

UNIT 4 Activity Guide

Solutions

(4-9)

a) $v = 8t \text{ m/s}$

$v(0) = 0 \text{ m/s}$

$v(2) = 16 \text{ m/s}$

b) $a = 8 \text{ m/s}^2$

$a(0) = a(2) = 8 \text{ m/s}^2$

acceleration is constant.

c) $v_x = 12t^3 \text{ m/s}$

$v_x(0) = 0 \text{ m/s}$ $v_x(2) = 96 \text{ m/s}$

d) $a_x = 36t^2 \text{ m/s}^2$

$a_x(0) = 0 \text{ m/s}^2$ $a_x(1) = 36 \text{ m/s}^2$

e) $v = 8t + 12t^3$