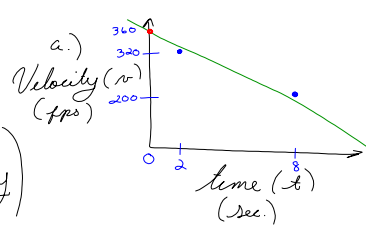


March 2, 2015

3.4 #32

(x, y)
 $(\text{time (sec)}, \text{Velocity (fps)})$
 (t, v)

a.) 

① $(2 \text{ sec}, 320 \text{ fps}) = (2, 320)$

② $(8 \text{ sec}, 200 \text{ fps}) = (8, 200)$

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b.) $m = \frac{320 - 200}{2 - 8} = \frac{120}{-6} = -20 \frac{\text{fps}}{\text{sec}}$

c.) $y = mx + b$

Velocity = $-20 \cdot \text{time} + b$

$v = -20t + b$

$320 = -20 \cdot 2 + b$

$320 = -40 + b$

$360 = b$

$v = -20t + 360$
 or
 $v(t) = -20t + 360$

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d.) $v(t) = -20t + 360$

$0 = -20t + 360$

$\frac{-360}{-20} = \frac{-20t}{-20}$

$18 = t$

18 seconds

Ok

$0 = -20(18) + 360$

$= -360 + 360$

$0 = 0 \checkmark$

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Solving Systems

① Elimination/addition

② Substitution

① $\begin{cases} x + 2y = 8 & (1) \\ x + 3y = 4 & (2) \end{cases}$

Steps

① Solve one equation for a variable

$x + 2y = 8$ solve for "x"

$x = 8 - 2y$ substitute into eq ②

② Substitute result from ① into the other equation

$(8 - 2y) + 3y = 4$ solve "y"

$8 - 2y = 4$

$-2y = 4$

$y = -2$ substitute into eq ①

③ Substitute result from ② into the other equation

$x + 2(-2) = 8$

$x - 4 = 8$

$x = 12$

④ Check

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① $5x + 3y = 4$

② $2x - y = 5$

Do 13.1 #2 - #44 Even

(Col 2)

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