AL MAWAHEB SCHOOL MATHEMATICS DEPT TEACHER : JISHA

Finding the Position of a Falling Object Given Its Acceleration

Q1 Determine the position function if the velocity function and the initial position are.

$$v(t) = 8 - 6t, \quad s(0) = 4$$

a) $s(t) = 8t - 6t^2 + 4$

b) $s(t) = 8t - 3t^2 + 4$

c) $s(t) = 6t^2 - 8t + 4$

d) $s(t) = 3t^2 - 8t + 4$

Q2 Determine the position function if the velocity function and the initial position are.

$$v(t) = 3\cos t + t - 5, \quad s(0) = 6$$

a) $s(t) = -3\cos t + 5t + 6$

b) $s(t) = 3\sin t + t^2 - 5t + 6$

c) $s(t) = 3\sin t + \frac{1}{2}t^2 - 5t + 6$

d) $s(t) = 3\cos t + t^2 - 5t$

Q3 Determine the position function if the acceleration function, the initial velocity is, and the initial position are

$$a(t) = t^2 + 1, \quad v(0) = 4 \quad s(0) = 0$$

a) $s(t) = \frac{t^4}{12} + \frac{t^2}{2} + 4t$

b) $s(t) = \frac{t^4}{12} + t^2 + 4t$

c) $s(t) = \frac{t^3}{3} + t + 4$

d) $s(t) = \frac{t^3}{3} + 2t + 4$

Keep going - you are improving with every question you solve. Believe in yourself and give your best always!

Practice today, succeed tomorrow!

LIVEWORKSHEETS