

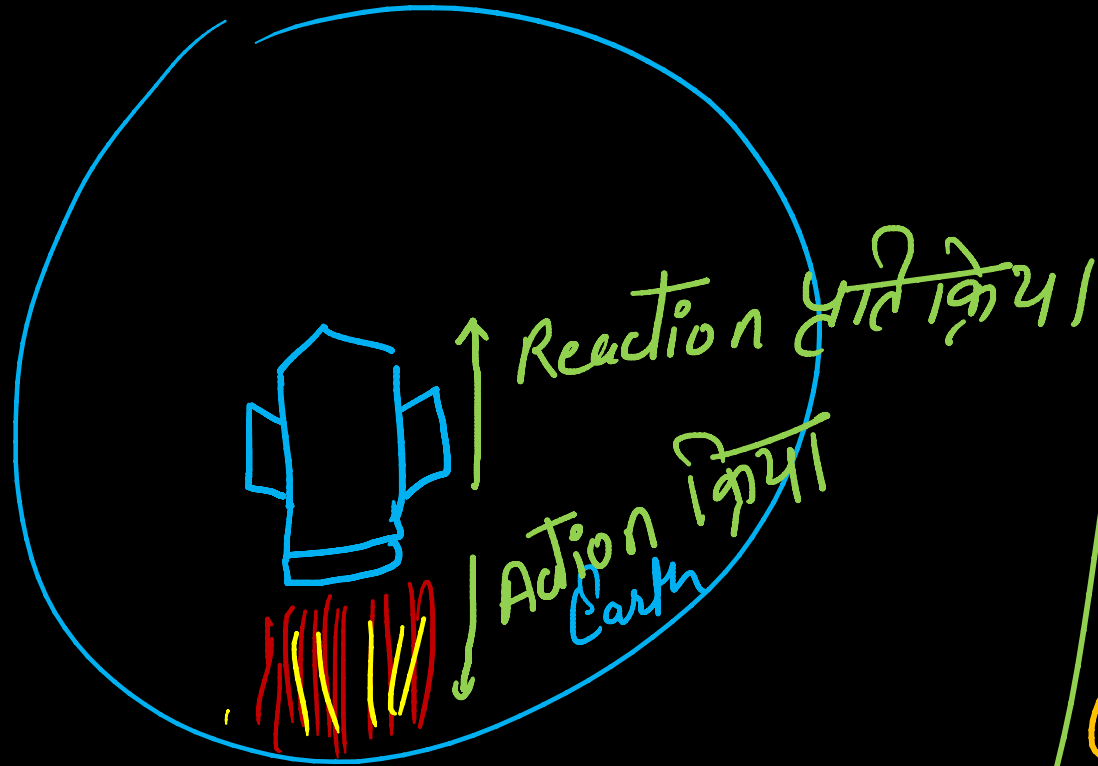


1-Motion

2-Work, power , energy

Part-2

Explanation Que



Enam
Que → A boy kick a stone
and he was hearted
Why?

क्रिया
एक बच्चे ने पत्थर पर लात
मारी और उसे पीट लग गया
क्यों?
प्रतिक्रिया

- ① Action क्रिया ② ~~Reaction~~ प्रतिक्रिया
③ III law नियम ④ None of these

Impulse आवेग $\rightarrow$

$$\underline{I = F \times t}$$

or Δt

$$\underline{\text{unit}} = \underline{\text{kg m/sec}} \\ \underline{[M L T^{-1}]}$$

numerical

$$\underline{I = m (v - u)}$$

$v =$ final velocity $\frac{द्वारा}{द्वारा}$

$u =$ initial velocity $\frac{द्वारा}{द्वारा}$

Conservation of Momentum $\Rightarrow$
संवेग संरक्षण का नियम

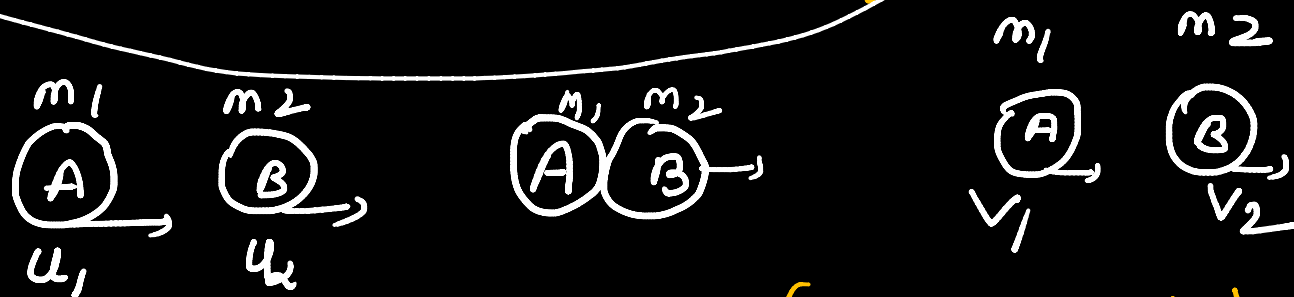
Numerical

(law of conservation of linear Momentum)
रेखीय संवेग संरक्षण का नियम)

$$\vec{P}_1 + \vec{P}_2 = \text{direction constant}$$

$$P_1 = -P_2$$

Explanation



$$m_1 u_1 + m_2 u_2 = - (m_1 v_1 + m_2 v_2)$$

$$P_1 = -P_2$$

Projectile Motion 4 સ્ટેપ્સ માટે -

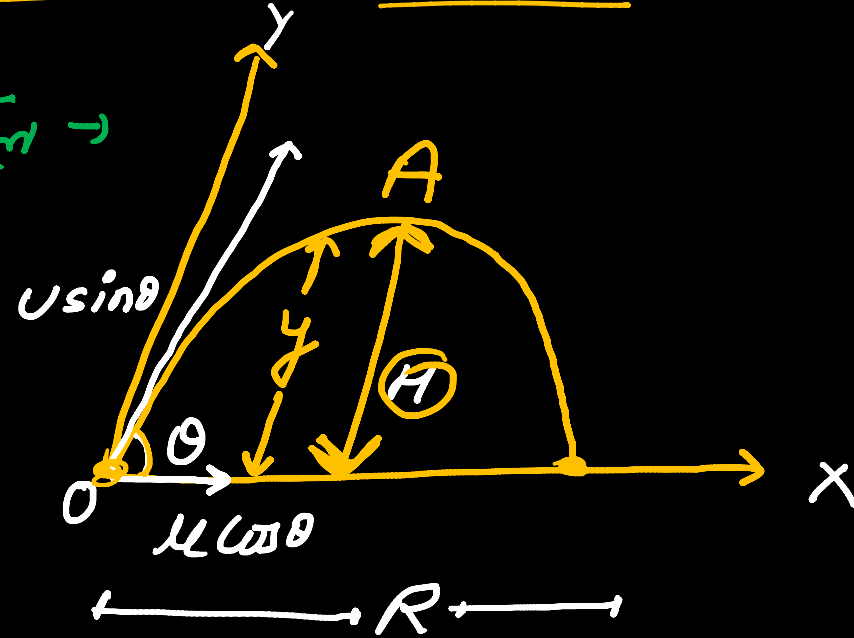
Time of flight કલ 3 સ્ટેપ્સ માટે -

$$T = \frac{2u \sin \theta}{g}$$

Maximum Height $\Rightarrow$

મહત્તમ ઊંચાઈ $\Rightarrow$

$$H = \frac{u^2 \sin^2 \theta}{2g}$$



Centrifetal force ପ୍ରାକଟିତ ହେଉଥିବା ନିମ୍ନ —

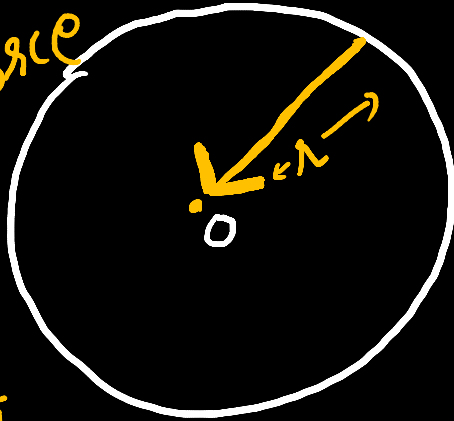
example →

34.6/100

Banking of road

ରୋଡ଼ର ବାଙ୍କିତ ହେବା

centrifetal inward force
ଓଡ଼ିଆ କି
ଓଡ଼ିଆ ଲୋକ
ବାଳା ଲୋକ



$$F = \frac{mv^2}{r}$$

$$C_p = -C_f$$

$$\text{Net } C_p + C_f = 0$$

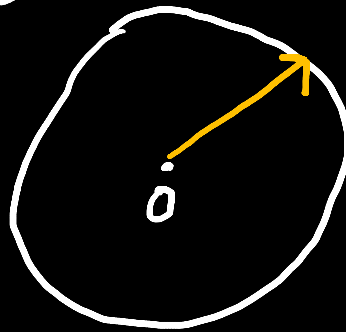


Centrifugal force ପ୍ରାକଟିତ ହେଉଥିବା ନିମ୍ନ —

example →

34.6/100

centrifugal outward force
ଓଡ଼ିଆ ଲୋକ
ଓଡ଼ିଆ ଲୋକ



$$F = \frac{mv^2}{r}$$

(Ex) → wash machine, swing
, Ghee

Equation of Motion

① Numerical

$$V = u + at$$

$$S = ut + \frac{1}{2}at^2$$

$$V^2 = u^2 + 2as$$

Note → $s_n = \frac{1}{2}a(n^2 - (n-1)^2) + u(n - (n-1))$

The displacement of a body in n^{th} second

$$s = u + \frac{1}{2}a(2n-1)$$