1) 2100
- 2) 1800
- 3) 1300
- 4) 2400
- 5) 1900

Answer: 2

Solution:

Total students in College A in 2014 = 1100	
Total students in College A in 2015 = 2500	ALIA.COM
Total students in College A in 2016 = 2100	An Initiative by 3대로 3기대
Total students in College A in 2017 = 1600	
Total students in College A in 2018 = 2000	
Total students in College A in 2019 = 1500	

Required average = (1100 + 2500+ 2100 + 1600 + 2000 + 1500)/6 = 10800/6 = 1800

Q335. What was the difference between the total number of students in all the colleges together in year 2015 and number of students in school B in the year 2017?

- 1) 4500
- 2) 4200
- 3) 3300
- 4) 4800
- 5) 4200

Answer: 2



Total students in College A in 2015 = 2500

Total students in College B in 2015 = 1500

Total students in College C in 2015 = 2300

Total number of students in school B in the year 2017 = 2100

Required difference = (2500 + 1500 + 2300) - 2100 = 4200

Directions (336-340): Study the following information carefully to answer the questions given below it:

In a school consisting of 4200 students, the ratio of girls to boys is 5 : 9respectively. All the children have taken different hobby classes viz. Singing, Dancing, Painting and cooking. 25 percent of the boys take painting classes. The number of girls taking dancing classes is two – fifth of the number of boys taking the same. One – third of the girls take cooking classes. The total number of students taking cooking classes is 1200.One – Fifth of the boys take singing classes and remaining boys take dancing classes. The girls taking singing classes is half the number of boys taking the same. The remaining girls take painting classes.

Q336. What is the respective ratio of boys taking painting classes to the boys taking singing classes?

1)8:5 SAFALIA.COM
2) 5 : 4 An Initiative by 3파로 3 기관
3) 4 : 3
4)9 : 5
5)11 : 4
Answer: 2
Solution:
Total number of girls = (5/14) × 4200 = 1500
Total number of Boys = (9/14) × 4200 = 2700
Number of boys in Painting = (25/100) × 2700 = 675
Number of girls in cooking classes = $(1/3) \times 1500 = 500$
Number of boys in cooking classes = 1200 – 500 = 700
Number of boys in singing classes = $(1/5) \times 2700 = 540$



Number of boys in dancing classes = 2700 - (675 + 700 + 540) = 785

Number of girls in singing = 540/2 = 270

Number of girls in dancing = $(2/5) \times 785 = 314$

Number of girls in paining classes = 1500 - (500 + 270 + 314) = 416

Therefore required ratio = 675 : 540 = 5 : 4

Q337. The number of girls taking cooking classes is what percent(approximate) of the total number of students in the school?

- 1) 12%
- 2) 18%
- 3) 10%
- 4) 15%
- 5) 24%
- Answer: 1

Solution:

Total number of girls = $(5/14) \times 4200 = 1500$ Total number of Boys = $(9/14) \times 4200 = 2700$ Number of boys in Painting = $(25/100) \times 2700 = 675$ Number of girls in cooking classes = $(1/3) \times 1500 = 500$ Number of boys in cooking classes = 1200 - 500 = 700Number of boys in singing classes = $(1/5) \times 2700 = 540$

Number of boys in dancing classes = 2700 - (675 + 700 + 540) = 785

Number of girls in singing = 540/2 = 270

Number of girls in dancing = $(2/5) \times 785 = 314$

Number of girls in paining classes = 1500 - (500 + 270 + 314) = 416

Therefore required percentage = $(500/4200) \times 100 = 11.90\% \approx 12\%$

Q338. The number of boys taking cooking classes is approximately what percent of the total number of students taking painting classes ?

SAFALTA .COM 1) 45% 2) 42% 3) 33% 4) 64% 5) 42% Answer: 4 Solution: Total number of girls = $(5/14) \times 4200 = 1500$ Total number of Boys = $(9/14) \times 4200 = 2700$ Number of boys in Painting = $(25/100) \times 2700 = 675$ Number of girls in cooking classes = $(1/3) \times 1500 = 500$ Number of boys in cooking classes = 1200 - 500 = 700Number of boys in singing classes = $(1/5) \times 2700 = 540$ Number of boys in dancing classes = 2700 - (675 + 700 + 540) = 785 Number of girls in singing = 540/2 = 270Number of girls in dancing = $(2/5) \times 785 = 314$ Number of girls in paining classes = 1500 - (500 + 270 + 314) = 416Required percentage = $700/(675 + 416) \times 100 = 64.16\% \approx 64\%$ Q339. What is the number of students taking dancing classes? 1) 2103 2) 1258 3) 2156 4) 1023 5) 1099 Answer: 5 Solution:



Total number of girls = $(5/14) \times 4200 = 1500$ Total number of Boys = (9/14) × 4200 = 2700 Number of boys in Painting = $(25/100) \times 2700 = 675$ Number of girls in cooking classes = $(1/3) \times 1500 = 500$ Number of boys in cooking classes = 1200 - 500 = 700Number of boys in singing classes = $(1/5) \times 2700 = 540$ Number of boys in dancing classes = 2700 - (675 + 700 + 540) = 785 Number of girls in singing = 540/2 = 270Number of girls in dancing = $(2/5) \times 785 = 314$ Number of girls in paining classes = 1500 - (500 + 270 + 314) = 416Therefore required answer = 785 + 314 = 1099 Q340. What is the number of girls taking paining classes? 1) 416 2) 420 3) 330 An Initiative by 31मर 3 3 1 4) 480 5) 420 Answer: 1 Solution: Total number of girls = $(5/14) \times 4200 = 1500$ Total number of Boys = (9/14) × 4200 = 2700 Number of boys in Painting = $(25/100) \times 2700 = 675$ Number of girls in cooking classes = $(1/3) \times 1500 = 500$ Number of boys in cooking classes = 1200 - 500 = 700Number of boys in singing classes = $(1/5) \times 2700 = 540$ Number of boys in dancing classes = 2700 - (675 + 700 + 540) = 785 Number of girls in singing = 540/2 = 270



Number of girls in dancing = $(2/5) \times 785 = 314$

Number of girls in paining classes = 1500 - (500 + 270 + 314) = 416

Required answer = 416

Directions(341-345) : Study the given line graph carefully to answer the questions:

Number of Flights cancelled from three countries in five different months.



Q341. What is the Average number of flights cancelled from Country B over all the months together?

- 1) 45
- 2) 35
- 3) 30
- 4) 40
- 5) 25

Answer: 3

Solution:

Number of flights cancelled from Country B over all the months = 45 + 15 + 20 + 30 + 40

= 150

 \therefore Required average = 150/5= 30



Q342.What is the respective ratio between the number of flights cancelled from Country A in the month of April and the number of flights cancelled form Country C in the month of May?

1) 9 : 5

2) 7 : 4

- 3) 5 : 3
- 4) 5 : 2

5) 3 : 2

Answer: 3

Solution:

Number of flights cancelled from Country A in the month of April =25

Number of flights cancelled form Country C in the month of May = 15

 $\therefore \text{Required Ratio} = 25 : 15 = 5 : 3$

Q343. Number of flights cancelled from country B in the month of March was what percent of the number of flights cancelled from country C in the month of January?

1) 75%

2) 25%

- 3) 30%
- 4) 40%
- 5) 50%

Answer: 5

Solution:

Number of flights cancelled from country B in the month of March = 20

Number of flights cancelled from country C in the month of January = 40

 \therefore Required percentage = (20/40) × 100= 50%



Q344. What is the difference between the total numbers of flights cancelled from all the three countries in the month of May and number of flights cancelled from country B in the month of January?

1) 40

- 2) 30
- 3) 50

4) 45

5) 35

Answer: 1

Solution:

Total numbers of flights cancelled from all the three countries in the month of May= 30 + 40 + 15 = 85

Number of flights cancelled from country B in the month of January = 45

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\thereforeRequired difference = 85 – 45 = 40
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Q345. Which month was the second highestnumber of flights cancelled from all the countries together?

1) January

2) February

3) March

4)April

5) May

Answer: 1

Solution:

January = 15 + 45 + 40 = 100

February = 20 + 15 + 50 = 85

March = 40 + 20 + 65 = 125



April = 25 + 30 + 30 = 85

May = 30 + 40 + 15 = 85

Hence, January is 2nd highest flight cancellation month.

Direction(346-350): Given below is the table which shows the total Mobile in five stores from which some are of Motorola and some are of Lenovo and the table also shows the mobile which is not sold.

Mobile Store	Total Mobile	Mobile which are	(Ratio between the sold mobile)
		not sold	Motorola : Lenovo
A	420	119	4:3
В	330	88	7:4
C	240	110	8:5
D	125	45	2:3
E	390	130	8:5

Q-346) What is the total Motorola mobile sold from store B, C, and E together?



Solution:

Mobile	Total	Mobile	Sold	sold mobile	sold mobile Lenovo
Store	Mobile	which are	mobile	Motorola	
		not sold			
A	420	119	301	$\frac{301}{7} \times 4 = 172$	$\frac{301}{7} \times 3 = 129$
В	330	88	242	$\frac{242}{11} \times 7 = 154$	$\frac{242}{11} \times 4 = 88$
С	240	110	130	$\frac{130}{13} \times 8 = 80$	$\frac{130}{13} \times 5 = 50$
D	125	45	80	$\frac{80}{5} \times 2 = 32$	$\frac{80}{5} \times 3 = 48$
E	390	130	260	$\frac{260}{13} \times 8 = 160$	$\frac{260}{13} \times 5 = 100$



Total Motorola mobile sold from store B, C, and E = 154 + 80 + 160 = 394

Hence the correct answer is 394

Q-347) what is the ratio between the total mobile sold to the total mobile unsold from Store "C"?

- A) 9:7
- B) 11:13
- C) 13:11
- D) 7:9
- E) None of these

Solution:

Mobile Store	Total Mobile	Mobile which are	Sold mobile	sold mobile Motorola	sold mobile Lenovo
A	420	119	301	$\frac{301}{7} \times 4 = 172$	$\frac{301}{7} \times 3 = 129$
В	<mark>33</mark> 0	88	242	$\frac{242}{11} \times 7 = 154$	$\frac{242}{11} \times 4 = 88$
С	240	110	130	$\frac{130}{13} \times 8 = 80$	$\frac{130}{13} \times 5 = 50$
D	125	45	80	$\frac{80}{5} \times 2 = 32$	$\frac{80}{5} \times 3 = 48$
E	390	130	260	$\frac{260}{13} \times 8 = 160$	$\frac{260}{13} \times 5 = 100$

Ratio between total mobile sold to the total mobile unsold from Store C

= total mobile soldfrom Store C : to the total mobile unsoldfrom Store C

= 130 : 110

= 13 : 11

Hence the correct answer is 13:11



Q-348) what is the average of total Motorola mobile sold from all Store? (You don't have to answer the exact answer)

- A) 117
- B) 120
- C) 130
- D) 125
- E) 116

Solution:

Mobile	Total	Mobile	Sold	sold mobile	sold mobile Lenovo
Store	Mobile	which are	mobile	Motorola	
		not sold			
A	420	119	301	$\frac{301}{7} \times 4 = 172$	$\frac{301}{7} \times 3 = 129$
В	330	88	242	$\frac{242}{11} \times 7 = 154$	$\frac{242}{11} \times 4 = 88$
C	240		130	$\frac{130}{13} \times 8 = 80$	$\frac{130}{13} \times 5 = 50$
D	125	45	80	$\frac{80}{5} \times 2 = 32$	$\frac{80}{5} \times 3 = 48$
E	390	130	260	$\frac{260}{13} \times 8 = 160$	$\frac{260}{13} \times 5 = 100$

Average of Motorola mobile sold from all store

 $=\frac{172+154+80+32+160}{5} = \frac{598}{5}$ = 119.6= 120

Hence the correct answer is 120

Q-349) If store F have 25% more Mobile then "C" and store F unable to sold 100 mobile then how many mobile does F sold?

- A) 150
- B) 175
- C) 200
- D) 250



Mobile	Total	Mobile	Sold	sold mobile	sold mobile Lenovo
Store	Mobile	which are	mobile	Motorola	
		not sold			
A	420	119	301	$\frac{301}{7} \times 4 = 172$	$\frac{301}{7} \times 3 = 129$
В	330	88	242	$\frac{242}{11} \times 7 = 154$	$\frac{242}{11} \times 4 = 88$
С	240	110	130	$\frac{130}{13} \times 8 = 80$	$\frac{130}{13} \times 5 = 50$
D	125	45	80	$\frac{80}{5} \times 2 = 32$	$\frac{80}{5} \times 3 = 48$
E	390	130	260	$\frac{260}{13} \times 8 = 160$	$\frac{260}{13} \times 5 = 100$

F has 25% more Mobile then "C" = $\frac{240}{100} \times 125 = 300$

Total mobile of F = 300

An Initiative by 314233161

Total mobile = Sold + unsold Accor. to question, 300 = 100 + soldsold = 300 - 100Total mobile sold = 200

Hence, the correct answer is 200 mobile

Q-350) Total sold mobile from C and E is how much more than the mobile unsold from C?

- A) 20
- B) 25
- C) 35
- D) 30
- E) 40

Solution:


Mobile	Total	Mobile	Sold	sold mobile	sold mobile Lenovo
Store	Mobile	which are	mobile	Motorola	
		not sold			
A	420	119	301	$\frac{301}{7} \times 4 = 172$	$\frac{301}{7} \times 3 = 129$
В	330	88	242	$\frac{242}{11} \times 7 = 154$	$\frac{242}{11} \times 4 = 88$
С	240	110	130	$\frac{130}{13} \times 8 = 80$	$\frac{130}{13} \times 5 = 50$
D	125	45	80	$\frac{80}{5} \times 2 = 32$	$\frac{80}{5} \times 3 = 48$
E	390	130	260	$\frac{260}{13} \times 8 = 160$	$\frac{260}{13} \times 5 = 100$

Total sold mobile from C and E = 50 +100

= 150

Mobile unsold from C = 110

Difference between total sold mobile from C and E and mobile unsold from C = 150 – 110

= 40 mobile

Hence, the correct answer is 40 mobile

An Initiative by **3HC33ICII**

Direction(351-355): Study the following information carefully and answer the question.

The table shows the total number of student of four different schools who give 12thexam who passed and the ratio of boys and girls who passed in exam.

School	Total student	% of student who	(Ratio of student who passed) Boys:
		passed	girls
А	600	90%	5:4
В	480	60%	2:1
С	1500	50%	1:1
D	1250	80%	2:3



Q-351) Total boys passed in class A and D together is what percentage of total student failed in class D?

- A) 200%
- B) 220%
- C) 280%
- D) 230%
- E) 270%

Solution:

School	Total	% of student who	passed Boys	Passed girls	Student Failed
	student	passed			
A	600	$90\% = \frac{600}{100} \times 90 = 540$	$\frac{540}{9} \times 5 = 300$	$\frac{540}{9} \times 4 = 240$	600 – 540 = 60
В	480	$60\% = \frac{480}{100} \times 60 = 288$	$\frac{288}{3} \times 2 = 192$	$\frac{288}{3} \times 1 = 96$	480 – 288 = 192
С	1500	$50\% = \frac{1500}{100} \times 50 = 750$	375	375	1500 – 750 =750
D	1250	$80\% = \frac{1250}{100} \times 80 = 1000$	$\frac{1000}{5} \times 2 = 400$	$\frac{1000}{5} \times 3 = 600$	1250 – 1000 = 250

Boys passed in class A and D = 300+400

= 700

Percentage of total student failed in class D = $\frac{700}{250} \times 100 = 280\%$

Hence the correct answer is 280%

Q-352) what is the total number of girls Passed in class B?

- A) 240
- B) 96
- C) 375
- D) 600
- E) None of these

Solution:

School	Total	% of student who	passed Boys	Passed girls	Student Failed
	student	passed			
А	600	$90\% = \frac{600}{100} \times 90 = 540$	$\frac{540}{2} \times 5 = 300$	$\frac{540}{2} \times 4 = 240$	600 - 540 = 60
			9	9	



В	480	$60\% = \frac{480}{100} \times 60 = 288$	$\frac{288}{3} \times 2 = 192$	$\frac{288}{3} \times 1 = 96$	480 - 288 = 192
С	1500	$50\% = \frac{1500}{100} \times 50 = 750$	375	375	1500 - 750 =750
D	1250	$80\% = \frac{1250}{100} \times 80 = 1000$	$\frac{1000}{5} \times 2 = 400$	$\frac{1000}{5} \times 3 = 600$	1250 - 1000 = 250

Hence, the correct answer is 96

Q-353) what is the ratio of boys passed in class C and the girls who passed in class D?

- A) 5:8
- B) 8:5
- C) 4:1
- D) 1:4
- E) None of these

			- / \		
School	Total	% of student who	passed Boys	Passed girls	Student Failed
	student	passed			/ I Y I
A	600	$90\% = \frac{600}{100} \times 90 = 540$	$\frac{540}{9} \times 5 = 300$	$\frac{540}{9} \times 4 = 240$	600 – 540 = 60
В	480	$60\% = \frac{480}{100} \times 60 = 288$	$\frac{288}{3} \times 2 = 192$	$\frac{288}{3} \times 1 = 96$	480 – 288 = 192
С	1500	$50\% = \frac{1500}{100} \times 50 = 750$	375	375	1500 – 750 =750
D	1250	$80\% = \frac{1250}{100} \times 80 = 1000$	$\frac{1000}{5} \times 2 = 400$	$\frac{1000}{5} \times 3 = 600$	1250 - 1000 = 250

The ratio of boys passed in class C = 375

The girls who passed in class D = 600

Ratio = 375: 600

= 5: 8

Hence, the correct answer is 5:8



Q-354) what is the sum of boys passed in all the school?

- A) 1276
- B) 1267
- C) 1000
- D) 1200
- E) 1076

Solution:

School	Total	% of student who	passed Boys	Passed girls	Student Failed
	student	passed			
A	600	$90\% = \frac{600}{100} \times 90 = 540$	$\frac{540}{9} \times 5 = 300$	$\frac{540}{9} \times 4 = 240$	600 – 540 = 60
В	480	$60\% = \frac{480}{100} \times 60 = 288$	$\frac{288}{3} \times 2 = 192$	$\frac{288}{3} \times 1 = 96$	480 - 288 = 192
С	1500	$50\% = \frac{1500}{100} \times 50 = 750$	375	375	1500 - 750 =750
D	1250	$80\% = \frac{1250}{100} \times 80 = 1000$	$\frac{1000}{5} \times 2 = 400$	$\frac{1000}{5} \times 3 = 600$	1250 - 1000 = 250

sum of boys passed in all the school = 300+192+375+400

= 1267

Hence, 1267 is the correct answer

An Initiative by अमरउजाला

Q-355) What is the average of girls passed from school A and D?

- A) 400
- B) 420
- C) 440
- D) 380
- E) None of these

Solution:

School	Total	% of student who	passed Boys	Passed girls	Student Failed
	student	passed			
A	600	$90\% = \frac{600}{100} \times 90 = 540$	$\frac{540}{9} \times 5 = 300$	$\frac{540}{9} \times 4 = 240$	600 – 540 = 60
В	480	$60\% = \frac{480}{100} \times 60 = 288$	$\frac{288}{3} \times 2 = 192$	$\frac{288}{3} \times 1 = 96$	480 - 288 = 192



С	1500	$50\% = \frac{1500}{100} \times 50 = 750$	375	375	1500 – 750 =750
D	1250	$80\% = \frac{1250}{100} \times 80 = 1000$	$\frac{1000}{5} \times 2 = 400$	$\frac{1000}{5} \times 3 = 600$	1250 - 1000 = 250

Average of girls passed in school A and D = $\frac{240+600}{2} = \frac{840}{2}$

= 420

Hence, the correct answer is 420

Direction(356-360): Study the following information carefully and answer the question.

Following table shows the percentage distribution of total number employ working in different department of a company "XYZ". The total numbers of employs are 450 in company XYZ and the ratio of male and female among them.

		<u> </u>	
Department	Percentage of employee	Male : Female	
H.R.	12%	5:4	
Production	26%	2:1	
Sales	18%	2:1 An Ini	tiative by अमर उजाला
Account	22%	7:4	
Marketing	22%	5:4	

Q-356) How many Male employee working in Production company in XYZ?

- A) 63
- B) 54
- C) 76
- D) 78
- E) 80

Ans- 78

Solution:

Department	Total number of	Male	Female	
	employee			



H.R.	12% of 450 = 54	$\frac{54}{9} \times 5 = 30$	$\frac{54}{9} \times 4 =$ 24
Production	26% of 450 = 117	$\frac{117}{3} \times 2 = 78$	$\frac{117}{3} \times 2 = 39$
Sales	18% of 450 = 81	$\frac{81}{3} \times 2 = 54$	$\frac{81}{3} \times 1 = 27$
Account	22% of 450 = 99	$\frac{99}{11} \times 7 = 63$	$\frac{99}{11} \times 4 = 36$
Marketing	22% of 450 = 99	$\frac{99}{9} \times 5 = 55$	$\frac{99}{9} \times 4 =$ 44
Total	100% = 450	280	170

Q-357) How many Total Male employee working in company XYZ ?



Ans- 280

Department	Total number of employee	Male	Female
H.R.	12% of 450 = 54	$\frac{54}{9} \times 5 = 30$	$\frac{54}{9} \times 4 =$ 24
Production	26% of 450 = 117	$\frac{117}{3} \times 2 = 78$	$\frac{117}{3} \times 2 = 39$
Sales	18% of 450 = 81	$\frac{81}{3} \times 2 = 54$	$\frac{81}{3} \times 1 = 27$
Account	22% of 450 = 99	$\frac{99}{11} \times 7 = 63$	$\frac{99}{11} \times 4 = 36$
Marketing	22% of 450 = 99	$\frac{99}{9} \times 5 = 55$	$\frac{99}{9} \times 4 =$ 4



Total	100% = 450	280	170

Q-358) What is the average of female working in the xyz company?

- A) 30
- B) 34
- C) 38
- D) 40
- E) 42

Solution:

Department	Total number of employee	Male	Female
H.R.	12% of 450 = 54	$\frac{54}{9} \times 5 = 30$	$\frac{54}{9} \times 4 = 24$
Production	26% of 450 = 117	$\frac{117}{3} \times 2 = 78$	$\frac{117}{3} \times 2 = 39$
Sales	18% of 450 = 81	$\frac{81}{3} \times 2 = 54$	$\frac{81}{3} \times 1 = 27$
Account	22% of 450 = 99	$\frac{99}{11} \times 7 = 63$	$\frac{99}{11} \times 4 = 36$
Marketing	22% of 450 = 99	$\frac{99}{9} \times 5 = 55$	$\frac{99}{9} \times 4 =$ 4
Total	100% = 450	280	170

Average of Female = $\frac{170}{5} = 34$

Hence, 34 is the correct answer



Q-359) Total number of employee work in marketing department is what percentage of difference between male and the female of same department?

Solution:

Department	Total number of employee	Male	Female
H.R.	12% of 450 = 54	$\frac{54}{9} \times 5 = 30$	$\frac{54}{9} \times 4 = 24$
Production	26% of 450 = 117	$\frac{117}{3} \times 2 = 78$	$\frac{117}{3} \times 2 = 39$
Sales	18% of 450 = 81	$\frac{81}{3} \times 2 = 54$	$\frac{81}{3} \times 1 = 27$
Account	22% of 450 = 99	$\frac{99}{11} \times 7 = 63$	$\frac{99}{11} \times 4 = 36$
Marketing	22% of 450 = 99	$\frac{99}{9} \times 5 = 55$	$\frac{99}{9} \times 4 =$ 4
Total	100% = 450	280	COM

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Q-360) How many Female work in Account department?

- A) 36
- B) 46
- C) 56
- D) 66
- E) 26

Ans – 36

Direction(361-365): Study the following information carefully and answer the question.

Table given below shows the number of corona patient in last day in five different states.

	Male	Female	Children
А	140	175	110



В	170	155	170
С	185	130	140
D	120	170	190
E	105	125	130

Q-361) What is the difference between total number of corona patient from State A and the average of total number of corona in state D ?

- A) 265
- B) 255
- C) 275
- D) 300
- E) None of these

ſ

	Male	Female	Children	Total
А	140	175	110	425
В	170	155	170	495
С	185	130	140	455
D	120	170	190	480
E	105	125	130	360
Total	720	755	740	2215

Total number of corona patient from State A = 425

average of total number of corona in state D = $\frac{480}{3}$ = 160

Difference = 425 - 160 = 265

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Hence, the correct answer is 265

Q-362) How many total number of patient in all five state ?

- A) 2000
- B) 2215
- C) 2234
- D) 3000
- E) Cannot be determine

Solution:

	Male	Female	Children	Total
А	140	175	110	425
В	170	155	170	495
С	185	130	140	455



2	120	170	100	400
D	120	170	190	480
E	105	125	130	360
Total	720	755	740	2215

Hence, the correct answer is 2215

Q-363) What is the respective ratio between male patient of E state and total patient of state A?

- A) 21:85
- B) 85:21
- C) 7:9
- D) 7:13
- E) None of these

Solution:

	Male	Female	Children	Total	
А	140	175	110	425	
В	170	155	170	495	N 1 1
С	185	130	140	455	JM
D	120	170	190	480	
E	105	125	130	360	221 CI
Total	720	755	740	2215	

Male patient of E = 105

Total patient of state A = 425

Ratio = 105 : 425

= 21: 85

Hence the correct answer is 21:85

Q-365) What is the difference between total patient of B state and total patient of A state ?

- A) 70
- B) 80
- C) 55
- D) 45
- E) 90



F) Solution:

	Male	Female	Children	Total
А	140	175	110	425
В	170	155	170	495
С	185	130	140	455
D	120	170	190	480
E	105	125	130	360
Total	720	755	740	2215

Total patient of B state = 495

Total patient of A state = 425

Difference = 495 – 425 = 70

Hence 70 is the correct answer

Directions (366-370): Study the bar graph and answer the questions given below.

The bar graph shows the Sales of cars for five months January, February, March, April and May in 2019



Q-366) The car sales in February is what percentage of the cars sales in April? (You don't have to calculate the exact value)

- A) 50%
- B) 60%
- C) 65%
- D) 45%
- E) None of these

Ans- B) 60%

Solution:

Car sales in February = 1500 cars sales in April = 2520

Percentage = $\frac{1500}{2520} \times 100$

Percentage = 59.52 %

= 60 %

Q-367) What is the average number of cars sales in six month?

A) 1800

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Directions (371-375): The bar graph given below shows the number of Boys and Girls participants in a year farewell function five years 2016, 2017, 2018, 2019 and 2020.





Q-371) Find the ratio of average number of boys participated in farewell function in 2017, 2018, 2019 to average number of female participated in 2016, 2017 and 2018.

a) 48:51 b) 28:41 c) 41:28 d) 51:48 e) None of these

Q-372) In which year maximum Student participated in farewell function?

- a) 2015
- b) 2012
- c) 2011 d) 2014
- e) 2013
- Q-373) Find the total no of participants in farewell function in 2021 if the total participants increased by 25% in 2021 over the average of participants in2019 and 2020?
- a) 3800
- b) 3700
- c) 3775
- d) 3875
- e) None of these



Q-374) what is the difference between average boys participants in farewell function and average Girls participants in farewell function?

a) 450

b) 660

c) 550

d) 350

e) None of these

Q-375) what is the difference between the percentage of girl's participants in farewell function in 2016 and percentage of boy's participants in farewell function in 2018?

a) 4.5%

b) 7.6%

c) 6.7%

d) 5.4%

e) None of these

Solution

Table –

ibic		and the second s			
	Years	Boys	Girls	Total	
	2 016	1800	1250	3050	COM
	2017	2150	1150	3300	
	2018	1700	1800	3500	readier
	2019	2300	900	3200	-
	2020	1450	1550	3000	1

Solution 1)

Farewell function in 2017, 2018, 2019 = 2150 + 1700 + 2300 = 6150 Average = $\frac{6150}{3}$ = 2050

Average number of female participated in 2016, 2017 and 2018 $=\frac{1250+1150+1800}{3} = \frac{4200}{3} = 1400$ Ratio = 2050 : 1400 = 41 : 28

Solution:2)

From the above table it is clear that 2018 is the year which has highest number of student attended Farewell

Solution:3)

Average Farewell function in 2019 and $2020 = \frac{6400}{2} = 3100$ Participants increased by 25% over the average of participants in 2019 and 2020.

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So, No of participants in 2021 = 125% of 3100 = 125/100×3100 = 3875

Solution: 4)

Average Boys participants = (1800+2150+1700+2300+1450)/5 = 9400/5 = 1880 Average Girls participants = (1250+1150+1800+900+1550)/5 = 6650/5 = 1330 Required difference = 1880-1330 = 550

Solution: 5) Percentage of female participants in marathon in 2011 = (1250/3050)*100 = 40.98 % Percentage of male participants in marathon in 2013 = (1700/3500)*100 = 48.57

Direction(376-380): Study the information carefully and answer the given question.



The bar graph shows the new appointment in different company with different department.

Q-376) What is the ratio of number of New employee in accounts department and Production department in C company to number of New employee for production and sales department in company A?



a) 1:2

b) 3:2

c) 2:3

d) 2:1

e) None of these

Q-377) new employees who joined in Account department from company C are approximately what percentage of Total employeefrom company A?

a) 11.11%

b) 22.22%

c) 33.33%

d) 44.44%

e) 55.55%

Q-378) If the ratio of women to men who joined for production department from company E is 9:8 then how many womenJoined in production department for company E?

a) 24

b) 12

c) 15

d) 21

e) 18

Q-379) Employees who joined who joined in sales departmentin company A and B together are approximately what percentage more or less than Employees who joinedProduction department of company C and E together?

a) 17.39% less

- b) 21.05% more
- c) 7.5% more
- d) 7.5% less
- e) None of these

Q-380) What is the difference between number of employee who joined in Production department for company A, B and E together and number of employee who joined sales department B, C and D together?

- a) 28
- b) 42
- c) 26
- d) 46
- e) 36

Solution:

Q-1) A

Number of New employee in accounts department and Production department in C company = 24+12 = 36 Number of New employee for production and sales department in company A = 72

Required ratio = 1:2



Q-2) B

new employees who joined in Account department from company C = 24 Total employee from company A =(36+52+20) = 108Required percentage = 24/108*100 = 22.22%

Q-3) E

the ratio of women to men who joined for production department from company E = 9:8Total numberJoined in production department for company E = 34

Q-4) A

Employees who joined who joined in sales department in company A and B = 20+18 = 38Employees who joined Production department of company C and E together = 12+34 = 46Required = (46-38)/46*100= (8/46)*100 = 17.39% less

Q-5) D

Number of employee who joined in Production department for company A, B and E together = 52+62+34 = 148

Number of employee who joined sales department B, C and D together = 18+70+14 = 102 Required difference = 148-102 = 46

Directions (381-385): The bar graph given below shows the percentage distribution of toys buys from different store in2020.



Solution:

Total toys in 2020 are 700



Stores	% of toys	Toys
А	15%	105
В	6%	42
С	4%	28
D	20%	140
E	10%	70
F	15%	105
G	30%	210
TOTAL	100%	700

Q-381) what is the average of toys buy from the store B, C, and E ?

A) 46 B) 46.4 C) 46.6 D) 47 E) None of these

Solution:

$$Average = \frac{42 + 28 + 70}{3} = 46.66$$

Q-382) If the total toys buys in 2020 is 20% more than 2019. Then find how many toys buy in 2019?

- A) 600
- B) 840
- C) 560
- D) 400
- E) None of these

Solution:

Toys in 2020 = 700 Toys in 2019 = $\frac{700}{100} \times 80 = 560 \ toys$

Q-383) if the toys buy from store D at the profit of 40%. Then find the overall profit from store D.

- A) 196
- B) 120
- C) 200
- D) 186
- E) Cannot be determine

Solution:

Cannot be determine – As we have no cost price of any of the toys therefore we cant find the selling price

Q-384) If toys purchased from store B is of 20 Rs each and the toys purchased from store F is 10 Rs each. Then what is the total purchased price from store B and F.

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- A) 1800
- B) 1890
- C) 1900
- D) 2000
- E) None of these

Store B = 42 × 20 = 840 Rs Store F =105 × 10 = 1050 Rs Total = 840 + 1050 = 1890 Rs

Q-385) What is the ratio of toys F and G together is to toys from A and D?

- A) 63:49
- B) 49:63
- C) 49:50
- D) 50:63
- E) None of these

Solution:

Toys F and G = 105 + 210 = 315 Toys A and D = 105 + 140 = 245 Ratio = 315 : 245

Direction(386-390): Study the following information carefully and answer the question given below.

The first pie chart shows the manufacture of cars in January by the different company and the second pie chart shows the sold cars manufacture in January. Note – None of the cars manufacture before January.

Total manufacture cars = Total cars sold + total cars unsold

Number of cars unsold by the company A = 400Number of cars unsold by the company D = 60



Q-386) What is the ratio of car sold by B to the total car manufacture by C?

A)5:6 B) 6:5 C)6:7 D)7:6 E)None of these

Q-387) If the total car production of C is increase by 20% in February as compare to January and the car sealing of C is increase by 150% as compared to previous month. Then find the number of cars unsold in February in company C?

A) 210 Cars

B) 200 Cars



- C) 220 Cars
- D) 230 Cars
- E) Cannot be determine

Solution:

On taking first pie chart, we have

Total cars manufacture = 360° $360^{\circ} = A + B + C + D$ $360^{\circ} = (2K + 18)^{\circ} + (2K)^{\circ} + (K + 18)^{\circ} + K^{\circ}$ $360^{\circ} = 6K^{\circ} + 36^{\circ}$ $6K^{\circ} = 360^{\circ} - 36^{\circ}$ $6K^{\circ} = 324^{\circ}$ $K^{\circ} = \frac{324}{6} = 54^{\circ}$

Hence, the degree value of A, B, C, D is $A = (2K + 18)^\circ = (2 \times 54 + 18)^\circ = 126^\circ$ $B = (2K)^\circ = 2 \times 54 = 108^\circ$ $C = (K + 18)^\circ = 54 + 18 = 72^\circ$ $D = K^\circ = 54^\circ$

Now, converting each degree value in percentage value (So the question should be solved easily) $1\% = 3.6^{\circ}$

A = 126 ° = 35% B = 108° = 30% C = 72° = 20% D = 54° = 15%

Also, the cars sold in January is (Through second pie chart)

A = y + 10 % B = 2y + 10 % c = y % D = y + 5%

Cars sold in January = 100 % A + B + C + D = 100% y % + 10% + 2y% + 10 % +y % + y% + 5% = 100% 5y% + 25% = 100% 5y% = 75% y% = 15%



Hence, the percentage value of A, B, C, D is A = y + 10% = 15 + 10 = 25% B = 2y + 10% = 30 + 10 = 40% c = y% = 15%D = y + 5% = 20%

Now according to the question, Number of cars unsold by the company A = 400 Number of cars unsold by the company D = 60

Let the total cars manufacture is 100x, then the car manufacture by A = 35% of 100x = 35x

And, Let the car Sold in January be 100y, then the car sold by A is 25% = 25% of 100y = 25y

Therefore, (cars by 'A') Total car manufacture = Total car sold + Total car unsold 35x = 25y + 4007x = 5y + 80 ------ (I) Now, similarly (in 'D') , we get 15x = 20y + 60

3x = 4y + 12 ------(II) On, Multiplying equation (I) by 3 and equation (II) by 7 We get 21x = 15y + 240 ------(III)

21x = 28y + 94 -----(IV)

On subtracting equation III and IV, We get

X = 20 and, y = 12

Hence we can form this pie chart in tabular form,

Cars	Total C	Cars	Total ur	nsold cars	Total ca	rs sold	
company	Value in %	cars (Value)	Value in %	cars (Value)	Value in %	car (Valu	s ie)
A	35%	700	50%	400	25%	300	Þ

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Total	100 %	2000	100%	800	100%	120
D	15%	300	7.5%	60	20%	240
С	20%	400	27.5%	220	15%	180
В	30%	600	15%	120	40%	480

Solution:

Solution: 1) Ratio = car sold by B : total car manufacture by C Ratio = 480 : 400 Ratio = 6:5

Solution: 2) Car production of C (In JAN) = 400

Accor. to question

Car production of C (In FEB) = $\frac{400}{100} \times 120 = 480$ Cars

And similarly, selling of car = $\frac{180}{100} \times 150 = 270$ cars

Therefore, Total cars Unsold in company c in February = 480 – 270 = 210 cars

Directions (391-395):Bar graph given below shows the total number of person who travel in Delhi by Bus or buy metro on five different days and table shows the number of person who took Bus to travel on these five days.

NOTE: - None of the person travel with both mode of transport

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Days	Person travel by Bus
Monday	40
Tuesday	30
Wednesday	35
Thursday	50
Friday	25

Total people = number person travel by bus + number person travel by metro

Q-391) If total persontravel by bus on Saturday is 20% more than that of total persontravel by bus on Thursday and total Person who took metro to travel on Saturday are 20% more than that of who took metro to travel on Wednesday, then find total person who travel on Saturday?

130 135 138 145 None of these

Ans - 138

Solution:

DAYS	Total	Travel by	Travel by
	person	Bus	Metro

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Monday	120	40	80
Tuesday	80	30	50
Wednesday	100	35	65
Thursday	90	50	40
Friday	110	25	85

Total persontravel by bus on Saturday is 20% more than that of on Total persontravels by busThursday = $50 \times \frac{120}{100} = 60$ Peson

Total Person who took metro to travel on Saturday are 20% more than that of who took metro to travel on Wednesday = $65 \times \frac{120}{100} = 78 \, person$

Total person who travel on Saturday = 60 + 78 = 138 Person

Q-392) Total number of person who took bus on Thursday is what percent less than total number of person who took Metro on Monday?

40% 45% 50% 100% 25%

Ans – 50% **Solution**:

DAYS	Total	Travel by	Travel by
	person	Bus	Metro
Monday	120	40	80
Tuesday	80	30	50
Wednesday	100	35	65
Thursday	90	50	40
Friday	110	25	85

Total number of person who took bus on Thursday = 50 Total number of person who took Metro on Monday= 80



Required percentage = $\frac{80-40}{80} \times 100 = 50\%$

Q-393) Find the average number of person who took metro on Monday and Thursday?

Ans - 60

Solution:

DAYS	Total	Travel by	Travel by	
	person	Bus	Metro	
Monday	120	40	80	
Tuesday	80	30	50	
Wednesday	100	35	65	
Thursday	90	50	40	~~`
Friday	110	25	85/ \	CON
	1		An Initiative by	अमरउजाल

Average number of person who took metro on Monday and Thursday

$$=\frac{80+40}{2}=\frac{120}{2}=60$$

Q-394) Find the ratio number of person who travel with metro on Friday to the total number of person travel with metro on Wednesday?

13 :15 15: 13 17:13 13:17 None of these

Ans – 17 : 13

Solution:

DAYS	Total	Travel by	Travel by
	person	Bus	Metro



Monday	120	40	80
Tuesday	80	30	50
Wednesday	100	35	65
Thursday	90	50	40
Friday	110	25	85

Number of person who travel with metro on Friday = 85Total number of person travel with metro on Wednesday = 65

Ratio = 85 : 65 Ratio = 17 : 13

Q-395) Total number of person of who travel on Tuesday is what percent more thanTotal number of person who travel by bus on Friday?

63% 65.3% 68.75% 70% None of these

Ans- 68.75%

Solution:

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DAYS	Total	Travel by	Travel by
	person	Bus	Metro
Monday	120	40	80
Tuesday	80	30	50
Wednesday	100	35	65
Thursday	90	50	40
Friday	110	25	85

Total number of person who travel by bus on Friday = 25Total number of person of who travel on Tuesday = 80

Required percent = $\frac{80-25}{80} \times 100 = \frac{55}{80} \times 100 = 68.75\%$



Directions (396-400): Table given below shows the total number of Baleno car sold by five different MarutiSuzuki stores and also shows the ratio of the total number of Baleno car sold to total vitarabrezza car sold by each of these 5 Maruti Suzuki stores. Read the data carefully and answer the following questions.

Maruti Suzuki store	Total Baleno car sold	Baleno car sold : vitarabrezza car sold
Α	108	9:5
В	240	6:5
С	200	4:1
D	150	3:1
E	120	3:2

Q-396) If out of total number of Vitarabrezza sold by store B & C, 40% and 20% Vitarabrezza car respectively are returned by customers (due to defect), then find total number of non-defected Vitarabrezza car sold by these two stores together?

100 120

140

160

180

Ans – 160

Solution:

Maruti Suzuki store	Total Baleno car sold	vitarabrezza car sold	Total car sold
Α	108	60	168
В	240	200	440
С	200	50	250
D	150	50	200
E	120	80	200

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Total number of defectedVitarabrezza sold by store $B = 200 \times \frac{40}{100} = 80$ Total non defected car = 200 - 80 = 120 Vitarabrezza car

Total number of defected Vitarabrezza sold by store C = $50 = 50 \times \frac{20}{100} = 10$ Total non defected car = 50 - 10 = 40 Vitarabrezza car

Total non defected car from B an C = 120 + 40 = 160 Vitarabrezza car

Q-397) Find the average number of cars sold by B, C, D, and E? 272.5 272.7 279.5 279.7 None of these

Ans - 297.5

Solution:

	/S	AF.	ALT/	4 COM
Maruti	Total	vitarabrezza	Total car sold	
Suzuki	Baleno car	car sold	An Initiativ	e by SIME SOUCH
store	sold			
Α	108	60	168	
В	240	200	440	
С	200	50	250	
D	150	50	200	
E	120	80	200	

Average number of cars sold by B, C, D, and E = $\frac{440+250+200+200}{4} = \frac{1090}{4} = 272.5$

Q-398) Total number of baleno car sold by store D is what percent less than the total number of vitarabrezza car sold by store B?

20%



25% 15% 10% 22%

Ans – 25% **Solution**: Total number of baleno car sold by store D = 150 Total number of vitarabrezza car sold by store B = 200 Percentage required = $\frac{200-150}{200} \times 100 = \frac{50}{200} \times 100 = 25\%$

Q-399) What is the ratio between the total car sold by B to total car sold by store E?

11:5 5:11 4:5 5:4 None of these

Ans – 11:5

Solution :

the total car sold by B = 440total car sold by store E = 200

Required ratio = 440 : 200 = 11 : 5

Maruti	Total	vitarabrezza	Total car sold
Suzuki	Baleno car	car sold	
store	sold		
Α	108	60	168
В	240	200	440
С	200	50	250
D	150	50	200
E	120	80	200

Q-400) If there is a store F which sales 50% more cars than E and store F sold baleno car 20% less car than by store sales Baleno car by B. Then find how many Vitarabrezzacar does F sales?

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 $\frac{80}{100} \times 240 = 192$

Total vitarabrezzacar sales by F = 300 - 192 = 108

Directions (401-405):Pie chart shows percentage distribution of total (diesel + petrol) cars manufactured by a company in five different years and table gives information about total petrol cars manufactured by the company in these five years.



Years	Total number of petrol
	cars
2014	560
2015	400
2016	360



2017	1000
2018	600

Q-401) Find total number of diesel cars manufactured by the company in years 2014 & 2016 together? 400

480

460

560 580

500

Ans - 480

Solution:

Years	Total cars	Total number of petrol	Total number of diesel
		cars	cars
2014	800	560	240
2015	1000	400	600
2016	600	360	240
2017	1400	1000	400
2018	1200	600	600
Total	5000	2920	2080

Complete Solution:

Required cars = $((5000 \times \frac{16}{100}) - 560) + ((5000 \times \frac{12}{100}) - 360)$ = (800 - 560) + (600 - 360)= (240) + (240)= 480 cars

Q-402) Petrol cars manufactured by the company in 2016 & 2018 together are what percent more or less than diesel cars manufactured by the company in 2015? 20% 25% 33% 60%



65%

Ans – 60%

Solution:

Years	Total cars	Total number of petrol	Total number of diesel
		cars	cars
2014	800	560	240
2015	1000	400	600
2016	600	360	240
2017	1400	1000	400
2018	1200	600	600
Total	5000	2920	2080

Petrol cars manufacture by the company in 2016 and 2018 = 360 + 600 = 960 Diesel cars manufacture by company in 2015 = $\left(\left(5000 \ x \ \frac{20}{100}\right) - \ 400\right)$

= 1000 - 400 = 600 cars

Required percentage = $\frac{960 - 600}{600} X 100$ = $\frac{360}{600} X 100 = 60\%$

Q-403) What is the ratio between the total petrol car is to total diesel cars?

73:56 56:73 1:4 4:1 None of these

Ans – 73 : 56 **Solution**: Total petrol car = 2920 Total diesel cars = 2080

Required ratio = 2920 : 2080 73 : 52

Q-404) Find total number of Diesel cars manufactured by the company in these 5 years together? 2080 2090 2800 2900 None of these



Ans - 2080 Solution: Required number of Diesel cars manufacture 240+600+240+400+600 = 2080

Q-405) Find difference between number of diesel cars manufactured by the company in year 2015 and that of in year 2017. 200 300 400 500 None of these **Solution**: Required difference = 600 – 400 = 200

Directions (406-410):Bar chart shows the total number of AC manufactured by five different companies in March andApril in 2020 and line chart shows the percentage of ACsold out of the total manufactured AC of these five companies in March andApril.





Q-406) AC sold by companies M and N together in March are what percent of AC sold by companies O and P together in April?

120% 130% 125%					.COM
75% 50%			An Initia	ative by	अमरउजाला

Ans – 130%

Solution:						
Company	Month	AC manufacture	Sold	Unsold		
L	March	350	80% = 280	70		
	April	400	85% = 340	60		
М	March	500	70% = 350	150		
	April	600	95% = 570	30		
N	March	400	75% = 300	100		
	April	300	90% = 270	30		
0	March	450	60% = 270	180		
	April	500	60% = 300	200		
Р	March	300	90% = 270	30		


250

April

50

AC Unsold from company L in March = $\left(350 - \left(\frac{350}{100} X \, 80\right)\right) = 350 - 280 = 70 \, AC$

AC unsold from company L in April = $\left(400 - \left(\frac{85}{100} X 400\right)\right) = 400 - 340 = 60$

Similarly for,

AC Unsold from company M in March = 150 AC AC unsold from company M in April = 30 AC AC Unsold from company N in March = 100 AC AC unsold from company N in April = 30 AC AC Unsold from company O in March =180 AC AC unsold from company O in April = 200 AC AC Unsold from company P in March = 30 AC AC unsold from company P in March = 50 AC

AC sold by companies M and N together in March = 350 + 300 = 650AC sold by companies O and P together in April = 300 + 200 = 500

Required percentage = $\frac{650}{500}$ X 100 = 130%

Q-407) Average number of unsold AC by companies M,O and P in March are what percent of total unsold AC by companies O and P together in April?

45% 48% 40% 25% None of these

Ans- 48%

Solution:

Solution.				
Company	Month	AC manufacture	Sold	Unsold
L	March	350	80% = 280	70
	April	400	85% = 340	60
Μ	March	500	70% = 350	150
	April	600	95% = 570	30
N	March	400	75% = 300	100
	April	300	90% = 270	30
0	March	450	60% = 270	180
	April	500	60% = 300	200
Р	March	300	90% = 270	30



April	250	80% =

AC Unsold from company L in March = $\left(350 - \left(\frac{350}{100} X \, 80\right)\right) = 350 - 280 = 70 \, AC$ AC unsold from company L in April = $\left(400 - \left(\frac{85}{100} X \, 400\right)\right) = 400 - 340 = 60$

200

50

Similarly for,

AC Unsold from company M in March = 150 AC AC unsold from company M in April = 30 AC AC Unsold from company N in March = 100 AC AC unsold from company N in April = 30 AC AC Unsold from company O in March =180 AC AC unsold from company O in April = 200 AC AC Unsold from company P in March = 30 AC AC unsold from company P in April = 50 AC

Average number of unsold AC by companies M,O and P in March = $\frac{150+180+30}{3} = \frac{360}{3} = 120$

Total unsold AC by companies O and P together in April = 200 + 50 = 250

Required percentage = $\frac{120}{250} X 100 = 48\%$

Q-408) AC sold by companies L and O together in March are how much more or less than AC sold by companies M and N together in April?

100

200

250 290 390

Ans – 290

Solution:

Solution:

Company	Month	AC manufacture	Sold	Unsold
L	March	350	80% = 280	70
	April	400	85% = 340	60
Μ	March	500	70% = 350	150
	April	600	95% = 570	30
N	March	400	75% = 300	100

An Initiative by **314333101**



	April	300	90% = 270	30
0	March	450	60% = 270	180
	April	500	60% = 300	200
Р	March	300	90% = 270	30
	April	250	80% = 200	50

AC Unsold from company L in March = $\left(350 - \left(\frac{350}{100} X \, 80\right)\right) = 350 - 280 = 70 \, AC$ AC unsold from company L in April = $\left(400 - \left(\frac{85}{100} X \, 400\right)\right) = 400 - 340 = 60$

Similarly for,

AC Unsold from company M in March = 150 AC AC unsold from company M in April = 30 AC AC Unsold from company N in March = 100 AC AC unsold from company N in April = 30 AC AC Unsold from company O in March =180 AC AC unsold from company O in April = 200 AC AC Unsold from company P in March = 30 AC AC unsold from company P in March = 30 AC

AC sold by companies L and O together in March = 280 + 270 = 550AC sold by companies M and N together in April = 570 + 270 = 840

Required difference =
$$840 - 550 = 290$$
 AC

Q-409) What is the ratio of AC unsold by the company N in April to the AC unsold by company M in March ?

5:1 2:5 1:5 5:2 None of these

Ans – 1:5

Solution:

Company	Month	AC manufacture	Sold	Unsold
L	March	350	80% = 280	70
	April	400	85% = 340	60
Μ	March	500	70% = 350	150
	April	600	95% = 570	30
Ν	March	400	75% = 300	100

An Initiative by **3147333161**



	April	300	90% = 270	30
0	March	450	60% = 270	180
	April	500	60% = 300	200
Ρ	March	300	90% = 270	30
	April	250	80% = 200	50

AC Unsold from company L in March = $\left(350 - \left(\frac{350}{100} X \, 80\right)\right) = 350 - 280 = 70 \, AC$ AC unsold from company L in April = $\left(400 - \left(\frac{85}{100} X \, 400\right)\right) = 400 - 340 = 60$ Similarly for,

AC Unsold from company M in March = 150 AC AC unsold from company M in April = 30 AC AC Unsold from company N in March = 100 AC AC unsold from company N in April = 30 AC AC Unsold from company O in March =180 AC AC unsold from company O in April = 200 AC AC Unsold from company P in March = 30 AC AC unsold from company P in April = 50 AC

AC unsold by the company N in April = 30 AC unsold by company M in March = 150

Required ratio = 30: 150 = 1 : 5

Q-410) Total AC manufacture by company O in both month is what percentage more or less than the total unsold AC from all the company? (You have to calculate approximate value)

3% 7% 6% 25% 20%

Ans = 6%

Solution:

Company	Month	AC manufacture	Sold	Unsold
L	March	350	80% = 280	70
	April	400	85% = 340	60
М	March	500	70% = 350	150
	April	600	95% = 570	30

An Initiative by **3IHC33IIC**



N	March	400	75% = 300	100
	April	300	90% = 270	30
0	March	450	60% = 270	180
	April	500	60% = 300	200
Р	March	300	90% = 270	30
	April	250	80% = 200	50

AC Unsold from company L in March = $\left(350 - \left(\frac{350}{100} X \, 80\right)\right) = 350 - 280 = 70 \, AC$ AC unsold from company L in April = $\left(400 - \left(\frac{85}{100} X \, 400\right)\right) = 400 - 340 = 60$ Similarly for,

AC Unsold from company M in March = 150 AC AC unsold from company M in April = 30 AC AC Unsold from company N in March = 100 AC AC unsold from company N in April = 30 AC

AC Unsold from company O in March =180 AC AC unsold from company O in April = 200 AC

AC Unsold from company P in March = 30 AC

AC unsold from company P in April = 50 AC

Total AC manufacture by company O in both month = 450 + 500 = 950total unsold AC from all the company = 70 + 60 + 150 + 30 + 100 + 30 + 180 + 200 + 30 + 50 = 900

Required Percentage = $\frac{950-900}{900} X 100 = \frac{50}{900} X 100 = 5.55\%$ = 6%

Directions (411-415): Table gives information about the number of students enrolled in four different Streams in five different colleges (P, Q, R, S& T). Note – Some of the data is missing you have to calculate that and answer the following

Colleges	Total student	Courses			
		Mechanical	CS	ECE	Civil
Р	(A)	1500	20%	700	1000
Q	6000		900	1200	2100
R	5000	1000	1500	1200	(C)
S		800	1000	(B)	300
Т	8000	25%	1600		1200
Total	26500				

Note - Every college have only these four branches

Q-411) what will come in place of A? 5000 4000



2000 1000 Cannot be determine

Ans - 4000 student

Solution:

Total student of College P (A) = Mechanical + CS + ECE + Civil A = 1500 + 20% + 700 + 1000 Acor. To the question, Total student of colleges P (A) = 100% Therefore, 100% = 1500 + 20% + 700 + 1000100% - 20% = 1500 + 700 + 100080% = 3200 $1\% = \frac{3200}{80} = 40$ $100\% = 40 \times 100 = 4000$ student

Hence, Total student of colleges P (A) = 4000 Student

Q-412) what will come in place of (c)?

1300 1200 1990 1000 None of these Ans – 1300 An Initiative by आगर उजाला

Solution:

C = number of student in civil branch of R colleges Total student of College R = Mechanical + CS + ECE + Civil Total student of College R = Mechanical + CS + ECE + C 5000 = 1000 + 1500 + 1200 + CC = 5000 - 3700C = 1300 Student

Hence, the total number of Civil student of college R = 1300 student

Q-413) What will come in the place of (B)?

1000 1300 1400 1500 Cannot be determine

Ans - 1400



Solution:

E = total number of student in ECE branch from college S

Total student of College S = Mechanical + CS + ECE + Civil

Total student of College S = Total number of student from all the collages

Total student =Total student of College P + Total student of College Q +Total student of College R +Total student of College S +Total student of College T

Therefore, A = 1500 + 20% + 700 + 1000 Acor. To the question, Total student of colleges P (A) = 100% Therefore, 100% = 1500 + 20% + 700 + 1000 100% - 20% = 1500 + 700 + 1000 80% = 3200 1% = $\frac{3200}{80}$ = 40 100% = 40 X 100 = 4000 student

Hence, Total student of colleges P (A) = 4000 Student

Total student =Total student of College P + Total student of College Q +Total student of College R +Total student of College S +Total student of College T

26500 = 4000 + 6000 + 5000 + Total student of College S + 8000Total student of College S = 26500 - 23000Total student of College S = 3500

Now, Total student of College S = Mechanical + CS + ECE + Civil 3500 = 800 + 1000 + B + 300B = 3500 - 2100B = 1400

Hence, the total student in ECE in S college = 1400 student

Q-414) What is the ratio between the Mechanical student from College Q to the Mechanical student of the T college?

10:9 8:9 9:10 9:8 None of these



Ans – 9: 10

Solution:

Mechanical student from Q college = total student of Q college –(CS + ECE + Civil) Student of same college

Mechanical student from Q college = 6000 - (900 + 1200 + 2100)Mechanical student from Q college = 6000 - (4200)Mechanical student from Q college = = 1800

Now,

Mechanical student of the T college = $8000 X \frac{25}{100} = 2000$

Required ratio = 1800 : 2000 = 9 : 10

Q-415)How many total number of mechanical student from all the colleges? 5000 7000 5900 7150 None of these Ans – None of these

Solution:

Mechanical student from Q college = total student of Q college –(CS + ECE + Civil) Student of same college

Mechanical student from Q college = 6000 - (900 + 1200 + 2100)Mechanical student from Q college = 6000 - (4200)Mechanical student from Q college = = 1800

In college T, Mechanical student of the T college = $8000 X \frac{25}{100} = 2000$

Now,

Total mechanical student = P + Q + R + S + TTotal mechanical student = 1500 + 1800 + 1000 + 800 + 2000Total mechanical student = 7100

Directions (416-420):The bar graph given below shows the number of total students who gave SBI PO examination in five different cities P, Q, R, S and T and also shows number of failed students in the SBI PO exam from these 5 different cities. Study the graph carefully and answer the questions given below.

Total students who gave SBI PO examination from any city = (Number of passed students + Number of failed students) in the SBI PO exam in that CITY.





Ans – 600

Solution:

After forming bar graph in table we, have

States	Total student enroll in	Total student failed in	Total student pass in
	SBI PO	SBI PO exam	sbipo exam
Ρ	1000	900	100
Q	800	700	100
R	1200	1000	200
S	900	800	100



Т	1100	900	200

Total number of passed students from State S = 100Total number of failed students from State Q = 700

Required difference = 700 - 100= 600 student

Q-417) Total numbers of failed students from State T is how much less or more then the percent of total number of students who gave exam from state P? 33.33% 25% 11.11% 9.09% None of these

Ans -`11.11%

Solution:

After forming bar graph in table we, have

States	Total student enroll in SBI PO	Total student failed in SBI PO exam	Total student pass in sbipo exam
P	1000	900 - /	100
Q	800	700 th mittacive by	100
R	1200	1000	200
S	900	800	100
Т	1100	900	200

Total numbers of failed students from State T = 900 total number of students who gave exam from state P = 1000

Required percentage = $\frac{1000-900}{900} X 100$ = $\frac{100}{9} = 11.11\%$

Q-418) Find the average number of passed students from State R and Q?



None of these

Ans – 150

Solution:

After forming bar graph in table we, have

States	Total student enroll in	Total student failed in	Total student pass in
	SBI PO	SBI PO exam	sbipo exam
Р	1000	900	100
Q	800	700	100
R	1200	1000	200
S	900	800	100
Т	1100	900	200

Average number of passed students from State R and Q = $\frac{200+100}{2} = \frac{300}{2} = 150$

Q-419) Find the ratio of failed students from State R, S and T respectively?

1:2:3 10:8:9 9:8:10 8:9:10 Cannot be determine

Ans - 10:8:9

Solution:

After forming bar graph in table we, have

States	Total student enroll in SBI PO	Total student failed in SBI PO exam	Total student pass in sbipo exam
Ρ	1000	900	100
Q	800	700	100
R	1200	1000	200
S	900	800	100
Т	1100	900	200

An Initiative by 31423316



Failed students from State R, S and T= 1000 : 800 : 900 = 10 : 8: 9

Q-420) Find the total number of passed students from state R, Q and P together? 400 200 500 1000 None of these

Ans – 400

Solution:

After forming bar graph in table we, have

States	Total student enroll in	Total student failed in	Total student pass in
	SBI PO	SBI PO exam	sbipo exam
Р	1000	900	100
Q	800	700	100
R	1200	1000	200
1			
S	900	800	100
	DALEA		COM
Т	1100	900	200
		An Initiative by	आगर र नामा

Total number of passed students from state R, Q and P together = 200 + 100 + 100= 400

Directions (421-425):Line chart given below shows total number of Students in five different streams (Civil, Mechanical, CS, IT and, ECE) of a college and also shows the number of girls in these five streams of the college. Study the line chart carefully and answer the following questions.



Note – Total student = Total male student + Total female student

Q-421) Boysin civil branch is what percent of the total student in ECE Branch of the college?

87.5% 33.33% 90% 77.77% 85.5%

Ans – 87.5%

Solution:

After forming line graph in table we, have

	Total student	Female Student	Male student
Civil	500	150	350
Mechanical	800	300	500
CS	900	600	300
ІТ	600	450	150
ECE	400	300	100

Boys in civil branch = 350 total student in ECE Branch = 400



Required percentage = $\frac{350}{400} X 100 = 87.5\%$

Q-422) Find average number of male student in Mechanical, ECE, CS, and IT branch of the college.

260.5 262.5 253.5 244.5 None of these

Ans - 262.5

Solution:

After forming line graph in table we, have

	Total student	Female Student	Male student	
Civil	500	150	350	
Mechanical	800	300	500	
CS	900	600	300	
п	600	450	150	
ECE	400	300	100 .COM	
Required average = $\frac{500 + 100 + 300 + 150}{4} = 262.5$				

Q-423) Female students from ECE branch is what percentage more or less than total student from IT department? 50% MORE 50% LESS

33.33% MORE 33.33% LESS None of these

ANs- 50% LESS

Solution:

After forming line graph in table we, have

	Total student	Female Student	Male student
Civil	500	150	350
Mechanical	800	300	500
CS	900	600	300



IT	600	450	150
ECE	400	300	100

Female students from ECE branch = 300 student Total student from IT department = 600 student

Hence,

Required percentage = $\frac{600-300}{600} X 100 = \frac{300}{600} X 100 = 50\%$

50% LESS

Q-424) Find the ratio of male student from civil branch to the male student from mechanical branch?

10:7 7:10 4:5 5:4 None of these

Ans – 7 : 10

Solution:

Solution: After forming line graph	n in table we, have	ALT.	
	Total student	Female Student	Male student
Civil	500	150 An Initiativ	350
Mechanical	800	300	500
CS	900	600	300
IT	600	450	150
ECE	400	300	100

Male student from civil branch = 350 male student from mechanical branch = 500

Required ratio = 350 : 500 = 7 : 10

Q-425) Find the total number of Male student from collage ? 1500 1400 1300 1200



None of these

Ans – 1400

Solution: Male student from collage = 350 + 500 + 300 + 150 + 100 = 1400 student

Directions (426-430): The table given bellow shows the number of person visits to watch Movie K and Move L on different days of the week in a particular city M. Study the given chart carefully and answer the following question:

Days	Movie "K"	Movie "L"	
Monday	350	250	
Tuesday	400	300	
Wednesday	500	450	
Thursday	550	200	
Friday	600	700	A COM
Saturday	750	500	itiative by 3HT 33HT
Sunday	800	600	and the by she residence

Q-426) If the number of person who watches Movie 'K' on Monday, half of them watches Movie 'L' on Sunday. If the remaining person who watch Movie 'L', watches Movie 'K' on the same day . Then find how many person watches only Movie 'K' on Sunday?

Ans – 375

Solution:

Number of person who watches Movie 'K' on Monday = 350 Half of them = $\frac{1}{2} X 350 = 175$



Number of person who watches Movie 'L' on Sunday and movie K on Monday = 175

According to question, Number of person watch Movie L on Sunday = 600

= 600 – 175 = 425

Total number of person watches both movie on Sunday = 425

the person who watch only Movie 'K' on Sunday = 800 – 425 = 375 person

Q-427) Find the total number of person watch Movie K and L on Tuesday and Wednesday both?

1650 1550 1750 1600 None of these

Ans – 1650

Solution:

Movie K and L on Tuesday and Wednesday = 400 + 500 + 300 + 450 = 1650

				- (· (·)) /
Days	Movie "K"	Movie "L"	17 1	.CON
Monday	250	250 An II	itiative by	अमर उजाल
wonday	550	230		
Tuesday	400	300		
Wednesday	500	450		
Thursday	550	200		
			-	
Friday	600	700		
			-	
Saturday	750	500		
			-	
Sunday	800	600		

Q-428) Total number of person who watches movie on Monday is what percentage of person watch movie L on Tuesday? 150% 20% 200% 300% None of these



Ans – 200%

Solution

Total number of person who watches movie on Monday = 350 + 250 = 600 person watch movie L on Tuesday = 300

Required percentage = $\frac{600}{300} X \ 100 = 200\%$

Q-429) total number of person watch Movie K in week? 3950 3590 3350 3466 None of these

Ans – 3950

Solution:

Monday + Tuesday + Wednesday + Thursday + Saturday + Sunday = 350 + 400 + 500 + 550 + 600 + 750 + 800 = 3950

Q-430) total number of person watch Movie L in week?

2000 2100 2200 2300 None of these Ans – 2300

Monday + Tuesday + Wednesday + Thursday + Saturday + Sunday = 250 + 300 + 450 + 200 + 700 + 500 + 600 = 2300

Directions (431-435):Pie - graph given below shows the percentage distribution of mobile phone sold by store 'K'. Study the Pie - graph carefully and answer the questions given below. Total number of mobile at store K = 250 mobile.

An Initiative by 34733101





Q-431) how many Redmi phone is less than Samsung phone ?



Solution:

Difference between Samsung phone and Redmi phone = 34% - 26% = 8%

Hence,

Total Redmi phone is less than Samsung phone = $\frac{8}{100} X 250 = 20$

Q-432) What is the average number of Redmi, and Samsung mobile sold by store K?

70 75 78 80 None of these

Ans – 75 mobile

Solution:

Average number of Redmi, and Samsung mobile sold by store K = $\frac{26\%+34\%}{2} = \frac{60\%}{2} = 30\%$ Average = $\frac{30}{100}$ X 250 = 75 mobile



Q-433) the cost of each Motorola phone is RS. 15000 and the cost of each Samsung phone is Rs. 20000. Then find the total selling price of both brand. If 20% of the mobile is sold ?

Rs 80000 RS. 50000 RS. 75000 RS. 55000 Cannot be determine

Ans – Cannot be determine

We don't have the exact value that whose brand mobile is 20% sold .so there is different cases.

Q-444) If the cost price of eachOne plus mobile is Rs. 20000 and the cost price of each Samsung mobile is Rs. 15000. And salesman want a profit of 25% than what will be the selling price of both mobile individually?

Solution:

Oneplus + Samsung = 20000 + 15000 = Rs 35000- for each mobile

Required profit = 25%

Directions (446-450): There are 10000 Aspirant who recruit in a different bank i.e. PNB,SBI, and BOB bank which has different number of people working 25%, 45%, 30% respectively in year 2021. It is also found that the numbers of male's aspirant who recruit in banks are 65%.

It is also find that the number of female recruit in PNB, SBI, and BOB Bank is in the ratio 3:4:3.

Solution:

Total aspirant who were selected = 10000

Total male aspirant who were selected = 65% of $10000 = \frac{65}{100} X \ 10000 = 6500$ Female = 10000 - 6500 = 3500

PNB bank = 25% of $10000 = \frac{25}{100} X 10000 = 2500$ Similarly, SBI bank = 45% of 10000 = 4500BOB bank = 30% of 10000 = 3000

Now according to question'

The number of female recruit in PNB, SBI, and BOB Bank is in the ratio 3:4:3 = 3500

→ female recruit in PNB = $\frac{3500}{10}$ X 3 = 1050



Similarly, female recruit in SBI = 1400 female recruit in BOB = 1050

The number of male recruit in PNB, SBI, and BOB Bank = 6500PNB male =PNB bank – female recruit in PNB = 2500 - 1050 = 1450similarly, SBI male = 4500 - 1400 = 3100BOB Male = 3000 - 1050 = 1950

Bank	Total	Male	Female
PNB	2500	1450	1050
SBI	4500	3100	1400
BOB	3000	1950	1050
Total	10000	6500	3500

Q-446) How many male candidate in SBI Bank?

3100 1950 「 1450

1400 None of these

Ans – 3100

Solution:

Total aspirant who were selected = 10000

Total male aspirant who were selected = 65% of $10000 = \frac{65}{100} X 10000 = 6500$ Female = 10000 - 6500 = 3500

PNB bank = 25% of $10000 = \frac{25}{100} X 10000 = 2500$ Similarly, SBI bank = 45% of 10000 = 4500BOB bank = 30% of 10000 = 3000

Now according to question' The number of female recruit in PNB, SBI, and BOB Bank is in the ratio 3:4:3 = 3500 \Rightarrow female recruit in PNB = $\frac{3500}{10} X 3 = 1050$ Similarly, female recruit in SBI = 1400 female recruit in BOB = 1050

An Initiative by 31423316



The number of male recruit in PNB, SBI, and BOB Bank = 6500PNB male =PNB bank – female recruit in PNB = 2500 - 1050 = 1450similarly, SBI male = 4500 - 1400 = 3100

BOB Male = 3000 - 1050 = 1950

Bank	Total	Male	Female
PNB	2500	1450	1050
SBI	4500	3100	1400
BOB	3000	1950	1050
Total	10000	6500	3500

Q-447) What is the ratio between the number of male from PNB bank is to number of male from BOB bank?

28 : 29 29 : 28 39 : 29 29 : 39 None of these

Ans – 29: 39

Solution: Total aspirant who were selected = 10000 An Initiative by 31423310

Total male aspirant who were selected = 65% of $10000 = \frac{65}{100} X 10000 = 6500$ Female = 10000 - 6500 = 3500

PNB bank = 25% of $10000 = \frac{25}{100} X 10000 = 2500$ Similarly, SBI bank = 45% of 10000 = 4500BOB bank = 30% of 10000 = 3000

Now according to question' The number of female recruit in PNB, SBI, and BOB Bank is in the ratio 3:4:3 = 3500 \Rightarrow female recruit in PNB = $\frac{3500}{10} X 3 = 1050$ Similarly, female recruit in SBI = 1400 female recruit in BOB = 1050

The number of male recruit in PNB, SBI, and BOB Bank = 6500PNB male =PNB bank – female recruit in PNB = 2500 - 1050 = 1450similarly,



SBI male = 4500 - 1400 = 3100 BOB Male = 3000 - 1050 = 1950

Bank	Total	Male	Female
PNB	2500	1450	1050
SBI	4500	3100	1400
BOB	3000	1950	1050
Total	10000	6500	3500

Required ratio = number of male from PNB bank : number of male from BOB bank Ratio = 1450 : 1950 = 29 : 39

Q-448) Aspirant selected to SBI bank is what percentage of More or less Total Female aspirant from all bank?

25% 28.5% 30% 26%

Ans – 28.5%

Solution: Solution: Total aspirant who were selected = 10000 An Initiative by **3मर 3जाल**

Total male aspirant who were selected = 65% of $10000 = \frac{65}{100} X 10000 = 6500$ Female = 10000 - 6500 = 3500

PNB bank = 25% of $10000 = \frac{25}{100} X 10000 = 2500$ Similarly, SBI bank = 45% of 10000 = 4500BOB bank = 30% of 10000 = 3000

Now according to question' The number of female recruit in PNB, SBI, and BOB Bank is in the ratio 3:4:3 = 3500 \Rightarrow female recruit in PNB = $\frac{3500}{10} X 3 = 1050$ Similarly, female recruit in SBI = 1400 female recruit in BOB = 1050

The number of male recruit in PNB, SBI, and BOB Bank = 6500 PNB male =PNB bank – female recruit in PNB = 2500 – 1050 = 1450 similarly,



SBI male = 4500 - 1400 = 3100 BOB Male = 3000 - 1050 = 1950

Bank	Total	Male	Female
PNB	2500 1450 1		1050
SBI	4500	3100	1400
BOB	3000	1950	1050
Total	10000	6500	3500

Aspirant selected to SBI bank = 4500 Female aspirant selected all bank = 3500

Required percentage = $\frac{4500-3500}{3500} X 100 = \frac{1000}{3500} X 100 = 28.5\%$

Q-449) IF 20% of the female aspirant selected in PNB bank leaves their seats and 30% of the male aspirant selected in PNB bank also leave their respective seats. Then find the total number of aspirants who joins PNB bank?

1855 1977 1955 1888 None of these

Ans - 1855

Solution:

Total aspirant who were selected = 10000

Total male aspirant who were selected = 65% of $10000 = \frac{65}{100} X 10000 = 6500$ Female = 10000 - 6500 = 3500

PNB bank = 25% of $10000 = \frac{25}{100} X 10000 = 2500$ Similarly, SBI bank = 45% of 10000 = 4500BOB bank = 30% of 10000 = 3000

Now according to question' The number of female recruit in PNB, SBI, and BOB Bank is in the ratio 3:4:3 = 3500 \Rightarrow female recruit in PNB = $\frac{3500}{10} X 3 = 1050$ Similarly, female recruit in SBI = 1400 female recruit in BOB = 1050



The number of male recruit in PNB, SBI, and BOB Bank = 6500PNB male =PNB bank – female recruit in PNB = 2500 - 1050 = 1450similarly, SBI male = 4500 - 1400 = 3100

BOB Male = 3000 - 1050 = 1950

Bank	Total Male		Female
PNB	2500	1450	1050
SBI	4500	3100	1400
BOB	3000	1950	1050
Total	10000	6500	3500

Female aspirant selected in PNB bank leaves their seats = 20% of 1050 = 210Female aspirant selected in PNB bank joins = 1050 - 210 = 840Male aspirant selected in PNB bank also leaves = 30% of 1450 = 435Male aspirant selected in PNB bank joins = 1450 - 435 = 1015

Total aspirants joins PNB bank = 840 + 1015 = 1855

Q-450) What is the average number of male selected in PNB and BOB bank?

Solution:

Total aspirant who were selected = 10000

Total male aspirant who were selected = 65% of $10000 = \frac{65}{100} X \ 10000 = 6500$ Female = 10000 - 6500 = 3500

PNB bank = 25% of $10000 = \frac{25}{100} X 10000 = 2500$ Similarly, SBI bank = 45% of 10000 = 4500BOB bank = 30% of 10000 = 3000

Now according to question' The number of female recruit in PNB, SBI, and BOB Bank is in the ratio 3:4:3 = 3500 \Rightarrow female recruit in PNB = $\frac{3500}{10} X 3 = 1050$ Similarly, female recruit in SBI = 1400 female recruit in BOB = 1050

The number of male recruit in PNB, SBI, and BOB Bank = 6500PNB male =PNB bank – female recruit in PNB = 2500 - 1050 = 1450similarly,

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SBI male = 4500 - 1400 = 3100 BOB Male = 3000 - 1050 = 1950

Bank	Total	Male	Female
PNB	2500	1450	1050
SBI	4500	3100	1400
BOB	3000	1950	1050
Total	10000	6500	3500

Average number of male selected in PNB and BOB bank = $\frac{1450+1950}{2} = \frac{3400}{2} = 1700$

Moderate to High Level

Directions (1-5): Data shows the different kind of solids in a toy manufacturing company. Company makes different types of toys by joining these solids. Some values are missing, you have to calculate these values if required to answer the questions.

	Length (L)	Diameter(D)	Breadth(B)	Height(H)
Cuboid	10			15
Cube	5			
Cylinder	-	- /	. Tiativa ha	8
Hemisphere	-	-	-	-
Cone	-	14	-	-
Sphere	-	28	-	-

Q1. The Company makes a toy in which a cone is mounted on the base of sphere, If the total surface are of the toy is 858 cm² then find the approximate volume of a toy.

1) 1255 cm³

2) 1323 cm³

3) 1400 cm³



4) 1219 cm³

5)2669 cm³

Answer: 5

Solution:

Total surface of the toy = C.S.A of conical part + C.S.A of spherical part

 $\Rightarrow \pi r l + 2 \pi r^{2} = 858 \text{ cm}^{2}$ $\Rightarrow l = 25 \text{ cm}$ Height of cone; $l = \sqrt{(H^{2} + R^{2})}$ $25 = \sqrt{(H^{2} + 7^{2})}$ H = 24 cmVolume of the toy = 1/3 $\pi R^{2}H + 4/3 \pi R^{3}$ $\Rightarrow 1/ \pi R^{2} (H + 4R)$ $\Rightarrow 2669 \text{ cm}^{3}$

Q2. The company makes a unique toy in which cube is mounted around the cylinder such that cylinder top is exactly in middle of the face of cube. Find the total surface area of the toy formed, if the height of formed toy is 1 ½ times the height of cylinder and curved surface area of cylinder is 33 times the height of cylinder.

1) 125 cm²

- 2) 360 cm²
- 3) 140 cm²

4) 121 cm²

5) 266 cm²

Answer: 2

Solution:

Height of cylindrical part = 8cm

Then height of toy = $1 \frac{1}{2} \times \text{height of cylindrical part}$



⇒1 ½ × 8 = 12cm

Edges of Cubical part = 12 - 8 = 4 cm

C.S.A of cylinder = 33 × height of cylinder

 $\Rightarrow 2\pi RH= 33 \times H$

⇒R = 5.25 cm

Total surface area of toy = $(6a^2 - \pi R^2) + 2 \pi RH + \pi R^2$ (- πR^2 are subtracted due to alignment)

 $\Rightarrow (6 \times 4^2 - 22/7 \times 5.25^2) + 2 \times 22/7 \times 5.25 \times 8 + 22/7 \times 5.25^2$

 \Rightarrow (96 - 86.625) + 264 + 86.625

 \Rightarrow 360 cm²

Q3. If manufacturing unit makes a toy in which a given sphere cut into a two hemisphere and these hemispheres are mounted on both the ends of the cylinder, then find the ratio between the volume of toy formed by joining both hemisphere on cylinder and sphere?

1) 2:1 2) 3:6 3) 1:4 4) 1:2 5) 2:6 Answer:1 Solution: Sphere radius = 28/2 \Rightarrow 14 cm So cylinder Radius = 14 cm Height of cylinder 8 cm Required ratio = $4/3 \pi R^3 + \pi R^2 H$: $4/3 \pi R^3$ \Rightarrow (4/3 × R + H) : 4/3 R $\Rightarrow (4/3 \times 22 + 8): 4/3 \times 14$



⇒2:1

Q4. Volume of the cuboid is approximately what percent less or more than the volume of cylinder if Radius of cylinder is 140% more than the length of Cuboid and Breadth of Cuboid is 125% more than the height of cylinder.

1) 49.65

2) 63.47

3) 52.36

4) 63.36

5) 36.36

Answer: 2

Solution:

Volume of cylinder = $\pi R^2 h$

 \Rightarrow 22/7 × 14 × 14 × 8 (Radius = 140 % of length of cuboid)

 \Rightarrow 22 × 2 × 14 × 8

 \Rightarrow 4928 cm²

Volume of Cuboid = $10 \times 15 \times 125$ % of 8

 \Rightarrow 10 × 15 × 12

 \Rightarrow 1800 cm²

Difference = $4928 - 1800 = 3128 \text{ cm}^2$

Required % = 3128/4928 × 100

⇒63.47% less

Directions(6 - 10): Read the following information carefully and answer the given questions:

The total distance which Amit travels during his journey is (A) km. Amit travels 25% distance of the total journey by car and 60% of the remaining by train and Bus in the respective ratio

An Initiative by **3HC33ICI**



of 5:4 and the remaining distance he covers on feet, sum of the distance which he travels by car and by foot is 396 km

Ratio of CI earned only for 3^{rd} year to CI earned only for 2^{nd} year on an amount Rs.(B) at (C)% per annum is 11/10 and CI earned on Rs. (X + 1500) in 2 years at the same rate is Rs. 2.5a + 90.

Out of a Original Sum Rs (D), $\frac{1}{4}$ th of sum is invested at (C – 4)% per annum, out of remaining half amount invested at 8% per annum and remaining amount is invested equally in two parts at 10% per annum and (C + 4)% per annum, all parts were invested for three years on simple interest and total interest of Rs (15A) was received at the end of three years

An article A is marked up by Rs (B/6 + 50) and then a discount of 10% is given on it. If the same article is marked up by 20% and sold after a discount of Rs 280, would fetch 610 less than the previous transaction. If another article B whose selling price is Rs (E) and cost price is Rs (D/25 + 100) more than the article A is marked up by 10% and the discount given on article B was Rs (A – 30) then find the selling price of article B? O6. Find the value of A?

1) 480 km

- 2) 500 km
- 3) 600 km
- 4) 720 km
- 5) 960 km

Answer: 4 Solution:

Let the total distance be 120x

By car = $\frac{25}{100} \times 120x = 30x$ By Train = $\frac{5}{9} \times \frac{60}{100} \times 90x = 30x$ By bus = $\frac{30x}{5} \times 4 = 24x$ By foot = 120x - 30x - 30x - 24x = 36x

According to question,

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30x + 36x = 396

x = 6 km

Total distance (a) = $120 \times 6 = 720$ km

Let the amount and Rate are X and R%

$$\frac{x(1+\frac{x}{100})^{3}-x(1+\frac{x}{100})^{2}}{x(1+\frac{x}{100})^{2}-x(1+\frac{x}{100})-1]} = \frac{11}{10}$$

$$\Rightarrow \frac{x(1+\frac{x}{100})^{2}-x(1+\frac{x}{100})-1]}{x(1+\frac{x}{100})-1]} = \frac{11}{10}$$

$$\Rightarrow 1+\frac{x}{10}=\frac{11}{10}$$

$$\Rightarrow 1+\frac{x}{10}=\frac{11}{10}$$

$$\Rightarrow 1+\frac{x}{100}=\frac{11}{10}$$

$$\Rightarrow 1+\frac{x}{100}=\frac{1}{10}$$

$$\Rightarrow 1+\frac{x}{10}=\frac{1}{10}$$

$$\Rightarrow 1+\frac{x}{10}=\frac$$

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$\Rightarrow \frac{5x \times (10-4) \times 3}{100} + \frac{7.5x \times 8 \times 3}{100} + \frac{3.75x \times 10 \times 3}{100} + \frac{3.75x \times (10+4) \times 3}{10} = 15 \times 720$
$\Rightarrow \frac{90x}{100} + \frac{180x}{100} + \frac{112.5x}{100} + \frac{157.5x}{100} = 10800$
⇒540x = 1080000
⇒X = Rs 2000
Total sum = 20× 2000 = Rs 40,000
Therefore D = Rs 40,000
Let the cost price of article A be Rs x
In the 1 st case:
Marked price of article $A = x + (B/6 + 50)$
Marked price of article A = $x + (7500/6 + 50)$
Marked price of article A = x + 1300
Selling price of article A = 0.90(x + 1300)
In the 2 nd case: SAFAL A COM
Marked price of article A = 120x An Initiative by 314 C 3 offen
Selling price of article A = $120x - 280$
Now according to question
0.90(x + 1300) - (120x - 280) = 610
0.90x + 1170 - 120x + 280 = 610
= .30x = 840
= x = Rs 2800
Cost price of article A= Rs 2800
Cost price of article B = 2800 +(D/25 + 100)
Cost price of article B = 2800 + (4000/25 + 100)
Cost price of article B = 2800 + 1700
= Rs 4500



Marked price of article B = 4500 × (110/100) =Rs 4950

Selling price of article B = 4950 - (A - 30) = 4950 - 690 = Rs 4260

Therefore E = Rs 4260

Q6. Find the value of E?

1) Rs 4260

- 2) Rs 5260
- 3) Rs 5230

4) Rs 4460

5) Rs 6520

Answer: 1

Solution:

Let the total distance be 120x

By car = $\frac{25}{100} \times 120x = 30x$ By Train = $\frac{5}{9} \times \frac{60}{100} \times 90x = 30x$ By bus = $\frac{30x}{5} \times 4 = 24x$ By foot = 120x - 30x - 30x - 24x = 36xAccording to question, 30x + 36x = 396 x = 6 km Total distance (a) = $120 \times 6 = 720$ km

Let the amount and Rate are X and R%

$$\frac{X\left(1+\frac{R}{100}\right)^3 - X\left(1+\frac{R}{100}\right)^2}{X\left(1+\frac{R}{100}\right)^2 - X\left(1+\frac{R}{100}\right)} = \frac{11}{10}$$

SAFALTA.COM $\Rightarrow \frac{X (1 + \frac{R}{100})^2 [(1 + \frac{R}{100}) - 1]}{X (1 + \frac{R}{100}) [(1 + \frac{R}{100}) - 1]} = \frac{11}{10}$ $\Rightarrow 1 + \frac{R}{100} = \frac{11}{10}$ ⇒R = 10% Now, $(X + 1500) (1 + \frac{10}{100})^2 - (X + 1500) = 2.5a + 90$ $\Rightarrow (X + 1500) \left(\frac{121}{100} - 1\right) = 2.5 \times 720 + 90$ \Rightarrow (X + 1500) ($\frac{21}{100}$) = 1890 $\Rightarrow (X + 1500) = 1890 \times \frac{100}{21}$ ⇒ (X + 1500) = 9000 ⇒X = 9000 – 1500 = 7500 Therefore, B = Rs 7500And C = 10%Let the total sum = Rs 20x First parts = $20x \times \frac{1}{4} = 5x$ Second part = $15x \times \frac{1}{2} = 7.5x$ Third and fourth part = $\frac{7.5x}{2}$ = 3.75x each $\Rightarrow \frac{5x \times (\mathcal{C}-4) \times 3}{100} + \frac{7.5x \times 8 \times 3}{100} + \frac{3.75x \times 10 \times 3}{100} + \frac{3.75x \times (\mathcal{C}+4) \times 3}{10} = 15A$ $\Rightarrow \frac{5x \times (10-4) \times 3}{100} + \frac{7.5x \times 8 \times 3}{100} + \frac{3.75x \times 10 \times 3}{100} + \frac{3.75x \times (10+4) \times 3}{10} = 15 \times 720$ $\Rightarrow \frac{90x}{100} + \frac{180x}{100} + \frac{112.5x}{100} + \frac{157.5x}{100} = 10800$ ⇒540x = 1080000 ⇒X = Rs 2000 Total sum = 20× 2000 = Rs 40,000 Therefore D = Rs 40,000

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Let the cost price of article A be Rs x In the 1st case: Marked price of article A = x + (B/6 + 50)Marked price of article A = x + (7500/6 + 50)Marked price of article A = x + 1300Selling price of article A = 0.90(x + 1300)In the 2nd case: Marked price of article A = 120x Selling price of article A = 120x - 280Now according to question 0.90(x + 1300) - (120x - 280) = 6100.90x + 1170 - 120x + 280 = 610= .30x = 840 = x = Rs 2800Cost price of article A= Rs 2800 Cost price of article B = 2800 + (D/25 + 100)Cost price of article B = 2800 + (4000/25 + 100)Cost price of article B = 2800 + 1700 = Rs 4500 Marked price of article $B = 4500 \times (110/100) = Rs 4950$ Selling price of article B = 4950 - (A - 30) = 4950 - 690 = Rs 4260Therefore E = Rs 4260Q6. Find the value of A? 1) 480 km 2) 500 km 3) 600 km 322



4) 720 km

5) 960 km

Answer: 4 Solution:

Let the total distance be 120x

By car =
$$\frac{25}{100} \times 120x = 30x$$

By Train = $\frac{5}{9} \times \frac{60}{100} \times 90x = 30x$
By bus = $\frac{30x}{5} \times 4 = 24x$

By foot = 120x - 30x - 30x - 24x = 36x

According to question,

$$30x + 36x = 396$$

x = 6 km

Total distance (a) = $120 \times 6 = 720$ km

Let the amount and Rate are X and R%

$$\frac{X\left(1+\frac{R}{100}\right)^3 - X\left(1+\frac{R}{100}\right)^2}{X\left(1+\frac{R}{100}\right)^2 - X\left(1+\frac{R}{100}\right)} = \frac{11}{10}$$

$$\Rightarrow \frac{X\left(1+\frac{R}{100}\right)^2 \left[\left(1+\frac{R}{100}\right) - 1\right]}{X\left(1+\frac{R}{100}\right) \left[\left(1+\frac{R}{100}\right) - 1\right]} = \frac{11}{10}$$

$$\Rightarrow 1 + \frac{R}{100} = \frac{11}{10}$$

$$\Rightarrow R = 10\%$$
Now,
$$(X + 1500) \left(1 + \frac{10}{100}\right)^2 - (X + 1500) = 2.5a + 90$$

 \Rightarrow (X + 1500) ($\frac{121}{100}$ - 1) = 2.5 × 720 + 90

An Initiative by 3मर उजाला
SAFALTA.COM \Rightarrow (X + 1500) ($\frac{21}{100}$) = 1890 $\Rightarrow (X + 1500) = 1890 \times \frac{100}{21}$ ⇒ (X + 1500) = 9000 ⇒X = 9000 – 1500 = 7500 Therefore, B = Rs 7500 And C = 10% Let the total sum = Rs 20x First parts = $20x \times \frac{1}{4} = 5x$ Second part = $15x \times \frac{1}{2} = 7.5x$ Third and fourth part = $\frac{7.5x}{2}$ = 3.75x each $\Rightarrow \frac{5x \times (\mathcal{C}-4) \times 3}{100} + \frac{7.5x \times 8 \times 3}{100} + \frac{3.75x \times 10 \times 3}{100} + \frac{3.75x \times (\mathcal{C}+4) \times 3}{10} = 15A$ $\Rightarrow \frac{5x \times (10-4) \times 3}{100} + \frac{7.5x \times 8 \times 3}{100} + \frac{3.75x \times 10 \times 3}{100} + \frac{3.75x \times (10+4) \times 3}{10} = 15 \times 720$ $\Rightarrow \frac{90x}{100} + \frac{180x}{100} + \frac{112.5x}{100} + \frac{157.5x}{100} = 10800$ An initiative by 31423 34121 ⇒540x = 1080000 ⇒X = Rs 2000 Total sum = 20× 2000 = Rs 40,000 Therefore D = Rs 40,000Let the cost price of article A be Rs x In the 1st case: Marked price of article A = x + (B/6 + 50)Marked price of article A = x + (7500/6 + 50)Marked price of article A = x + 1300Selling price of article A = 0.90(x + 1300)In the 2nd case:



Marked price of article A = 120x Selling price of article A = 120x - 280Now according to question 0.90(x + 1300) - (120x - 280) = 6100.90x + 1170 - 120x + 280 = 610= .30x = 840 = x = Rs 2800Cost price of article A= Rs 2800 Cost price of article B = 2800 + (D/25 + 100)Cost price of article B = 2800 + (4000/25 + 100)Cost price of article B = 2800 + 1700 = Rs 4500 Marked price of article B = $4500 \times (110/100) = \text{Rs} 4950$ Selling price of article B = 4950 - (A - 30) = 4950 - 690 = Rs 4260Therefore E = Rs 4260 Q8. Quantity I : B Quantity II: D 1) Quantity I > Quantity II 2) Quantity I ≥ Quantity II 3) Quantity I ≤ Quantity II 4) Quantity I < Quantity II 5) Quantity I = Quantity II Answer: 4 Solution: : Let the total distance be 120x By car = $\frac{25}{100} \times 120x$ = 30x



By Train = $\frac{5}{9} \times \frac{60}{100} \times 90x = 30x$

By bus = $\frac{30x}{5} \times 4 = 24x$

By foot = 120x - 30x - 30x - 24x = 36x

According to question,

30x + 36x = 396

x = 6 km

Total distance (a) = 120 × 6 = 720 km

Let the amount and Rate are X and R%

$$\frac{x(1+\frac{R}{100})^3 - x(1+\frac{R}{100})^2}{x(1+\frac{R}{100})^2 - x(1+\frac{R}{100}) = \frac{11}{10}}{x(1+\frac{R}{100})^2 ((1+\frac{R}{100}) - 1)} = \frac{11}{10}$$

$$\Rightarrow \frac{x(1+\frac{R}{100})^2 ((1+\frac{R}{100}) - 1)}{x(1+\frac{R}{100}) - 1)} = \frac{11}{10}$$
An Initiative by 314R33161

$$\Rightarrow 1 + \frac{R}{100} = \frac{11}{10}$$

$$\Rightarrow R = 10\%$$
Now,

$$(X + 1500) (1 + \frac{10}{100})^2 - (X + 1500) = 2.5a + 90$$

$$\Rightarrow (X + 1500) (\frac{121}{100} - 1) = 2.5 \times 720 + 90$$

$$\Rightarrow (X + 1500) (\frac{121}{100}) = 1890$$

$$\Rightarrow (X + 1500) = 1890 \times \frac{100}{21}$$

$$\Rightarrow (X + 1500) = 1890 \times \frac{100}{21}$$

$$\Rightarrow (X + 1500) = 9000$$

$$\Rightarrow X = 9000 - 1500 = 7500$$
Therefore, B = Rs 7500



And C = 10% Let the total sum = Rs 20x First parts = $20x \times \frac{1}{4} = 5x$ Second part = $15x \times \frac{1}{2} = 7.5x$ Third and fourth part = $\frac{7.5x}{2}$ = 3.75x each $\Rightarrow \frac{5x \times (C-4) \times 3}{100} + \frac{7.5x \times 8 \times 3}{100} + \frac{3.75x \times 10 \times 3}{100} + \frac{3.75x \times (C+4) \times 3}{10} = 15A$ $\Rightarrow \frac{5x \times (10-4) \times 3}{100} + \frac{7.5x \times 8 \times 3}{100} + \frac{3.75x \times 10 \times 3}{100} + \frac{3.75x \times (10+4) \times 3}{10} = 15 \times 720$ $\Rightarrow \frac{90x}{100} + \frac{180x}{100} + \frac{112.5x}{100} + \frac{157.5x}{100} = 10800$ ⇒540x = 1080000 ⇒X = Rs 2000 Total sum = 20× 2000 = Rs 40,000 Therefore D = Rs 40,000 Let the cost price of article A be Rs x In the 1st case: Marked price of article A = x + (B/6 + 50)Marked price of article A = x + (7500/6 + 50)

Marked price of article A = x + 1300

Selling price of article A = 0.90(x + 1300)

In the 2nd case:

Marked price of article A = 120x

Selling price of article A = 120x - 280

Now according to question

0.90(x + 1300) - (120x - 280) = 610

0.90x + 1170 - 120x + 280 = 610





By bus = $\frac{30x}{5} \times 4 = 24x$

By foot = 120x - 30x - 30x - 24x = 36x

According to question,

30x + 36x = 396

x = 6 km

Total distance (a) = 120 × 6 = 720 km

Let the amount and Rate are X and R%

$$\frac{X(1+\frac{R}{100})^{3}-X(1+\frac{R}{100})^{2}}{X(1+\frac{R}{100})^{2}-X(1+\frac{R}{100})} = \frac{11}{10}$$

$$\Rightarrow \frac{X(1+\frac{R}{100})^{2}\left[\left(1+\frac{R}{100}\right)-1\right]}{X\left(1+\frac{R}{100}\right)\left[\left(1+\frac{R}{100}\right)-1\right]} = \frac{11}{10}$$

$$\Rightarrow 1+\frac{R}{100} = \frac{11}{10}$$

$$\Rightarrow R = 10\%$$
An Initiative by SHR351RM

Now,

$$(X + 1500) (1 + \frac{10}{100})^{2} - (X + 1500) = 2.5a + 90$$

$$\Rightarrow (X + 1500) (\frac{121}{100} - 1) = 2.5 \times 720 + 90$$

$$\Rightarrow (X + 1500) (\frac{21}{100}) = 1890$$

$$\Rightarrow (X + 1500) = 1890 \times \frac{100}{21}$$

$$\Rightarrow (X + 1500) = 9000$$

$$\Rightarrow X = 9000 - 1500 = 7500$$

Therefore, B = Rs 7500
And C = 10%
Let the total sum = Rs 20x



First parts = $20x \times \frac{1}{4} = 5x$ Second part = $15x \times \frac{1}{2} = 7.5x$ Third and fourth part = $\frac{7.5x}{2}$ = 3.75x each $\Rightarrow \frac{5x \times (\mathcal{C}-4) \times 3}{100} + \frac{7.5x \times 8 \times 3}{100} + \frac{3.75x \times 10 \times 3}{100} + \frac{3.75x \times (\mathcal{C}+4) \times 3}{10} = 15A$ $\Rightarrow \frac{5x \times (10-4) \times 3}{100} + \frac{7.5x \times 8 \times 3}{100} + \frac{3.75x \times 10 \times 3}{100} + \frac{3.75x \times (10+4) \times 3}{10} = 15 \times 720$ $\Rightarrow \frac{90x}{100} + \frac{180x}{100} + \frac{112.5x}{100} + \frac{157.5x}{100} = 10800$ ⇒540x = 1080000 ⇒X = Rs 2000 Total sum = 20× 2000 = Rs 40,000 Therefore D = Rs 40,000Let the cost price of article A be Rs x In the 1st case: Marked price of article A = x + (B/6 + 50)Marked price of article A = x + (7500/6 + 50)Marked price of article A = x + 1300Selling price of article A = 0.90(x + 1300)In the 2nd case: Marked price of article A = 120x Selling price of article A = 120x - 280Now according to question 0.90(x + 1300) - (120x - 280) = 6100.90x + 1170 - 120x + 280 = 610= .30x = 840= x = Rs 2800



Cost price of article A= Rs 2800 Cost price of article B = 2800 + (D/25 + 100)Cost price of article B = 2800 + (4000/25 + 100)Cost price of article B = 2800 + 1700 = Rs 4500 Marked price of article $B = 4500 \times (110/100) = Rs 4950$ Selling price of article B = 4950 - (A - 30) = 4950 - 690 = Rs 4260Therefore E = Rs 4260 Q10.Find the difference between B and E? 1) Rs 2040 2) Rs 1840 3) Rs 1640 4) Rs 3240 5) Rs 4240 An Initiative by 3PFC 35FC Answer: 4 Solution: Let the total distance be 120x

By car = $\frac{25}{100} \times 120x = 30x$ By Train = $\frac{5}{9} \times \frac{60}{100} \times 90x = 30x$ By bus = $\frac{30x}{5} \times 4 = 24x$ By foot = 120x - 30x - 30x - 24x = 36xAccording to question, 30x + 36x = 396



x = 6 km

Total distance (a) = $120 \times 6 = 720$ km

Let the amount and Rate are X and R%

$$\frac{x(1 + \frac{R_{0}}{100})^{3} - x(1 + \frac{R_{0}}{100})^{2}}{x(1 + \frac{R_{0}}{100})^{2} - x(1 + \frac{R_{0}}{100}) - 1} = \frac{11}{10}$$

$$\Rightarrow \frac{x(1 + \frac{R_{0}}{100})^{2} [(1 + \frac{R_{0}}{100}) - 1]}{x(1 + \frac{R_{0}}{100}) - 1] = \frac{11}{10}}$$

$$\Rightarrow R = 10\%$$
Now,

$$(X + 1500) (1 + \frac{10}{100})^{2} - (X + 1500) = 2.5a + 90$$

$$\Rightarrow (X + 1500) (\frac{121}{100} - 1) = 2.5 \times 720 + 90$$

$$\Rightarrow (X + 1500) (\frac{21}{100}) = 1890$$

$$\Rightarrow (X + 1500) = 1890 \times \frac{100}{21}$$

$$\Rightarrow (X + 1500) = 9000$$

$$\Rightarrow X = 9000 - 1500 = 7500$$
Therefore, B = Rs 7500
And C = 10\%
Let the total sum = Rs 20x
First parts = 20x $\times \frac{1}{4} = 5x$
Second part = $15x \times \frac{1}{2} = 7.5x$
Third and fourth part = $\frac{7.5x}{2} = 3.75x \ \text{each}$

$$\Rightarrow \frac{5x \times (C-4) \times 3}{100} + \frac{7.5x \times 80 \times 3}{100} + \frac{3.75x \times 10 \times 3}{10} + \frac{3.75x \times (10+4) \times 3}{10} = 15A$$

$$\Rightarrow \frac{5x \times (10-4) \times 3}{100} + \frac{7.5x \times 80 \times 3}{100} + \frac{3.75x \times (10+4) \times 3}{10} = 15 \times 720$$

SAFALTA .COM $\Rightarrow \frac{90x}{100} + \frac{180x}{100} + \frac{112.5x}{100} + \frac{157.5x}{100} = 10800$ ⇒540x = 1080000 ⇒X = Rs 2000 Total sum = 20× 2000 = Rs 40,000 Therefore D = Rs 40,000Let the cost price of article A be Rs x In the 1st case: Marked price of article A = x + (B/6 + 50)Marked price of article A = x + (7500/6 + 50)Marked price of article A = x + 1300Selling price of article A = 0.90(x + 1300)In the 2nd case: Marked price of article A = 120x Selling price of article A = 120x - 280An Initiative by 31423316 Now according to question 0.90(x + 1300) - (120x - 280) = 6100.90x + 1170 - 120x + 280 = 610= .30x = 840 = x = Rs 2800Cost price of article A= Rs 2800 Cost price of article B = 2800 + (D/25 + 100)Cost price of article B = 2800 + (4000/25 + 100)Cost price of article B = 2800 + 1700 = Rs 4500 Marked price of article B = 4500 × (110/100) =Rs 4950



Selling price of article B = 4950 - (A - 30) = 4950 - 690 = Rs 4260

Therefore E = Rs 4260

So,

7500 - 4260 = Rs 3240

Directions(11-15) : Pie chart given below shows the distibution of distance (km) in degree travelled by fivepersons A, B,C,D, and E while going to office from home.

Paragraph given below shows the distance (km) travelled by those five persons while returning from office to home.



Total distance = 600 km





Total distance by A while going from home to office is same as the total distance covered while returning from office to home.Person D covers 20% more distance while returning from office to home than the distance he covers while going to office from home. Average distance covered by person C and E together while returning from office to home is 75km while the respective ratio of their covered distance while returning from office to home is 4 : 1. Total distance covered by all the five persons together while going to office from home is 25% more than the total distance covered by them while returning from office to home.

Table given below shows the change in their expected speed when they are travelling from home to office and office to home. Changed amount of speed remains same while going to office and coming back from office.

Persons	Change in their expected speed (km/h)
А	10
В	-
С	-
D	3
E	4



Note1: All the persons mentioned in the question are travelling with their changed speed only where:

Changed speed while going to office from home = Expected speed while going to office from home + Change in expected speed

Changed speed while returning from office to home = expected speed while returning from office to home – Change in expected speed

Note2: Expected speed of each person while going from home to office and while returning from office to home may be different.

Q11. If time taken by Person E while returning from office to home is same as the time taken by person D to go to office from his home and sum of the expected speeds of D from home to office and E from office to home is 25 km/h, then what is the ratio of the expected speed of E from office to home to the expected speed of D from home to office?

1) 4 : 3

- 2) 3 : 5
- 3) 5 : 3
- 4) 3 : 2
- 5) 2 : 3

Answer: 5

Solution:

Let the expected speed of person D from home to office and E from office to home be a and b respectively

Time taken by person E to return from office to home = (30/(b-4))

Time taken by person D to go to office from his home = (90/(a + 3))

Now,

$$(30/(b-4)) = (90/(a+3))$$

30a + 90 = 90b - 360

90b – 30a = 45 ---- (i)

Given, b + a = 25 ----- (ii)

From (i) and (ii)



a = 15

 \therefore Required ratio = 10 : 15 = 2 : 3

Common Solution:

Persons	Distance (Home to office)
А	600 × (90/360) = 150 km
В	600 × (72/360) = 120 km
С	600 × (108/360) = 180 km
D	600 × (54/360) = 90 km
E	600 × (36/360) = 60 km

Distance covered by A while returning from office to home = 150 km

Distance covered by D while returning from office to home = $90 \times (120/100) = 108$ km

Let distance covered by persons C and E while returning from office to home be 4x and x respectively,

(4x + x)/2 = 75

5x = 150

⇒ x = 30

An initiative by **SIME SCIET**

Distance covered by C while returning from office to home = $4 \times 30 = 120$ km

Distance covered by E while returning from office to home = 30 km

Total distance covered by all of them while returning from office to home = $600 \times (100/125)$ = 480 km

Distance covered by B while going from office to home = 480 - (150 + 108 + 120 + 30) = 72 km

Persons	Distance (home to	Distance (Office to	Change in their
	office)	home)	expected speed
			(km/h)
А	150	150	10
В	120	72	-
С	180	120	-
D	90	108	3
E	60	30	4



Q12. Total time taken by person A to go his home and return from office to his home is 7 hours and 30minutes and his expected speed while going to office from home is 25% more than his expected speed while returning from office to home , then find the changed speed of person A while going to office from his home?

1) 75 km/h

2) 30 km/h

3) 60 km/h

4) 50 km/h

5) 40 km/h

Answer: 3

Solution:

Let expected speed of A while returning from office to home be 4a

And expected speed of A while going to office from home = $4a \times (125/100) = 5a$

Now according to question,

[150/(5a + 10)] + [150/4a - 10)] = 15/2 $\Rightarrow 150 \times [(4a - 10) + (5a + 10)/(5a + 10) \times (4a - 10) = 15/2$ $\Rightarrow 150 \times (9a/(20a^{2} - 50a + 40a - 100)) = 15/2$ $\Rightarrow 180a = 20a^{2} - 50a + 40a - 100$ $\Rightarrow 180a = 20a^{2} - 10a - 100$ $\Rightarrow 20a^{2} - 190a - 100 = 0$ $\Rightarrow 2a^{2} - 19a - 10 = 0$ $\Rightarrow 2a(a - 10) + 1(a - 10) = 0$ $\Rightarrow a = 10$ $\therefore Changed speed of person A while going to office from his home = 5a + 10$ $\Rightarrow 5 \times 10 + 10$

⇒60 km/h



Common Solution:

Persons	Distance (Home to office)
А	600 × (90/360) = 150 km
В	600 × (72/360) = 120 km
С	600 × (108/360) = 180 km
D	600 × (54/360) = 90 km
E	600 × (36/360) = 60 km

Distance covered by A while returning from office to home = 150 km

Distance covered by D while returning from office to home = $90 \times (120/100) = 108$ km

Let distance covered by persons C and E while returning from office to home be 4x and x respectively,

(4x + x)/2 = 75

5x = 150

 \Rightarrow x = 30

Distance covered by C while returning from office to home = $4 \times 30 = 120$ km

Distance covered by E while returning from office to home = 30 km

Total distance covered by all of them while returning from office to home = 600 × (100/125) = 480 km

Distance covered by B while going from office to home = 480 - (150 + 108 + 120 + 30) = 72 km

Persons	Distance (home to	Distance (Office to	Change in their	
	office)	home)	expected speed	
			(km/h)	
А	150	150	10	
В	120	72	-	
С	180	120	-	
D	90	108	3	
E	60	30	4	

Q13. If for person B, ratio of expected speed while going to office from home to the expected speed while returning from office to home is 9 : 5 and difference between these speeds is 24 km/h while changed amount in the speed of B is 6 km/hr, then what is the total time taken by B to go his office from home and return from office to home?



- 1) 5 hours
- 2) 4 hours
- 3) 6 hours
- 4) 8 hours
- 5) 3 hours

Answer: 1 Solution:

Let expected speed while going to office from home and while returning from office to home be 9a and 5a

⇒9a – 5a = 24

⇒4a = 24

⇒a = 6

So, expected speed of B while going to office from home = $9 \times 6 = 54$ km/h

And expected speed of B while returning from office to home = 5 × 6 = 30 km/hr

Changed amount in the speed of B is 6 km/hr

 \therefore Total time = [120/(54 + 6)] + [72/(30 - 6)]

⇒2 + 3

 \Rightarrow 5 hours

Common Solution:

Persons	Distance (Home to office)
А	600 × (90/360) = 150 km
В	600 × (72/360) = 120 km
С	600 × (108/360) = 180 km
D	600 × (54/360) = 90 km
E	600 × (36/360) = 60 km

Distance covered by A while returning from office to home = 150 km

Distance covered by D while returning from office to home = $90 \times (120/100) = 108$ km

An Initiative by 3142.3316



Let distance covered by persons C and E while returning from office to home be 4x and x respectively,

(4x + x)/2 = 75

5x = 150

 \Rightarrow x = 30

Distance covered by C while returning from office to home = $4 \times 30 = 120$ km

Distance covered by E while returning from office to home = 30 km

Total distance covered by all of them while returning from office to home = $600 \times (100/125)$ = 480 km

Distance covered by B while going from office to home = 480 - (150 + 108 + 120 + 30) = 72 km

Persons	Distance (home to	Distance (Office to	Change in their	
	office)	home)	expected speed	
			(km/h)	
A	150	150	10	
В	120	72	-	
С	180	120	COM	
D	90	108	3	
E	60	30 An Initiative I	4 अमरउजाला	

Q14. If time taken by person E to go to his office is 40% of the time taken by person A to return from his office to home, then the expected speed of A while returning from office to home is how much more than the expected speed of E while going to office from home?

1) 12 km/h

2) 14 km/h

3) 24 km/h

4) 15 km/h

5) 20 km/h

Answer: 2 Solution:



Let expected speed of A while returning from office to home and expected speed of E while going to office from home be a and b respectively

Total time taken by A = 150/(a - 10)

Total time taken by E = 60/(b + 4)

Now according to question,

60/(b + 4) = 40/100 × (150/(a - 10))

 \Rightarrow 60/(b + 4) = (60/(a - 10))

 \Rightarrow b + 4 = a - 10

 \Rightarrow a – b = 14 km/h

 \therefore Expected speed of A while returning from office to home is 14 km/hr more than the expected speed of E while going to office from home

Common Solution:

Persons	Distance (Home to office)
A	600 × (90/360) = 150 km
В	600 × (72/360) = 120 km
С	600 × (108/360) = 180 km
D	600 × (54/360) = 90 km
E	600 × (36/360) = 60 km

Distance covered by A while returning from office to home = 150 km

Distance covered by D while returning from office to home = $90 \times (120/100) = 108$ km

Let distance covered by persons C and E while returning from office to home be 4x and x respectively,

(4x + x)/2 = 75

5x = 150

 \Rightarrow x = 30

Distance covered by C while returning from office to home = $4 \times 30 = 120$ km

Distance covered by E while returning from office to home = 30 km

Total distance covered by all of them while returning from office to home = $600 \times (100/125)$ = 480 km



Distance covered by B while going from office to home = 480 - (150 + 108 + 120 + 30) = 72 km

Persons	Distance (home to office)	Distance (Office to home)	Change in their expected speed (km/h)	
А	150	150	10	
В	120	72	-	
С	180	120	-	
D	90	108	3	
E	60	30	4	

Q15.For person C, if changed speed while going to office from home is 2 times of the changed speed while returning from office to home and difference between time taken by him returning from office to home and while going to office from home is 6 hours, then what is the total time taken by C to go to office from home and return back to his home with changed speed?

- 1) 15 hours
- 2) 14 hours
- 3) 16 hours
- 4) 18 hours
- 5) 13 hours

Answer: 4 Solution:

Let changed speed of C while returning from office to home be a

And changed speed of C while going to office from home be 2a

Time taken by C to go to office from home = 180/2a

Time taken by C to return from office to home = 120/a

According to question,

120/a - 180/2a = 6

⇒60 = 6a

An Initiative by 314331



⇒a = 10

:. Total time taken = 180/20 + 120/10

 \Rightarrow 18 hours

Common Solution:

Persons	Distance (Home to office)
А	600 × (90/360) = 150 km
В	600 × (72/360) = 120 km
С	600 × (108/360) = 180 km
D	600 × (54/360) = 90 km
E	600 × (36/360) = 60 km

Distance covered by A while returning from office to home = 150 km

Distance covered by D while returning from office to home = $90 \times (120/100) = 108$ km

Let distance covered by persons C and E while returning from office to home be 4x and x respectively,

(4x + x)/2 = 75

5x = 150

⇒ x = 30

An initiative by Simicassile

Distance covered by C while returning from office to home = $4 \times 30 = 120$ km

Distance covered by E while returning from office to home = 30 km

Total distance covered by all of them while returning from office to home = $600 \times (100/125)$ = 480 km

Distance covered by B while going from office to home = 480 - (150 + 108 + 120 + 30) = 72 km

Persons	Distance (home to	Distance (Office to	Change in their
	office)	home)	expected speed
			(km/h)
А	150	150	10
В	120	72	-
С	180	120	-
D	90	108	3
E	60	30	4



Directions (16-20): Following is the information about number of cars of four different colours (Green, Red, Blue and white) produced in a day by five (A, B,C,D and E) cars manufacturig companies.

Company A:

Total number of cars manufactured by company A of all four colurs in a day is 580 and number of Green, Red and Blue cars manufactured by company A in a day are 50%, 74% and 66% of the number of White cars manufactured by company A in a day respectively.

Company B:

Number of Red cars manufactured by company B in a day is 50% less than the number of Red cars manufactured by company A in a day. Number of Blue cars manufactured by company B in a day is 50% more than the number of Red cars manufactured by company B in a day. Total number of cars produced by company B of all four colours is 560 and number of Green cars manufactured by company B in a day is 69 more than the number of White cars manufactured by company B in a day.

Company C:

The ratio of number of Green cars manufactured by company C in a day to the number of Red cars manufactured by company B in a day is 5 : 2. Company B and C manufacture same number of Blue cars in a day. The ratio of number of Blue cars manufactured by company C in a day to the number of White cars manufactured by company C in a day is 3 : 4 and number of Red cars manufactured by company C in a day is 22 less than the number of White cars manufactured by company C in a day.

Company D:

Total number of cars manufatured of all four colours by company D is 30 more than the total number of Cars manufatured of all four colours by company C. The ratio of the number of Green, Red, Blue and White coloured cars manufatured by company D is 8 : 9 : 6 : 7.

Company E:

Number of Green cars manufatured by company E in a day is 16 less than the number of Red cars manufatured by company C in day and number of Red cars manufatured by company E in day is 40 more than the number of Green cars manufactured by company E in a day. Number of Green cars manufatured by companty E is 15 more than the number of White cars manufactured by company E in day. Total number of cars manufactured of all four colours by company E in a day is 10% less than the total number of cars manufactured of all four colours by company C in day.



Q16. Total number of cars of four colours manufactured by company C is what percent more/less than the total number of cars of four colours manufactured by company D?

1) 6% less

2) 5% less

3) 4% less

4) 5% more

5) 6% more

Answer: 2 Solution:

Number of cars manufactured by C = 570

Number of cars manufactured by D = 600

 \therefore Required percentage = (600 - 570)/600 × 100

⇒5% less

Common Solution:

Company A:

Let number of white cars manufactured in day be x

Number of green cars manufactured in day = 0.50x

Number of red cars manufactured in day = 0.74x

Number of blue cars manufactured = 0.66x

According to question,

Total number of cars manufatured by company A = x + 0.50x + 0.74x + 0.66x = 580

⇒2.9x = 580

⇒x = 200

Number of white cars manufactured in day = 200

Number of green cars manufactured in day = $0.50 \times 200 = 100$

An Initiative by अमर उजाव



Number of red cars manufactured in day = $0.74 \times 200 = 148$ Number of blue cars manufactured = $0.66 \times 200 = 132$ Company B: Number of red cars manufactured in day = $148 \times (50/100) = 74$ Number of blue cars manufactured = $74 \times (150/100) = 111$ Let Number of white cars manufactured in day be x Number of green cars manufactured in day = x + 69According to question, 74 + 111 + x + x + 69 = 560 $\Rightarrow 2x + 254 = 560$ $\Rightarrow x = 306/2$ $\Rightarrow x = 153$ Number of white cars manufactured in day = 153Number of green cars manufactured in day = 153 + 69 = 222Company C:

Ratio of number of green cars manufactured by company C in day to the number of red cars manufactured by company B in day is 5 : 2

Number of green cars manufactured by company C in day = $(74/2) \times 5 = 185$

Number of blue cars manufactured in day = Number of blue cars manufactured by company B in day = 111

Ratio of number of blue cars manufactured by company C in day to the number of white cars manufactured by company C in day is 3 : 4

Number of white cars manufactured by company $C = (111/3) \times 4 = 148$

Number of red cars manufactured by company C = 148 - 22 = 126

Company D :

Total number of cars manufactured = 570 + 30 = 600



Let the number of green, red, blue and white colored cars manufactured by company D are 8x, 9x, 6x and 7x respectively

According to question,

8x + 9x + 6x + 7x = 600

⇒30x = 600

⇒x = 20

Number of green cars manufactured in day = $8 \times 20 = 160$

Number of red cars manufactured in day = $9 \times 20 = 180$

Number of blue cars manufactured in day = $6 \times 20 = 120$

Number of white cars manufactured in day = $7 \times 20 = 140$

Company E:

Number of green cars manufactured by company E in day = 126 - 16 = 110

Number of red cars manufactured by company E in day = 110 + 40 = 150

Number of white cars manufactured by company E in day = 110 + 15 = 125

Total number of cars of all four colors by company E in day = 570 × (90/100) = 513

	Green	Red	Blue	White	Total
Company A	100	148	132	200	580
Company B	222	74	111	153	560
Company C	185	126	111	148	570
Company D	160	180	120	140	600
Company E	110	150	128	125	513
Total	777	678	602	766	

Number of Blue cars manufactured by company E in day = 513 - (110 + 150 + 125) = 128

Q17. What is the ratio of the total number of green, red and blue cars manufactured by company A in a day to the total number of green, red and blue cars manufactured by company D in day?

1) 19 : 25

2) 17 : 23

3) 19 : 23



4) 18 : 23

5) 19 : 24

Answer: 3 Solution:

Total number of green, red and blue cars manufactured by company A in a day

⇒ 100 + 148 + 132 = 380

Total number of green, red and blue cars manufactured by company D in day

 $\Rightarrow 160 + 180 + 120 = 460$

: Required ratio = 380 : 460 = 19 : 23

Common Solution:

Company A:

Let number of white cars manufactured in day be x

Number of green cars manufactured in day = 0.50x

Number of red cars manufactured in day = 0.74x

Number of blue cars manufactured = 0.66x

According to question,

Total number of cars manufatured by company A = x + 0.50x + 0.74x + 0.66x = 580

⇒2.9x = 580

⇒x = 200

Number of white cars manufactured in day = 200

Number of green cars manufactured in day = $0.50 \times 200 = 100$

Number of red cars manufactured in day = $0.74 \times 200 = 148$

Number of blue cars manufactured = $0.66 \times 200 = 132$

Company B:

Number of red cars manufactured in day = $148 \times (50/100) = 74$



Number of blue cars manufactured = $74 \times (150/100) = 111$ Let Number of white cars manufactured in day be x

Number of green cars manufactured in day = x + 69

According to question,

74 + 111 + x + x + 69 = 560

⇒2x + 254 = 560

⇒x = 306/2

⇒x = 153

Number of white cars manufactured in day = 153

Number of green cars manufactured in day = 153 + 69 = 222

Company C:

Ratio of number of green cars manufactured by company C in day to the number of red cars manufactured by company B in day is 5:2

Number of green cars manufactured by company C in day = $(74/2) \times 5 = 185$

Number of blue cars manufactured in day = Number of blue cars manufactured by company B in day = 111

Ratio of number of blue cars manufactured by company C in day to the number of white cars manufactured by company C in day is 3 : 4

Number of white cars manufactured by company $C = (111/3) \times 4 = 148$

Number of red cars manufactured by company C = 148 – 22 = 126

Company D :

Total number of cars manufactured = 570 + 30 = 600

Let the number of green, red, blue and white colored cars manufactured by company D are 8x, 9x, 6x and 7x respectively

According to question,

8x + 9x + 6x + 7x = 600

⇒30x = 600



⇒x = 20

Number of green cars manufactured in day = 8 × 20 = 160
Number of red cars manufactured in day = 9 × 20 = 180
Number of blue cars manufactured in day = 6 × 20 = 120
Number of white cars manufactured in day = 7 × 20 = 140
Company E:
Number of green cars manufactured by company E in day = 126 - 16 = 110
Number of red cars manufactured by company E in day = 110 + 40 = 150
Number of white cars manufactured by company E in day = 110 + 15 = 125

Total number of cars of all four colors by company E in day = $570 \times (90/100) = 513$

Number of Blue cars manufactured by company E in day = 513 - (110 + 150 + 125) = 128

	Green	Red	Blue	White	Total
Company A	100	148	132	200	580
Company B	222	74	111	153	560
Company C	185	126	111	148	570
Company D	160	180	120	140	600
Company E	110	150	128	125	513
Total	777	678	602	766	

Q18. If the number of red cars manufactured by all the five given companies is increased by 50%, then what is the sum of number of red cars manufactured by all five companies?

1) 967

2) 1217

3) 917

4) 1117

5) 1017

Answer: 5 Solution:



Number of red cars manufactured by all the companies = 678

Manufacturing of red cars is increased by 50%

 \therefore New number of red cars manufactured by all the companies = (150/100) × 678 = 1017

Common Solution:

Company A:

Let number of white cars manufactured in day be x

Number of green cars manufactured in day = 0.50x

Number of red cars manufactured in day = 0.74x

Number of blue cars manufactured = 0.66x

According to question,

Total number of cars manufatured by company A = x + 0.50x + 0.74x + 0.66x = 580

⇒2.9x = 580

⇒x = 200

Number of white cars manufactured in day = 200 Number of green cars manufactured in day = $0.50 \times 200 = 100$ Number of red cars manufactured in day = $0.74 \times 200 = 148$ Number of blue cars manufactured = $0.66 \times 200 = 132$

Company B:

Number of red cars manufactured in day = $148 \times (50/100) = 74$

Number of blue cars manufactured = $74 \times (150/100) = 111$

Let Number of white cars manufactured in day be x

Number of green cars manufactured in day = x + 69

According to question,

74 + 111 + x + x + 69 = 560

⇒2x + 254 = 560



⇒x = 306/2

⇒x = 153

Number of white cars manufactured in day = 153

Number of green cars manufactured in day = 153 + 69 = 222

Company C:

Ratio of number of green cars manufactured by company C in day to the number of red cars manufactured by company B in day is 5 : 2

Number of green cars manufactured by company C in day = $(74/2) \times 5 = 185$

Number of blue cars manufactured in day = Number of blue cars manufactured by company B in day = 111

Ratio of number of blue cars manufactured by company C in day to the number of white cars manufactured by company C in day is 3 : 4

Number of white cars manufactured by company $C = (111/3) \times 4 = 148$

Number of red cars manufactured by company C = 148 - 22 = 126

Company D :

Total number of cars manufactured = 570 + 30 = 600 In Initiative by 31472351101

Let the number of green, red, blue and white colored cars manufactured by company D are 8x, 9x, 6x and 7x respectively

According to question,

8x + 9x + 6x + 7x = 600

⇒30x = 600

⇒x = 20

Number of green cars manufactured in day = $8 \times 20 = 160$

Number of red cars manufactured in day = $9 \times 20 = 180$

Number of blue cars manufactured in day = $6 \times 20 = 120$

Number of white cars manufactured in day = $7 \times 20 = 140$

Company E:



Number of green cars manufactured by company E in day = 126 - 16 = 110Number of red cars manufactured by company E in day = 110 + 40 = 150Number of white cars manufactured by company E in day = 110 + 15 = 125Total number of cars of all four colors by company E in day = $570 \times (90/100) = 513$ Number of Blue cars manufactured by company E in day = 513 - (110 + 150 + 125) = 128

	Green	Red	Blue	White	Total
Company A	100	148	132	200	580
Company B	222	74	111	153	560
Company C	185	126	111	148	570
Company D	160	180	120	140	600
Company E	110	150	128	125	513
Total	777	678	602	766	

Q19. What is the ratio of total number of green cars manufactured by companies A and C together to the total number of white cars manufactured in a day by companies D and E together?

- 1) 47 : 43
- 2) 57 : 43
- 3) 58 : 53
- 4)57 : 53
- 5) 67 : 63
- Answer: 4

Solution:

Number of green cars manufactured by company A and C together

⇒ 100 + 185 = 285

Number of white cars manufactured by company D and E together

⇒ 140 + 125 = 265

∴ Required ratio = 285 : 265 = 57 : 53

An Initiative by **3747.35161**



Common Solution:

Company A:

Let number of white cars manufactured in day be x

Number of green cars manufactured in day = 0.50x

Number of red cars manufactured in day = 0.74x

Number of blue cars manufactured = 0.66x

According to question,

Total number of cars manufatured by company A = x + 0.50x + 0.74x + 0.66x = 580

⇒2.9x = 580

⇒x = 200

Number of white cars manufactured in day = 200

Number of green cars manufactured in day = $0.50 \times 200 = 100$

Number of red cars manufactured in day = $0.74 \times 200 = 148$

Number of blue cars manufactured = $0.66 \times 200 = 132$

Company B:

Number of red cars manufactured in day = $148 \times (50/100) = 74$

Number of blue cars manufactured = $74 \times (150/100) = 111$

Let Number of white cars manufactured in day be x

Number of green cars manufactured in day = x + 69

According to question,

74 + 111 + x + x + 69 = 560

⇒2x + 254 = 560

⇒x = 306/2

⇒x = 153

Number of white cars manufactured in day = 153



Number of green cars manufactured in day = 153 + 69 = 222

Company C:

Ratio of number of green cars manufactured by company C in day to the number of red cars manufactured by company B in day is 5 : 2

Number of green cars manufactured by company C in day = $(74/2) \times 5 = 185$

Number of blue cars manufactured in day = Number of blue cars manufactured by company B in day = 111

Ratio of number of blue cars manufactured by company C in day to the number of white cars manufactured by company C in day is 3 : 4

Number of white cars manufactured by company $C = (111/3) \times 4 = 148$

Number of red cars manufactured by company C = 148 - 22 = 126

Company D :

Total number of cars manufactured = 570 + 30 = 600

Let the number of green, red, blue and white colored cars manufactured by company D are 8x, 9x, 6x and 7x respectively

According to question,

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8x + 9x + 6x + 7x = 600

⇒30x = 600

⇒x = 20

Number of green cars manufactured in day = $8 \times 20 = 160$

Number of red cars manufactured in day = $9 \times 20 = 180$

Number of blue cars manufactured in day = $6 \times 20 = 120$

Number of white cars manufactured in day = $7 \times 20 = 140$

Company E:

Number of green cars manufactured by company E in day = 126 – 16 = 110

Number of red cars manufactured by company E in day = 110 + 40 = 150

Number of white cars manufactured by company E in day = 110 + 15 = 125



Total number of cars of all four colors by company E in day = $570 \times (90/100) = 513$

Number of Blue cars manufactured by company E in day = 513 - (110 + 150 + 125) = 128

	Green	Red	Blue	White	Total
Company A	100	148	132	200	580
Company B	222	74	111	153	560
Company C	185	126	111	148	570
Company D	160	180	120	140	600
Company E	110	150	128	125	513
Total	777	678	602	766	

Q20. Total number of cars of all four colors manufactured by company A in day is approximate what percent of total number of red cars manufactured by all five given companies in day?

1) 87%

- 2) 85.5%
- 3) 86.5%

4)67%

5) 76%

Answer: 2 Solution:

Total number of cars manufactured by company A = 580

Total number of red cars manufactured by all companies = 678

 \therefore Required percentage = (580/678) × 100

⇒85.54% ≈ 86%

Common Solution:

Company A:

Let number of white cars manufactured in day be x

Number of green cars manufactured in day = 0.50x

Number of red cars manufactured in day = 0.74x

An Initiative by 3HC33H



Number of blue cars manufactured = 0.66xAccording to question, Total number of cars manufatured by company A = x + 0.50x + 0.74x + 0.66x = 580⇒2.9x = 580 $\Rightarrow x = 200$ Number of white cars manufactured in day = 200 Number of green cars manufactured in day = $0.50 \times 200 = 100$ Number of red cars manufactured in day = $0.74 \times 200 = 148$ Number of blue cars manufactured = $0.66 \times 200 = 132$ Company B: Number of red cars manufactured in day = $148 \times (50/100) = 74$ Number of blue cars manufactured = $74 \times (150/100) = 111$ Let Number of white cars manufactured in day be x Number of green cars manufactured in day = x + 69An Initiative by 3142.3310 According to question, 74 + 111 + x + x + 69 = 560 $\Rightarrow 2x + 254 = 560$ ⇒x = 306/2 ⇒x = 153 Number of white cars manufactured in day = 153Number of green cars manufactured in day = 153 + 69 = 222 Company C: Ratio of number of green cars manufactured by company C in day to the number of red cars manufactured by company B in day is 5:2 Number of green cars manufactured by company C in day = $(74/2) \times 5 = 185$



Number of blue cars manufactured in day = Number of blue cars manufactured by company B in day = 111

Ratio of number of blue cars manufactured by company C in day to the number of white cars manufactured by company C in day is 3 : 4

Number of white cars manufactured by company $C = (111/3) \times 4 = 148$

Number of red cars manufactured by company C = 148 - 22 = 126

Company D:

Total number of cars manufactured = 570 + 30 = 600

Let the number of green, red, blue and white colored cars manufactured by company D are 8x, 9x, 6x and 7x respectively

According to question,

8x + 9x + 6x + 7x = 600

⇒30x = 600

⇒x = 20

Number of green cars manufactured in day = 8 × 20 = 160

Number of red cars manufactured in day = $9 \times 20 = 180$ initiative by 314 PC3 of tell

Number of blue cars manufactured in day = $6 \times 20 = 120$

Number of white cars manufactured in day = $7 \times 20 = 140$

Company E:

Number of green cars manufactured by company E in day = 126 – 16 = 110

Number of red cars manufactured by company E in day = 110 + 40 = 150

Number of white cars manufactured by company E in day = 110 + 15 = 125

Total number of cars of all four colors by company E in day = $570 \times (90/100) = 513$

Number of Blue cars manufactured by company E in day = 513 - (110 + 150 + 125) = 128

	Green	Red	Blue	White	Total
Company A	100	148	132	200	580
Company B	222	74	111	153	560
Company C	185	126	111	148	570


Company D	160	180	120	140	600
Company E	110	150	128	125	513
Total	777	678	602	766	

Directions(21-25) : Below tabular data shows electricity bill details by various electricity providers. Read the following data carefully and answer the following questions based on that.

Provider	Base Price	Rate/Unit	Extra charge above 50 units			
			50 <unit>150</unit>	Unit <150		
SJVN	130	12	5	8		
JSW	180	15	5	14		
CESC	160	18	9	16		
NTPC	140	10	10	12		
NLC	200	8	12	18		
NHPC	175	20	8	12		

Note:1 Consumption up to 50 units:

Bill = Base price + (units consumed × Rate/unit)

2. Consumption above 50 units:

Bill = Base price + (Units consumed × Rate/units) × (100 + extra charge)/100)

Q21. If Mohan and Nick consumed 130 and 185 units from JSW and NTPC respectively, then what is the difference between bill paid by Mohan and Nick?

1) 11.5

2) 13

3) 14.75

4) 15.5

5) 19.5

Answer: 4 Solution:

Bill of Mohan = 180 + ((130 × 15) ×(100 + 5)/100)



⇒2227.5

Bill of Nick = 140 + ((185 × 10) × (100 + 12)/100)

⇒2212

 \therefore Requireddifference = 2227.5 - 2212 = 15.5

Q22. If Peter and David consume 225 and 250 units from SJVN and CESC respectively then what is the difference of bills paid by Peter and David?

1) 1666
2) 2334
3) 2667
4)2445
5) 4666
Answer: 2
Peter bill = $130 + ((225 \times 12) \times (100 + 8)/100)$
⇒3046
David's bill = 160 + ((250 × 18) + (100 + 16)/100)
⇒5380
∴Required difference = 5380 – 3046 = 2334

Q23. What is the approximate average bill received by NTPC, NLC and NHPC together for a consumption of 40, 100 and 120 units respectively?

1) 1468

2) 1475

3) 1269

4)1457

5) 1532



Answer: 1 Solution:

Bill received by NTPC = $140 + (40 \times 10) = 540$ Bill received by NLC = $200 + ((100 \times 8) \times (100 + 12) = 1096$ Bill received by NHPC = $175 + ((120 \times 20) \times (100 + 8) = 2767$ ∴Required average = $(540 + 1096 + 2767)/3 = 1467.66 \approx 1468$

Q24. Peter wants an electricity connection with estimated 180 units then which of the following electricity provider is the cheapest among all?

1) SJVN

2) JSW

3)CESC

4)NTPC

5) NLC

Answer: 5 Solution:



 $SJVN = 130 + ((180 \times 12) \times (100 + 8)/100) = 2462.8$ $JSW = 180 + ((180 \times 15) \times (100 + 14)/100) = 3258$ $CESC = 160 + ((180 \times 18) \times (100 + 16)/100) = 3918.4$ $NTPC = 140 + ((180 \times 10) \times (100 + 12)/100) = 2156$ $NLC = 200 + ((180 \times 8) \times (100 + 18)/100) = 1899.2$ $NHPC = 175 + ((180 \times 20) \times (100 + 12)/100) = 4207$

 $\div \mathsf{NLC}$ is cheapest among all for Peter

Q25. Mark is having electricity connections from JSW and NLC for domestic and commercial purposes respectively , then what is the total bill of Mark for a consumption of 200 and 220



units for domestic and commercial purpose respectively, if the base rate is 25% more for commercial purpose?

1) 5926.8

2) 5752.8

3)4589.8

4)4956.8

5) 5945.8

Answer: 1

Solution :

Bill of mark from JSW = 180 + ((200 × 15) × (100 + 14) = 3600

Bill of mark from NLC = 200 + (125/100) + ((220 × 8) × (100 + 18) = 2326.8

∴Total bill of Mark = 3600 + 2326.8 = 5926.8

Direction(26-30): Following is the data regarding the expenditure and revenue of five companies i.e. Oppo, Redmi, Apple, Samsung and Nokia. The data is in the Crores. Some of the data is missing.

	2017			2018			2019			
	Reve	Expendi	Profi	Revenu	Expenditu	Profi	Revenu	Expenditu	Pro	ofi
	nue	ture	t	e	re	t	e	re	t	
Oppo	-	-			-	-	-	-	-	
Redmi	-		-	440	-	-	-	480	-	
Apple	-	190	-	-	210	-	-	-	-	
Samsung	-	170	-	-	310	-	-	90	-	
Nokia	-	270	-	-	250	-	-	-	-	
Net Total	1370	1130	240	-	1330	-	2160	-	66	D

Profit = Revenue – Expenditure

Profit% = (Profit/Expenditure) × 100

Profit of apple in 2018 is 1/9 of Profit of Redmi in 2019. The sum of Revenue of Nokia in 2017 and 2018 is 660. Revenue of Oppo in 2017 is 50 less than the Revenue of Redmi in 2017. Profit of Apple and Samsung in 2019 are equal. Ratio between the Revenue of Redmi in 2017 to

363



Profit of Redmi in 2019 is 11 : 12.Ratio between the Revenue of Nokia in 2017 to 2018 is 5 : 6.Revenue of Redmi in 2017 is 300 more than the profit of Nokia in same year. The total net profit of all the companies in 2018 is twice the revenue of Apple in 2018. Revenue of Oppo in 2019 is twice the revenue of Nokia in 2019 and Revenue of Apple in 2019 is three times the Revenue of Samsung in 2019. Ratio between the Expenditure of Oppo and Redmi in 2018 is 3 : 4 and ratio between Revenue of Samsung in 2019 to Expenditure of Oppo in 2018 is 3 : 4. Profit of apple in 2019 is 1/4 of revenue of Nokia in 2018.Sum of Revenue of Oppo in 2019 and Revenue of Nokia in 2019 is 600.The total net revenue of all the companies in 2019.Ratio between the Profit of Oppo in 2018 is 330 less than the total net revenue of all the companies in 2019.Ratio between the Profit of Oppo in 2018 is 2019 to profit of Nokia in 2019 is 2 : 1.

Q26. If the sum of revenues for all companies in 2017 is 1370 and the ratio of expenditure of Oppo and Redmi is 11 : 14, and the difference in revenues of Apple and Samsung is 40 with Apple's revenue being more, what is the difference in the profit of Apple and Redmi in 2017?





Expenditure of oppo in 2017 = $11 \times 20 = 220$ Expenditure of Redmi in 2017 = $14 \times 20 = 280$ Let the revenue of Apple and Samsung in 2017 be b and c respectively 280 + 330 + b + c + 300 = 1370 $\Rightarrow b + c = 1370 - 910$ $\Rightarrow b + c = 460 - ---(i)$ Given, $b - c = 40 \dots$ (ii) Solving (i) and (ii) we get, 2b = 500 $\Rightarrow b = 250$ $\Rightarrow c = 210$ Profit of Apple in 2017 = 250 - 190 = 60Profit of Redmi in 2017 = 330 - 280 = 50 \therefore Required difference = 60 - 50 = 10

Common Solution:

Revenue of Nokia in 2017 and 2018 = 660 Ratio between the Revenue of Nokia in 2017 to 2018 = 5 : 6 Therefore Revenue of Nokia in 2017 = $(660/11) \times 5 = 300$ And Revenue of Nokia in 2018 = 660 - 300 = 360Profit of Nokia in 2017 = 300 - 270 = 30Profit of Nokia in 2018 = 360 - 250 = 110Profit of Apple in 2019 = $1/4 \times 360 = 90$ Revenue of Redmi in 2017 = 300 + 30 = 330Therefore Revenue of oppo = 330 - 50 = 280Profit of Redmi in 2019 = $(330/11) \times 12 = 360$



Revenue of Redmi in 2019 = 480 + 360 = 840 Profit of apple in 2018 = 360/9 = 40 Revenue of Apple in 2018 = 210 + 40 = 250 Total net profit of All the companies in $2018 = 2 \times 250 = 500$ Profit of Apple in 2019 = Profit of Samsung in 2019 Therefore Profit of Samsung = 90 Revenue of Samsung in 2019 = 90 + 90 = 180 Expenditure of Oppo in 2018 = (180/3) × 4 = 240 Expenditure of Redmi in $2018 = (240/3) \times 4 = 320$ Revenue of Apple in 2019 = 3 × 180 = 540 Expenditure of Apple in 2019 = 540 - 90 = 450Revenue of Oppo in 2019 + Revenue of Nokia in 2019 = 600 Let the Revenue of Oppo in 2019 be x units Revenue of Oppo in 2019 is twice the revenue of Nokia in 2019 $\Rightarrow 2x + x = 600$ ⇒x = 200 Revenue of Oppo in 2019 = 400 and Revenue of Nokia in 2019 = 200 Total Revenue of all the companies in 2019 = 400 + 840 + 540 + 180 + 200 = 2160 The total net revenue of all the companies in 2018 is 330 less than the total net revenue of all the companies in 2019

 \Rightarrow total net revenue of all the companies in = 2160 - 330 = 1830

Net profit of all the companies in 2019 = 660

Ratio between the Profit of Oppo in 2019 to profit of Nokia in 2019 is 2 : 1

Let the profit of Nokia in 2019 be y units

2y + 360 + 90 + 90 + y = 660

 \Rightarrow 3y = 660 - 540



 \Rightarrow y = 40

Profit of Oppo in 2019 = 80

Profit of Nokia in 2019 = 40

	2017			2018			2019		
	Reve	Expendi	Profi	Revenu	Expenditu	Prof	fi Revenu	Expenditu	Profi
	nue	ture	t	е	re	t	е	re	t
Орро	280	-			240	-	400	320	80
Redmi	330		-	440	320	120	840	480	360
Apple	-	190		250	210	40	540	450	90
Samsung	-	170	-	-	310	-	180	90	90
Nokia	300	270	30	360	250	110	200	160	40
Net	1370	1130	240	1830	1330	500	2160	1500	660
Total					A 8 1		4		
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Q27. If in 2018, Apple's profit is $11\frac{1}{9}\%$ of Samsung's revenue, what is the profit of Oppo in 2018?

1) 100

2) 200

3) 300

4) 250

5) 180

Answer: 5

Solution:

Apple's profit in 2018 = 40

Now,

 \Rightarrow 40 = 100/9% × Samsung's revenue



Samsung's revenue= 360 Profit of Samsung = 360 - 310 = 50 Oppo's profit = 500 - (120 + 40 + 50 + 110) Oppo's profit = 500 - 320 = 180 ∴ Profit of Oppo in 2018 is 180

Common Solution:

Revenue of Nokia in 2017 and 2018 = 660 Ratio between the Revenue of Nokia in 2017 to 2018 = 5 : 6 Therefore Revenue of Nokia in $2017 = (660/11) \times 5 = 300$ And Revenue of Nokia in 2018 = 660 – 300 = 360 Profit of Nokia in 2017 = 300 – 270 = 30 Profit of Nokia in 2018 = 360 – 250 = 110 Profit of Apple in $2019 = 1/4 \times 360 = 90$ Revenue of Redmi in 2017 = 300 + 30 = 330 Therefore Revenue of oppo = 330 - 50 = 280Profit of Redmi in 2019 = (330/11) × 12 = 360 Revenue of Redmi in 2019 = 480 + 360 = 840 Profit of apple in 2018 = 360/9 = 40 Revenue of Apple in 2018 = 210 + 40 = 250 Total net profit of All the companies in $2018 = 2 \times 250 = 500$ Profit of Apple in 2019 = Profit of Samsung in 2019 Therefore Profit of Samsung = 90 Revenue of Samsung in 2019 = 90 + 90 = 180 Expenditure of Oppo in $2018 = (180/3) \times 4 = 240$ Expenditure of Redmi in $2018 = (240/3) \times 4 = 320$



Revenue of Apple in $2019 = 3 \times 180 = 540$ Expenditure of Apple in 2019 = 540 – 90 = 450 Revenue of Oppo in 2019 + Revenue of Nokia in 2019 = 600 Let the Revenue of Oppo in 2019 be x units Revenue of Oppo in 2019 is twice the revenue of Nokia in 2019 \Rightarrow 2x + x = 600 ⇒x = 200 Revenue of Oppo in 2019 = 400 and Revenue of Nokia in 2019 = 200 Total Revenue of all the companies in 2019 = 400 + 840 + 540 + 180 + 200 = 2160 The total net revenue of all the companies in 2018 is 330 less than the total net revenue of all the companies in 2019 \Rightarrow total net revenue of all the companies in = 2160 - 330 = 1830 Net profit of all the companies in 2019 = 660 Ratio between the Profit of Oppo in 2019 to profit of Nokia in 2019 is 2 : 1 An Initiative by 314333161 Let the profit of Nokia in 2019 be y units 2y + 360 + 90 + 90 + y = 660 \Rightarrow 3y = 660 - 540 \Rightarrow y = 40 Profit of Oppo in 2019 = 80 Profit of Nokia in 2019 = 40

	2017			2018			2019		
	Reve	Expendi	Profi	Revenu	Expenditu	Profi	Revenu	Expenditu	Profi
	nue	ture	t	е	re	t	е	re	t
Орро	280	-			240	-	400	320	80



Redmi	330		-	440	320	120	840	480	360
Apple	_	190		250	210	40	540	450	90
Samsung	-	170	-	-	310	-	180	90	90
Nokia	300	270	30	360	250	110	200	160	40
Net	1370	1130	240	1830	1330	500	2160	1500	660
Total									

Q28. What is the approximate percentage increase in the average profit of Redmi and Nokia in 2019 from 2018?

- 1) 62%
- 2) 75%
- 3) 74%
- 4) 88%
- 5) 80%
- Answer: 3
- Solution:

According to the given question, Average profit of Redmi and Nokia in 2018 = (120 + 110)/2 = 115

Average profit of Redmi and Nokia in 2019 = (360 + 40)/2 = 200

Required percentage = $(200 - 115)/115 \times 100$

⇒ (85/115) × 100

⇒ 73.91% ≈ 74%

Common Solution:

Revenue of Nokia in 2017 and 2018 = 660

Ratio between the Revenue of Nokia in 2017 to 2018 = 5 : 6

Therefore Revenue of Nokia in $2017 = (660/11) \times 5 = 300$

And Revenue of Nokia in 2018 = 660 - 300 = 360



Profit of Nokia in 2017 = 300 – 270 = 30 Profit of Nokia in 2018 = 360 – 250 = 110 Profit of Apple in $2019 = 1/4 \times 360 = 90$ Revenue of Redmi in 2017 = 300 + 30 = 330 Therefore Revenue of oppo = 330 - 50 = 280Profit of Redmi in 2019 = (330/11) × 12 = 360 Revenue of Redmi in 2019 = 480 + 360 = 840 Profit of apple in 2018 = 360/9 = 40 Revenue of Apple in 2018 = 210 + 40 = 250 Total net profit of All the companies in $2018 = 2 \times 250 = 500$ Profit of Apple in 2019 = Profit of Samsung in 2019 Therefore Profit of Samsung = 90 Revenue of Samsung in 2019 = 90 + 90 = 180 Expenditure of Oppo in $2018 = (180/3) \times 4 = 240$ Expenditure of Redmi in $2018 = (240/3) \times 4 = 320$ Revenue of Apple in $2019 = 3 \times 180 = 540$ Expenditure of Apple in 2019 = 540 - 90 = 450Revenue of Oppo in 2019 + Revenue of Nokia in 2019 = 600 Let the Revenue of Oppo in 2019 be x units Revenue of Oppo in 2019 is twice the revenue of Nokia in 2019 $\Rightarrow 2x + x = 600$ ⇒x = 200 Revenue of Oppo in 2019 = 400 and Revenue of Nokia in 2019 = 200 Total Revenue of all the companies in 2019 = 400 + 840 + 540 + 180 + 200 = 2160 The total net revenue of all the companies in 2018 is 330 less than the total net revenue of all the companies in 2019



 \Rightarrow total net revenue of all the companies in = 2160 - 330 = 1830

Net profit of all the companies in 2019 = 660

Ratio between the Profit of Oppo in 2019 to profit of Nokia in 2019 is 2 : 1

Let the profit of Nokia in 2019 be y units

2y + 360 + 90 + 90 + y = 660

 \Rightarrow 3y = 660 - 540

 \Rightarrow y = 40

Profit of Oppo in 2019 = 80

Profit of Nokia in 2019 = 40

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		IE	t	e	re	t
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-	440	320	120	840	480	360
190	250	210	40	540	450	90
170 -	-	310	-	180	90	90
270 30	360	250	110	200	160	40
130 240	1830	1330	500	2160	1500	660
- 1 2 1	- 90 70 - 70 30 30 240	- 440 90 250 70 - 70 30 30 240	- 440 320 90 250 210 70 - - 310 70 30 360 250 30 240 1830 1330	- 440 320 120 90 250 210 40 70 - - 310 - 70 30 360 250 110 30 240 1830 1330 500	- 440 320 - 400 90 250 210 40 540 70 - - 310 - 180 70 30 360 250 110 200 30 240 1830 1330 500 2160	- 440 320 - 400 320 - 440 320 120 840 480 90 250 210 40 540 450 70 - - 310 - 180 90 70 30 360 250 110 200 160 30 240 1830 1330 500 2160 1500

Q29. If in 2017, the ratio of Revenue of Samsung and Apple is 21 : 25, the ratio of expenditure of Oppo and Redmi is 11 : 14,the sum of Samsung's Revenue and Redmi's Expenditure is 330 more than the Nokia's expenditure in 2019, What is the ratio between the average profit of Samsung in 2017 and 2019 to the average profit of Nokia in 2017 and 2019?

1) 17 : 8

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2) 13 :7
3) 15 : 7
4) 13 :8
5) 15 :8
Answer: 2
Solution:
Let the revenue of Samsung and Apple in 2017 be 21a and 25a
And expenditure of Oppo and Redmi be 11b and 14b
Profit in 2017 = 240
Therefore,
(280 - 11b) + (330 - 14b) + (25a - 190) + (21a - 170) + (300 - 270) = 240
\Rightarrow 25b - 46a = 40 ----(i)
According to the question,
21a + 14b = 330 + 160
\Rightarrow 21a + 14b = 490
                    ----(ii)
                                                    An Initiative by 31423316
From (i) and (ii)
\Rightarrow a = 10
\Rightarrow b = 20
Revenue of samsung = 210
Revenue of Apple = 250
Expenditure of Oppo = 220
Expenditure of Redmi = 280
\Rightarrow Profit of Samsung = 210 - 170 = 40
Average profit of Samsung in 2017 and 2019 = (40 + 90)/2 = 65
Average income of Nokia in 2017 and 2019 = (30 + 40)/2 = 35
\thereforeRequired ratio = 65 : 35 = 13 : 7
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Common Solution:

Revenue of Nokia in 2017 and 2018 = 660 Ratio between the Revenue of Nokia in 2017 to 2018 = 5 : 6 Therefore Revenue of Nokia in $2017 = (660/11) \times 5 = 300$ And Revenue of Nokia in 2018 = 660 – 300 = 360 Profit of Nokia in 2017 = 300 – 270 = 30 Profit of Nokia in 2018 = 360 – 250 = 110 Profit of Apple in $2019 = 1/4 \times 360 = 90$ Revenue of Redmi in 2017 = 300 + 30 = 330 Therefore Revenue of oppo = 330 - 50 = 280Profit of Redmi in 2019 = (330/11) × 12 = 360 Revenue of Redmi in 2019 = 480 + 360 = 840 Profit of apple in 2018 = 360/9 = 40Revenue of Apple in 2018 = 210 + 40 = 250 Total net profit of All the companies in $2018 = 2 \times 250 = 500$ Profit of Apple in 2019 = Profit of Samsung in 2019 Therefore Profit of Samsung = 90 Revenue of Samsung in 2019 = 90 + 90 = 180 Expenditure of Oppo in $2018 = (180/3) \times 4 = 240$ Expenditure of Redmi in $2018 = (240/3) \times 4 = 320$ Revenue of Apple in $2019 = 3 \times 180 = 540$ Expenditure of Apple in 2019 = 540 - 90 = 450Revenue of Oppo in 2019 + Revenue of Nokia in 2019 = 600 Let the Revenue of Oppo in 2019 be x units Revenue of Oppo in 2019 is twice the revenue of Nokia in 2019



 \Rightarrow 2x + x = 600

⇒x = 200

Revenue of Oppo in 2019 = 400 and Revenue of Nokia in 2019 = 200

Total Revenue of all the companies in 2019 = 400 + 840 + 540 + 180 + 200 = 2160

The total net revenue of all the companies in 2018 is 330 less than the total net revenue of all the companies in 2019

 \Rightarrow total net revenue of all the companies in = 2160 - 330 = 1830

Net profit of all the companies in 2019 = 660

Ratio between the Profit of Oppo in 2019 to profit of Nokia in 2019 is 2 : 1

Let the profit of Nokia in 2019 be y units

2y + 360 + 90 + 90 + y = 660

 \Rightarrow 3y = 660 - 540

⇒ y = 40

Profit of Oppo in 2019 = 80

Profit of Nokia in 2019 = 40

An Initiative by **3HC 33ICI**

	2017			2018 2			2019			
	Reve	Expendi	Profi	Revenu	Expenditu	Prof	i Revenu	Expenditu	Pro	ofi
	nue	ture	t	е	re	t	е	re	t	
Орро	280	-			240	-	400	320	80	
Redmi	330		-	440	320	120	840	480	36	50
Apple	-	190		250	210	40	540	450	9	0
Samsung	-	170	-	-	310	-	180	90	90	0
Nokia	300	270	30	360	250	110	200	160	40	
Net	1370	1130	240	1830	1330	500	2160	1500	66	0
Total										



Q30. If in 2018, ratio of profit of Oppo and Samsung is 18: 5, then what is the percentage change in the difference of Oppo's and Samsung' Revenue in 2019 to that in 2018?

1) 167% increase

2) 212% decrease

3) 88% increase

4) 267% increase

5) 116% decrease

Answer: 4

Solution:

Let the revenue of Oppo and Samsung in 2018 be a and b

 \Rightarrow a + 440 + 250 + b + 360 = 1830

⇒ a+ b = 780 ----(i)

According to the question,

(a - 240)/(b - 310) = 18/5

= 5a - 1200 = 18b - 5580

= 18b - 5a = 4380 ----(ii)

Solving (i) and (ii) we get,

a = 420

b = 360

 \Rightarrow Differcne between revenue of Oppo and Samsung in 2018 = 420 - 360 = 60

 \Rightarrow Differnce between revenue of oppo and Samsung in 2019 = 400 – 180 = 220

 \therefore Percnetage change = $(220 - 60)/60 \times 100$

⇒266.66% ≈ 267 % increase

Common Solution:

Revenue of Nokia in 2017 and 2018 = 660

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Ratio between the Revenue of Nokia in 2017 to 2018 = 5 : 6 Therefore Revenue of Nokia in $2017 = (660/11) \times 5 = 300$ And Revenue of Nokia in 2018 = 660 - 300 = 360 Profit of Nokia in 2017 = 300 - 270 = 30 Profit of Nokia in 2018 = 360 – 250 = 110 Profit of Apple in $2019 = 1/4 \times 360 = 90$ Revenue of Redmi in 2017 = 300 + 30 = 330 Therefore Revenue of oppo = 330 - 50 = 280Profit of Redmi in 2019 = (330/11) × 12 = 360 Revenue of Redmi in 2019 = 480 + 360 = 840 Profit of apple in 2018 = 360/9 = 40Revenue of Apple in 2018 = 210 + 40 = 250 Total net profit of All the companies in $2018 = 2 \times 250 = 500$ Profit of Apple in 2019 = Profit of Samsung in 2019 Therefore Profit of Samsung = 90 Revenue of Samsung in 2019 = 90 + 90 = 180 Expenditure of Oppo in $2018 = (180/3) \times 4 = 240$ Expenditure of Redmi in $2018 = (240/3) \times 4 = 320$ Revenue of Apple in $2019 = 3 \times 180 = 540$ Expenditure of Apple in 2019 = 540 - 90 = 450Revenue of Oppo in 2019 + Revenue of Nokia in 2019 = 600 Let the Revenue of Oppo in 2019 be x units Revenue of Oppo in 2019 is twice the revenue of Nokia in 2019 $\Rightarrow 2x + x = 600$ ⇒x = 200 Revenue of Oppo in 2019 = 400 and Revenue of Nokia in 2019 = 200



Total Revenue of all the companies in 2019 = 400 + 840 + 540 + 180 + 200 = 2160

The total net revenue of all the companies in 2018 is 330 less than the total net revenue of all the companies in 2019

 \Rightarrow total net revenue of all the companies in = 2160 - 330 = 1830

Net profit of all the companies in 2019 = 660

Ratio between the Profit of Oppo in 2019 to profit of Nokia in 2019 is 2 : 1

Let the profit of Nokia in 2019 be y units

2y + 360 + 90 + 90 + y = 660

 \Rightarrow 3y = 660 - 540

 \Rightarrow y = 40

Profit of Oppo in 2019 = 80

Profit of Nokia in 2019 = 40

		An initiative by SIMC SOLID								
	2017			2018			2019			
	Reve	Expendi	Profi	Revenu	Expenditu	Profi	Revenu	Expenditu	Profi	
	nue	ture	t	е	re	t	е	re	t	
Орро	280	-			240	-	400	320	80	
Redmi	330		-	440	320	120	840	480	360	
Apple	-	190		250	210	40	540	450	90	
Samsung	-	170	-	-	310	-	180	90	90	
Nokia	300	270	30	360	250	110	200	160	40	
Net Total	1370	1130	240	1830	1330	500	2160	1500	660	

Direction(31-34): Study the given information carefully and answer the questions accordingly.

Bar graph given below shows number of days taken by four people to complete a piece of work individually





Note: Given below three different range of efficiency of persons.

Efficiency A - 80% -100%

Efficiency B – 60% - 80%

Efficiency C – 40% - 60%

Three persons also operate on three different levels an initiative by 314 C351101

Level 1 – Take above range of efficiency

Level 2 – Take mid range of efficiency

Level 3 – Take lower range of efficiency

Q 31.Rohan and Mohan started working together with level 2 and level 1 of efficiency A respectively and after 'x' days Shyam replaced both and did remaining work with level 3 of efficiency C in (x - 49/4) days. If Sohanwork for '2.5x' days with level 3 of efficiency B, then find what portion of work that will be completed by Sohan.

1) 11: 15 2) 32/47 3) 13/17 4) 11/16 5) 13/18

Answer: 1



Solution:

Rohan	40		45
Mohan	50		36
Sohan	45	1800	40
Shyam	60		30

Efficiency of Rohan with level 2 of efficiency $A = (90/100) \times 45 = 40.5$ units

Efficiency of Mohan with level 1 of efficiency $A = 36 \times 100/100 = 36$ units

Efficiency of Shyam with level 3 of efficiency $C = 30 \times 40/100 = 12$ units

According to question,

 $(40.5 + 36) \times x + 12 (x - 49/4) = 1800$

 \Rightarrow 76.5x + 12x - 147 = 1800

⇒ 88.5x = 1947

 \Rightarrow x = 22 days

Efficiency of Sohan with level 3 of efficiency $B = 40 \times 60/100$

 \Rightarrow 24 units

Work done by Sohan in 2.5x days

$$\Rightarrow 24 \times 2.5 \times 22$$

⇒1320 units

 \therefore Portion of work completed = 1320/1800 = 11/15

Q32. Vivek and Shyam started working together with level 3 and level 2 of efficiency A and efficiency C respectively. After 15 days Vivek and Shyam left the work and remaining work was completed by Rohan with level 2 of efficiency B in 20 days. If Vivek and Sohan work together with level 1 of efficiency A, then find percentage of remaining work after 12 days of work?

$$1)\frac{\frac{230}{9}\%}{\frac{320}{3}\%}$$





Q33. Rohan worked certain units for 'x' days with level 2 of efficiency B and remaining work with level 2 of efficiency C for 'y' days. If Sohan work for 'x' days with level 2 of efficiency A and remaining work complete by Shyam in 'y' days with level 2 of efficiency C. Find in how many days remaining work complete by Shyamwith his usual efficiency , if Sohan worked for (x + y) days with level 2 of efficiency C.

1) 23.75 days 2) 19.33 days 3) 15.5 days 4) 18.67 days 5) 17.33 days Answer: 5 Solution: Rohan 40 Mohan 50 Sohan 45 1800

45

36

40

30

Efficiency of Rohan with level 2 of efficiency $B = (70/100) \times 45 = 31.5$ units

Efficiency of Rohan with level 2 of efficiency $C = (50/100) \times 45 = 18$ units

According to question

Shyam | 60

An Initiative by 3142 33161

31.5x + 22.5y = 1800 ---- (i)

Efficiency of Sohan with level 2 of efficiency $A = (90/100) \times 40 = 36$ units

Efficiency of Shyam with level 2 of efficiency $C = (50/100) \times 30 = 15$ units

36x + 15y = 1800 ---- (ii)

From equation (i) and (ii) we get

 \Rightarrow x = 40 days

 \Rightarrow y = 24 days

Efficiency of Sohan with level 2 of efficiency $C = (50/100) \times 40 = 20$ units

Total work completed Sohan in (x +y) days

 \Rightarrow (24 + 40) × 20 = 1280 units

 \Rightarrow Remaining work = 1800 - 1280 = 520 units



: Number of days taken by Shyam to complete the remaining work with his usual efficiency

⇒ 520/30 = 17.33 days

Q34. All four started working together, Rohan worked with level 3 of efficiency C Mohan worked with level 2 of efficiency C, Sohan worked with level 1 of efficiency A and Shyam worked with level 1 of efficiency A. If the total wage of Rs 26500 distributed among these four, then find the difference between the wages of Rohan and Shyam?

1) 2390 2) 3230 3) 4600 4) 4100 5) 3000 Answer: Solution	5			
Rohan	40		45	
Mohan	50		36	
Sohan.	45	1800	40	AFALIACOM
Shyam	60		30	An Initiative by 314333161

Efficiency of Rohan with level 3 of efficiency $C = (40/100) \times 45 = 18$ units

Efficiency of Mohan with level 2 of efficiency $C = (50/100) \times 36 = 18$ units

Efficiency of Sohan with level 1 of efficiency $A = (100/100) \times 40 = 40$ units

Efficiency of Shyam with level 3 of efficiency $A = (100/100) \times 30 = 30$ units

 \Rightarrow Ratio of wages of Rohan, Mohan, Sohan and Shyam = 18: 18: 40: 30 = 9: 9: 20: 15

: Difference between wages of Rohan and Shyam = $(15 - 9)/53 \times 26500$

```
⇒ 6/53 × 26500 = Rs. 3000
```

Direction(35-39): Study the given information carefully and answer the following questions accordingly

Given graph shows total matches played and average score by five different players in IPL\









Total Runs = Total matches played × Average score

Strike rate = Total runs scored/Total number of Balls faced × 100

Q35. Strike rate of Pollard is approximately what percentage more/less than the strike rate of Kohli?

1)2.50% less

2)3.75% less

3)4.50% more

4)7.85% more

5)9.85% less

Answer:4 Solution:

From the given graphs we can draw the following information

player	Matches played	average	Total runs scored	Balls faced	Strike rate
Dhoni	26	20	520	700	74.29



Pollard	20	30	600	450	133.34
Warner	10	30	300	250	120
Kohli	34	40	1360	1100	123.63
Rohit	16	40	640	500	128

Total runs score by pollard = Total matches played × Average score

⇒20 × 30

⇒600

Strike rate of pollard = Total runs scored / Total number of Balls faced × 100

⇒600 / 450 × 100

⇒ 133.34

Total runs score by Kohli = Total matches played × Average score

 $\Rightarrow 34 \times 40$

⇒ 1360

Strike rate of pollard = Total runs scored/Total number of Balls faced × 100

 \Rightarrow 1360/1100 × 100

⇒ 123.63

∴Required percentage = (133.34 – 123.63)/123.63 × 100

⇒7.85% more

Q36. If Rohit played further three more matches in a tournament. The respective ratio between the scores of 1st and 2nd match was 16:7 and that between the scores of 2nd and 3rd was 4:7. The difference between the scores of 1st and 3rd match was 15. What was the Rohit's average score in all 19 matches?

1)25.03

2)37.58

3) 41.10



4) 39.66

5)None of these Answer: 3 **Solution**:

From the given graphs we can draw the following information

Player	Matches played	average	Total runs scored	Balls faced	Strike rate
Dhoni	26	20	520	700	74.29
Pollard	20	30	600	450	133.34
Warner	10	30	300	250	120
Kohli	34	40	1360	1100	123.63
Rohit	16	40	640	500	128

1st and 2nd = 16:7

 2^{nd} and $3^{rd} = 4:7$

Match 1st:Match 2nd: Match 3rd = 64: 28:49

According to the question,

 \Rightarrow Difference between score of 1st and 3rd match = 15

 \Rightarrow 15 units = 15

Runs scored in all three matches = 64 + 28 + 49

 \Rightarrow 141

 \therefore Required average after 19 matches = (640 + 141)/19

⇒ 781/19

 \Rightarrow 41.10

Q37. Warner's highest score exceeds his lowest score by 24 runs. If these two innings are excluded the average of the remaining 8 innings is same as his overall average. Then Warner's highest score is what percent of lowest score?

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Solution:

From the given graphs we can draw the following information

Player	Matches played	average	Total runs scored	Balls faced	Strike rate
Dhoni	26	20	520	700	74.29
Pollard	20	30	600	450	133.34
Warner	10	30	300	250	120
Kohli	34	40	1360	1100	123.63
Rohit	16	40	640	500	128

Total runs scored by Warner = $10 \times 30 = 300$ Runs after excluding two innings = $8 \times 30 = 240$ Sum of highest and lowest score = 300 - 240 = 60Difference between highest and lowest score = 24

⇒Highest score = 42

 \Rightarrow Lowest score = 18

 \therefore Required percentage = 42/18 × 100 = 233 $\frac{1}{3}$ %

Q38. In a match if Warner, Rohit and Dhawan plays for a particular team. These three players have to chase 220 runs. Warner Faces 70 balls, score runs with same strike rate, Rohit faces 75 balls and he also score runs with same strike rate and remaining runs scored by Dhawan with the strike rate of 125. Find how many balls faced by Dhawan to score remaining runs?

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2)37

3)45

4)39

5)42 Answer : 1 **Solution**:

From the given graphs we can draw the following information

Player	Matches played	average	Total runs scored	Balls faced	Strike rate
Dhoni	26	20	520	700	74.29
Pollard	20	30	600	450	133.34
Warner	10	30	300	250	120
Kohli	34	40	1360	1100	123.63
Rohit	16	40	640	500	128

Let the runs scored by Warner and Rohit be x and y respectively

Let the balls faced by Dhawan be m

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Warner

Strike Rate = Runs scored/balls faced × 100

 \Rightarrow 120 = x/70 ×100

⇒x =84

Rohit

Strike Rate = Runs scored/balls faced × 100

 \Rightarrow 128 = y/75 × 100

⇒ y = 96

Runs score by Dhawan = 220 - 84 - 96 = 40

 \therefore Strike rate of Dhawan = Runs scored/Balls faced × 100

 $125 = 40/m \times 100$

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⇒m = 32

Q39. Out of total runs scored by Dhoni in all the matches he scored 118 runs by 4s and 6s in the ratio of 32:27, 268 runs by 2s and 3s in the ratio of 43 : 24 and remaining runs by 1s. Find the dot balls faced by Dhoni?

1) 250 2) 423 3) 450 4) 396 5)None of these Ans: 2

Sol. 2

From the given graphs we can draw the following information

Player	-Matches	average	Total runs	Balls faced	Strike rate
	played		scored		
Dhoni	26	20	520	700	74.29
Pollard	20	30	600	450	133.34
Warner	-10	30	300 An Initia	250	120
Kohli	34	40	1360	1100	123.63
Rohit	16	40	640	500	128

Total runs scored by Dhoni = $26 \times 20 = 520$

Runs scored by $4s = 32/59 \times 118 = 64$

 \Rightarrow Balls faced for 4s = 64/4 = 16

Runs scored by 6s = 118 - 64 = 54

 \Rightarrow Balls faced for 6s = 54/6 = 9

Runs scored by 2s = 43/67 × 268 = 172

 \Rightarrow Balls faced for 2s = 172/2 = 86

Runs scored by 3s = 268 - 172 = 96



 \Rightarrow Balls faced for 3s = 96/3 = 32

Runs scored by 1s = 520 - 118 - 268 = 134

 \Rightarrow Balls faced for 1s = 134/1 = 134

∴Dot balls faced by Dhoni = 700 – 16 – 9 – 86 – 32 – 134 = 423

Direction(40-42): Study the given information carefully and answer the following questions accordingly

The flow chart given below shows the data regarding total number of Covid-19 cases of three different states i.e. Maharashtra, Delhi and Uttar Pradesh.

Covid patients under isolation in Uttar Pradesh = 4000





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Q40. What is the value of X?

1)20000

2)11000

3) 18000

4)22000

5)2500 Answer: 1 Solution: According to the given information, Y - 45 = 100 - 40 - 25

⇒Y – 45 = 100 – 65

 \Rightarrow Y = 35 + 45



Under isolation covid cases in Uttar Pradesh = 4000 X × 90/100 × 80/100 × 35/100 × 50/63 = 4000 $\Rightarrow X \times 9/10 \times 8/10 \times 7/20 \times 50/63 = 4000$ $\Rightarrow X = (4000 \times 10 \times 10 \times 20 \times 63) / (9 \times 8 \times 7 \times 50)$ ⇒X = 20000 \Rightarrow Number of Covid detected patients from all three states = 20000 Total number of samples taken from all three states= $20000 \times 90/100 = 18000$ \Rightarrow Number of positive cases in all three states = 18000 × 80/100 = 14400 Cases in Maharashtra = 14400 × 40/100 = 5760 Patients are under isolation in Maharashtra = 35/48 × 5760 = 4200 \Rightarrow Recovered patients in Maharashtra = 5760 – 4200 = 1560 \Rightarrow Cases in Delhi = 14400 × 25/100 = 3600 \Rightarrow Patients are under isolation in Delhi = 3600 \times 2/3 = 2400 An Initiative by 314233161 Recovered patients in Delhi = 3600 – 2400 = 1200 \Rightarrow Cases in Uttar Pradesh = 14400 \times 35/100 = 5040 Patients are under isolation in Uttar Pradesh = $5040 \times 50/63 = 4000$ Recovered patients in Uttar Pradesh = 5040 - 4000 = 1040

Q41. Number of patients who are under isolation in Delhi are approximate how much more/less percent than number of patients who recovered from Uttar Pradesh?

- 1) 170.32%
- 2) 130.77%
- 3) 151.74%
- 4) 222.26%
- 5) 225.36%



Answer: 2 Y - 45 = 100 - 40 - 25 \Rightarrow Y - 45 = 100 - 65 \Rightarrow Y = 35 + 45 \Rightarrow Y = 80 Under isolation Covid cases in Uttar Pradesh = 4000 X × 90/100 × 80/100 × 35/100 × 50/63 = 4000 $\Rightarrow X \times 9/10 \times 8/10 \times 7/20 \times 50/63 = 4000$ $\Rightarrow X = (4000 \times 10 \times 10 \times 20 \times 63) / (9 \times 8 \times 7 \times 50)$ ⇒X = 20000 \Rightarrow Number of Covid detected patients from all three states = 20000 Total number of samples taken from all three states= $20000 \times 90/100 = 18000$ \Rightarrow Number of positive cases in all three states = 18000 × 80/100 = 14400 Cases in Maharashtra = $14400 \times 40/100 = 5760$ Patients are under isolation in Maharashtra = 35/48 × 5760 = 4200 \Rightarrow Recovered patients in Maharashtra = 5760 – 4200 = 1560 \Rightarrow Cases in Delhi = 14400 × 25/100 = 3600 \Rightarrow Patients are under isolation in Delhi = 3600 × 2/3 = 2400 Recovered patients in Delhi = 3600 – 2400 = 1200 \Rightarrow Cases in Uttar Pradesh = 14400 \times 35/100 = 5040 Patients are under isolation in Uttar Pradesh = $5040 \times 50/63 = 4000$ Recovered patients in Uttar Pradesh = 5040 - 4000 = 1040 Now, Number of patients who are under isolation in Delhi = 2400 Number of patients who recovered from covid in Uttar Pradesh = 1040 : Required percentage = $(2400 - 1040)/1040 \times 100$

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Q42.Total number of Recovered patients from Delhi and Maharashtra is what percent of total positive patients from Uttar Pradesh?

1) 54.76

2)38.70%

3) 38.70%

4) 22.25%

5)21.70% Answer :1 **Solution**: Y - 45 = 100 - 40 - 25

 $\Rightarrow Y - 45 = 100 - 65$ $\Rightarrow Y = 35 + 45$

 \Rightarrow Y = 80

Under isolation Covid cases in Uttar Pradesh = 4000 An Initiative by States States

 $X \times 90/100 \times 80/100 \times 35/100 \times 50/63 = 4000$

$$\Rightarrow X \times 9/10 \times 8/10 \times 7/20 \times 50/63 = 4000$$

$$\Rightarrow X = (4000 \times 10 \times 10 \times 20 \times 63) / (9 \times 8 \times 7 \times 50)$$

⇒X = 20000

 \Rightarrow Number of Covid detected patients from all three states = 20000

Total number of samples taken from all three states= 20000 × 90/100 = 18000

 \Rightarrow Number of positive cases in all three states = 18000 × 80/100 = 14400

Cases in Maharashtra = 14400 × 40/100 = 5760

Patients are under isolation in Maharashtra = 35/48 × 5760 = 4200

 \Rightarrow Recovered patients in Maharashtra = 5760 – 4200 = 1560

 \Rightarrow Cases in Delhi = 14400 × 25/100 = 3600


 \Rightarrow Patients are under isolation in Delhi = 3600 × 2/3 = 2400

Recovered patients in Delhi =3600 - 2400 = 1200

 \Rightarrow Cases in Uttar Pradesh = 14400 \times 35/100 = 5040

Patients are under isolation in Uttar Pradesh = $5040 \times 50/63 = 4000$

Recovered patients in Uttar Pradesh = 5040 - 4000 = 1040

Now,

Number of patients who are under isolation in Delhi = 2400

Number of patients who recovered from covid in Uttar Pradesh = 1040

∴Required percentage = (2400 – 1040)/1040 × 100

⇒130.77%

Now,

Total number of Recovered patients from Delhi and Maharashtra = 1200 + 1560 = 2760 Total positive patients from Uttar Pradesh = 5040

∴Required percentage = 2760/5040 × 100

⇒54.76%

Direction (43-47): Study the given data carefully and answer the question accordingly

Four trains- Rajdhani express, Duronto Express, Shatabadi Express and Jan shatabadi Express travel from Kolkata to Delhi, Dehradun to Kota, Kota to Delhi and Kolkata to Dehradun; not necessarily in same order. Their speeds during journey were observed and plotted as time speed curves as shown below, not necessarily in same order. The trains halt only at source stations and destinations stations. Following information is also available.

I: Rajdhani Express does not start or end its journey at Dehradun.

II: Shatabadi Express leaves Kota at 11:00 AM for its destination.

III: Duronto express travels for 230km.

Distance between the cities (in km):

	Dehradun	Kota	Delhi	Kolkata
Dehradun	\setminus /	230	250	490
Kota		\setminus /	240	320



Delhi		300
Kolkata		

The time-speed curves are as shown:

Figure 1 – Rajdhani Express

Figure 2 – Jan Shatabdi Express

- Figure 3 Duranto Express
- Figure 4 Shatabdi Express







- 1) Delhi
- 2) Kota
- 3) Kolkata
- 4) Dehradun
- 5) None of these
- Answer: 3

Four trains travel between four locations,

Kolkata - Delhi

Dehradun - Kota

Kota - Delhi

Kolkata – Dehradun

From information I we concluded that Rajdhani express doesn't travel Dehradun – Kota and Kolkata to Dehradun, so Rajdhani express whether travels Kolkata – Delhi or Kota - Delhi

From information II we concluded that Shatabadi express travels between Kota to delhi.

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From I and II we concluded that Rajdhani express travels Kolkata - Delhi

From information III we concluded that Duronto express travels between Dehradun – Kota.

Therefore,

	Dehradun	Kota	Delhi	Kolkata
Dehradun		230	250	490
Kota		\setminus /	240	320
Delhi	\square	\mathbf{X}	\bigvee	300
Kolkata		/	\land	$\left \right\rangle$

Rajdhani Express - Kolkata – Delhi – 300 km

Duronto Express - Dehradun - Kota - 230 km

Shatabadi Express - Kota – Delhi – 240 km

Jan shatabadi Express - Kolkata – Dehradun – 490km

:the destination station of Jan shatabadi Express is Kolkata

Q44. When would Shatabdi express reach its destination?

1) 1 : 00 PM

- 2) 1 : 00 AM
- 3) 2 : 00 AM
- 4) 2 : 00 Pm

5) None of these

Answer: 2

Solution:

Figure - 4





As we can see in the graph that Shatbadi express took 14 hours to reach its destination.

So, 11:00 + 14 = 1:00 AM

:-Shatabdi Express reaches its destination at 1 : 00 AM

Q45.When a person travel by the train having speed curve shown in Figure 2 and then travel by the train having speed curve shown in figure 3, which has he made?

1) Delhi - Kolkata

2) Kota - Delhi

3) Kolkata - Kota

4) Dehradun - Delhi

5) None of these

Answer: 1

Solution:

Figure 2:

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Figure3:







Rajdhani Express - Kolkata – Delhi – 300 km (Figure 1)

Duronto Express - Dehradun – Kota – 230 km (Figure 3)

Shatabadi Express - Kota - Delhi - 230 km (Figure 4)

Jan shatabadi Express - Kolkata – dehradun – 490km (Figure 2)

∴, Distance travelled is Kolkata – Dehradun - Kota

From the above two graph we have concluded that a person completed the journey between Kolkata - Kota

Q46. A person travelled by some/all of these four trains in some order so as to visit all the four cities Dehradun , Kota , Delhi and Kolkata. What would have been his last destination?

1) Delhi

2) Kota

3) Kolkata

4) Dehradun

5) None of these

Answer: 1

Solution:



Rajdhani Express - Kolkata – Delhi – 300 km (Figure 1)

Duronto Express - Dehradun – Kota – 230 km (Figure 3)

Shatabadi Express - Kota - Delhi - 230 km (Figure 4)

Jan shatabadi Express - Kolkata – dehradun – 490km (Figure 2)

⇒Kolkata – Dehradun – Kota – Delhi

If a person starts his journey from Kolkata then only he can complete his journey and his last destination would be Delhi.

Q47. What is the difference between the Figure 2 and Figure 4 distance?

- 1) 200 km
- 2) 300 km
- 3) 250 km
- 4) 360 km
- 5) 260 km
- Answer: 1

Solution :

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Rajdhani Express - Kolkata - Delhi - 300 km (Figure 1)

Duronto Express - Dehradun – Kota – 230 km (Figure 3)

Shatabadi Express - Kota - Delhi - 230 km (Figure 4)

Jan Shatabadi Express - Kolkata – Dehradun – 490km (Figure 2)

∴Required difference = Distance of figure 2 – Distance of figure 4

⇒490 – 230 = 260km

Directions (48-52): Study the following information carefully and answer the related questions. Following graph represents the data regarding distance covered and fuel consumed by a bus in six different months





Note: x - coordinates represents the quantity of fuel used (in liters) and y - coordinates represents the distance travelled (in km).

Note: Fuel consumption rate = (Distance travelled (in km)/Fuel used(in liters)

Speed of bus = 40 km/hr

Q48.Fuel consumption of bus in May and June taken together is approximately what percent more/less than its fuel consumption rate in January and March taken together?

1)) 45%

2) 48%



- 3) 56%
- 4) 58%
- 5) 59%

Answer: 3

Solution:

Month	Distance travelled (in kms)	Fuel used (in liters)
January	6000	400
February	7000	900
March	6500	800
April	4500	250
May	3000	350
June	5500	200

Fuel consumption Rate of bus in May and June Taken together = (3000/350) + (5500/200)

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⇒8.57 + 27.50
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⇒36.07

Fuel consumption of bus in January and March together = (6000/400) + (7000/900)

⇒ 15 + 8.125

⇒ 23.125

- ⇒Difference = 36.07 23.125 = 12.945
- ∴ Required percentage = (12.945/23.125) × 100 = 55.97% = 56% (approx.)

Q49. If the average of time taken by bus in July, March and June taken together is 150 hours, then what is the average distance covered by bus in January and July?

1) 6000

2) 4000

3) 5000



4) 3000

5) 2000

Answer: 1

Solution:

Month	Distance travelled (in kms)	Fuel used (in liters)
January	6000	400
February	7000	900
March	6500	800
April	4500	250
Мау	3000	350
June	5500	200

Let the distance covered by bus in July be y

⇒3 × 150 = (y + 6500 + 5500)/40

- ⇒ y = 6000 km
- \therefore Average distance covered by bus in January and July = (6000 + 6000)/2 = 6000 km

 $\bigcirc / \land /$

Q50.If fuel consumption rate of bus in June and July are in the ratio of 5:4 and distance covered by bus in July is 20% less than the distance covered in April, then what will be the difference between quantity of fuel used in March and July?

- 1) 9000/17
- 2) 2500/37
- 3) 7000/11
- 4) 5000/7

5) 5500/7

Answer: 3

Solution:

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Month	Distance travelled (in kms)	Fuel used (in liters)
January	6000	400
February	7000	900
March	6500	800
April	4500	250
May	3000	350
June	5500	200

Fuel consumption rate in June = 5500/200 = 27.5 km/liters

Then fuel consumption rate in July = $27.5 \times 4/5$ km/liters = 22 km/litres

Now,

Distance covered in July = 80% of April = 80% of 4500

⇒3600 km

 \therefore Difference between quantity of fuel used in March and July = 800 – 3600/22











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