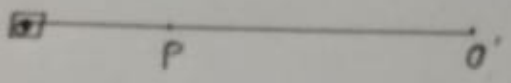
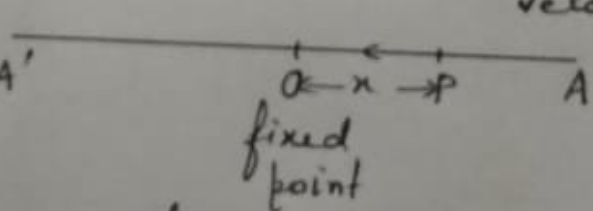
DYNAMICS

Rectilinear motion :- When a particle moves along a straight line, the motion of particle is said to be Rectilinear motion.



Simple Harmonic motion :- The kind of motion in which a particle moves in a straight line in such a way that its acceleration is always directed towards a fixed point on the line.

(Then the fixed point is called centre of force) and varies as the distance of the particle from the fixed point. Then the motion is called simple Harmonic motion.



Suppose that O is fixed point on the line A'A. Let a particle A start from rest from A moves towards O. Suppose that after t time the particle reach at point P. If OP = x then by the definition of simple Harmonic motion the magnitude of Acceleration at point P $\propto x$, suppose

Acceleration $= \mu x$ where μ is a Constant and the μ is called intensity of force.