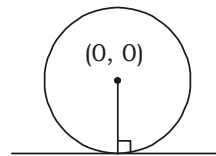


- The given curve $2x^2 + 2y^2 + 14y + 10y - 26 = 0$ represent
 - Parabola
 - Circle
 - Ellipse
 - Hyperbola
- The equation of circle, which passes through the three points (0, 1), (2, 0) and (5, 6) is
 - $x^2 + y^2 - 5x - 7y + 6 = 0$
 - $x^2 + y^2 - 5x - 7y - 6 = 0$
 - $x^2 + y^2 + 5x - 7y + 6 = 0$
 - $x^2 + y^2 - 5x + 7y + 6 = 0$
- The equation of the circle which passes through the origin and cuts off intercept 3 and 4 from the positive parts of the axes respectively is
 - $4x^2 + 12xy + 4y^2 - 16y = 0$
 - $4x^2 - 12x + 4y^2 - 16y = 0$
 - $4x^2 + 12xy + 4y^2 + 16y = 0$
 - $4x^2 + 12x + 4y^2 + 16y = 0$
- The equation of circle whose centre is (4, 2) and touch the x -axis is
 - $x^2 + y^2 - 8x - 4y + 16 = 0$
 - $x^2 + y^2 - 8x + 4y + 16 = 0$
 - $x^2 + y^2 + 8x + 4y + 16 = 0$
 - $x^2 + y^2 + 8x - 4y - 16 = 0$
- The equation of circle whose centre is (-3, 5) and touch the y -axis
 - $x^2 + y^2 + 16x + 10y + 25 = 0$
 - $x^2 + y^2 + 6x - 10y + 25 = 0$
 - $2x^2 + 2y^2 + 6x - 10y + 25 = 0$
 - None of these
- The equation of circle passes through origin, whose centre lies on x -axis of radius 3 units is
 - $x^2 + y^2 + 6x = 0$
 - $x^2 + y^2 - 6x = 0$
 - $x^2 + y^2 - 6x + 6y = 0$
 - $x^2 + y^2 + 6x + 6y = 0$
- The equation of circle passes through origin and whose radius is 4 units and their circle lies m y -axis is
 - $x^2 + y^2 - 8x = 0$
 - $x^2 + y^2 + 8x = 0$
 - $x^2 + y^2 - 8x - 8y = 0$
 - $x^2 + y^2 + 8x + 8y = 0$
- The equation of circle the coordinate of end points of whose diameter are (2, 4) and (3, 5) is
 - $x^2 + y^2 + 5x + 9y + 26 = 0$
 - $x^2 + y^2 - 5x - 9y - 26 = 0$
 - $x^2 + y^2 + 5x - 9y + 26 = 0$
 - $x^2 + y^2 - 5x + 9y + 26 = 0$
- The parameter equation of the circle $x^2 + y^2 - 2x - 4y - 4 = 0$ is
 - $x = 1 + 3\cos\theta, y = 2 + 3\sin\theta$
 - $x = 1 - 3\cos\theta, y = 2 + 3\sin\theta$
 - $x = 1 + 3\cos\theta, y = 2 - 3\sin\theta$
 - None of these
- The equation of circle passing through (1, 2) and which is concentric with the circle $x^2 + y^2 + 11x - 5y + 3 = 0$ is
 - $x^2 + y^2 + 11x + 5y + 6 = 0$
 - $x^2 + y^2 + 11x - 5y - 6 = 0$
 - $x^2 + y^2 + 11x - 6y + 7 = 0$
 - $x^2 + y^2 - 11x - 6y - 7 = 0$
- The length of tangent drawn from the point (-1, 4) to the circle $2x^2 + 2y^2 = 9$ is
 - $\frac{5}{\sqrt{2}}$
 - $\frac{5}{2}$
 - $\frac{2}{\sqrt{5}}$
 - $\frac{5}{3\sqrt{2}}$
- The coordinate of the centre and the radius of the circle $x^2 + y^2 + 4x - 6y - 36 = 0$ are respectively, given by
 - (-4, 6) and 6
 - (4, -6) and 7
 - (2, -3) and 6
 - (-2, 3) and 7
- The circle $x^2 + y^2 - 8x + 4y + 4 = 0$ touches
 - x -axis
 - y -axis
 - Both axis
 - Neither x -axis nor y -axis

14. What is the radius of circle touching x -axis at $(3, 0)$ and y -axis at $(0, 3)$
 (A) 3 units (B) 4 units
 (C) 5 units (D) 6 units
15. For the equation $ax^2 + by^2 + 2hxy + 2gx + 2ty + c = 0$ where $(a \neq 0)$ to represent a circle, the required condition will be
 (A) $a = b$ and $c = 0$ (B) $f = g$ and $h = 0$
 (C) $a = b$ and $h = 0$ (D) $f = g$ and $c = 0$
16. The circle $x^2 + y^2 - 3x - 4y + 2 = 0$ cut x -axis at
 (A) $(2, 0)$ $(-3, 0)$ (B) $(3, 0)$ $(4, 0)$
 (C) $(1, 0)$ $(-1, 0)$ (D) $(1, 0)$ $(2, 0)$
17. If the line $x + 2by - 7 = 0$ is a diameter of a circle $x^2 + y^2 - 6x + 2y = 0$ then b is equal to
 (A) 3 (B) -5
 (C) -1 (D) 5
18. If the two circle $2x^2 + 2y^2 - 3x + 6y + k = 0$ and $x^2 + y^2 - 4x + 10y + 16 = 0$ cut orthogonally, then the value of k is
 (A) 41 (B) 14
 (C) 4 (D) 0
19. The value of k so that $x^2 + y^2 + kx + 4y + 2 = 0$ and $2(x^2 + y^2) - 4x - 3y + k = 0$ cut orthogonally is
 (A) $-\frac{10}{3}$ (B) $-\frac{8}{3}$
 (C) $+\frac{10}{3}$ (D) $\frac{8}{3}$
20. The line $3x - 2y = k$ meets the circle $x^2 + y^2 = 4r^2$ at only one points its k^2 is



- (A) $\frac{52}{9}r^2$ (B) $52r^2$
 (C) $\frac{53}{9}r^2$ (D) $\frac{20}{9}r^2$
21. Two circles $x^2 + y^2 = 6$ and $x^2 + y^2 - 6x + 8 = 0$ are given. The equation of the circle through their point of intersection and the point $(1, 1)$ is given by
 (A) $x^2 + y^2 - 3x + 1 = 0$
 (B) $x^2 + y^2 - 4x + 2 = 0$
 (C) $x^2 + y^2 - 6x + 4 = 0$
 (D) $x^2 + y^2 - 3x + 2 = 0$
22. The radius of circle passing through the point $(6, 2)$ and two of whose diameter are $x + y = 6$ and $x + 2y = 4$ is
 (A) 4 (B) 6
 (C) 20 (D) $\sqrt{20}$