

1) #40 $x - .2x = 32$

2a) 2.96 s
 b) 3.20 s
 c) Fall 38 ft

3) 10,286
 19,714

4) 63.10 mph

5) .28 gal.

Sep 25-8:08 AM

$$\frac{|2-x|}{.07} + \frac{|x|}{1} = \frac{|2|}{.2}$$

$$.07(2-x) + x = .2(2)$$

$$.14 - .07x + x = .4$$

$$.93x = .26$$

$$x = \frac{.26}{.93}$$

$$x \approx .28 \text{ gal}$$

Sep 25-8:12 AM

$$P = -.00027(x-15000)^2 + 60000$$

$$P = 54000$$

$x \rightarrow 0 \text{ to } 25000$
 $y \rightarrow 0 \text{ to } 60000$

1) $x - .2x = \$32$
 $.8x = 32$

Sep 25-10:14 AM

4)

$$A^2 + 180^2 = 310^2$$

$$A^2 = 3700$$

$$A = 252.39 \text{ mi}$$

$$D = r t$$

$$D = (45)(4)$$

$$252.39 = r(4)$$


$$r = 63.10 \text{ mph}$$

Sep 25-8:15 AM

2) $h = -16t^2 + V_0t + h_0$

a) $0 = -16t^2 + 0t + 140$
 $0 = -16t^2 + 140 \rightarrow \begin{matrix} 16t^2 = 140 \\ t^2 = 8.75 \\ t = 2.96 \end{matrix}$

b) $0 = -16t^2 + 45t + 20$

c) $h = -16(1^2) - 22(1) + 100$
 $h = 62 \text{ ft}$


Sep 25-8:18 AM

1a) $y = .0092x^2 + .1093x + 32.48$

1b) 153.51 mill workers

1c) 2029

2a) $y = -.501x^2 + 13.82x - 15.412$

b) $74.5^\circ, 66.38^\circ$

c) 21:30

3a) $y = 5x + 9.93$

b) 27, 24

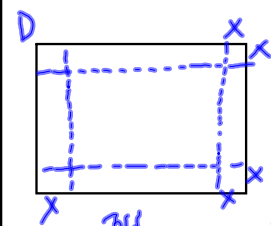
c) 4.6

4a) $y = -.086x + 22.62$

b) 14.72

c) 2012

Sep 25-8:23 AM



$V = lwh$
 $V = (20-2x)(34-2x)x$

$x = 4.07 \text{ ft}$
 $V \approx 1248.27 \text{ ft}^3$

$x \rightarrow 0 \text{ to } 10$
 $y \rightarrow 0 \text{ to } 1500$


Sep 25-8:34 AM

2) $x = \text{orig. sal.}$

$x + .045x = 35000$
 $1.045x = 35000$
 $x = \$33492.82$

Sep 25-8:40 AM

3)



$A = lw$
 $A = x(x+5)$
 $380 = x^2 + 5x$
 $0 = x^2 + 5x - 380$
 $x \approx 17.15 \text{ ft}$

17.15 ft
 22.15 ft

Sep 25-8:43 AM

4)

stock	x	.10
sav	y	.021
CD	1900	.05
		<hr/>
	7000	.078

$x + y + 1900 = 7000$
 $.1x + .021y + .05(1900) = .078(7000)$
 $y = 5100 - x$
 $.1x + .021(5100 - x) + 95 = 546$
 $.1x + 107.1 - .021x + 95 = 546$
 $.079x = 343.9$
 $x = \$4353.16 \text{ stock}$
 $y = \$746.84 \text{ sav}$

Sep 25-8:46 AM