Answer on Question #44910, Physics, Mechanics — Kinematics — Dynamics

THE MOTION OF A PARTICLE IS DESCRIBED BY AN EQUATION X=3t+6t-5t where x is meters and t is seconds find the postion acceleration of particle in 2 seconds.

Solution

$$x = 3t + 6t - 5t = 4t$$

The position in 2 seconds is

$$x = 4t = 4 \cdot 2 = 8\,m$$

The acceleration is

$$a = \frac{d^2x}{dt^2} = 0$$

Acceleration in 2 seconds will be 0 m/s^2.