

Algebra: Please clear your desk except for...

Assignment #23 and SNB

Write the equation of the line with the given information.

1. $m = -\frac{1}{2}, (0, 5)$

2. $m = \frac{3}{4}, (-4, 3)$

Go to the back of the room when you are done all three!

3. $(6, -5)$ and $(3, -3)$

1. $m = -\frac{1}{2}, (0, 5) \quad b = 5$

$$y = -\frac{1}{2}x + 5$$

2. $m = \frac{3}{4}, (-4, 3)$

$$y = mx + b$$

$$3 = \left(\frac{3}{4}\right)(-4) + b$$

$$3 = -3 + b$$

$$b = 6$$

$$y = \frac{3}{4}x + 6$$

3. $(6, -5)$ and $(3, -3) *$

$$m = \frac{\Delta y}{\Delta x} = \frac{-3 - (-5)}{3 - 6} = \frac{2}{-3}$$

$$m = -\frac{2}{3}$$

$$y = mx + b$$

$$-3 = \left(-\frac{2}{3}\right)(3) + b$$

$$-3 = -2 + b$$

$$b = -1$$

$$y = -\frac{2}{3}x + (-1)$$

Using Slope-Intercept Form

Landscape Supply: A landscape supply business charges \$30 to deliver mulch. The mulch costs \$23 per cubic yard.

① $T = \# \text{ of } \$ \text{ [Total cost]}$ ② $m = \frac{\Delta T}{\Delta C} = \23 per cub. yd

$C = \# \text{ of cubic yards}$ $(0, 30)$

(C, T)

③ $T = 23C + 30$ where T is the total cost of having C cubic yards delivered.

Find the cost of having 8 cubic yards of mulch delivered to a site.

$C = 8$ $T = 23C + 30$ It would cost \$214
 $T = 23(8) + 30$ to have 8 cu. yd
 $T = 184 + 30$ delivered.
 $T = \$214$

Cable Television: A cable company charges \$44 per month for basic service. Each premium channel costs an additional \$16 per month.

① $B = \# \text{ of } \$ \text{ [Monthly Bill]}$ ② $m = \frac{\Delta B}{\Delta P} = \$16 \text{ per Premium channel}$

$P = \# \text{ of Premium channels}$ $(0, 44)$

(P, B)

③ $B = 16P + 44$ where B is the monthly bill with P premium channels.

How many premium channels can you have if you can afford \$80 a month?

$B = 80$ $B = 16P + 44$ You can afford 2 premium
 $80 = 16P + 44$ channels if you can only
 $36 = 16P$ pay \$80 a month.
 $P = 2\frac{4}{16}$

Phone Bill: I noticed my phone bill had been increasing over the past year. My bill in December of 2013 was \$80.50. Last month, November 2015, my bill was \$109.25. Assuming a constant increase, predict my phone bill for July 2016.

① $B = \# \text{ of } \$ \text{ (Monthly Bill)}$
 $M = \# \text{ of months (after Dec. 2013)}$
 (m, B)

② $(0, 80.50) (23, 109.25)$
 $m = \frac{\Delta B}{\Delta M} = \frac{109.25 - 80.50}{23 - 0}$
 $m = \frac{28.75}{23} = \$1.25 \text{ per month}$

③ $B = 1.25M + 80.50$
 Where B is the
 monthly bill
 M months after
 December 2013.

④ $M = 31$ $B = 1.25M + 80.50$
 $B = 1.25(31) + 80.50$
 $B = 38.75 + 80.50$
 $B = \$119.25$

I predict your July 2016
 phone bill will be about
 \$119.25.

Assignment #24

Part I:

p. 296-298

#6-8 (Write the equation and graph labeling 3 points),

#14-19, 50-52

Part II: Chapter 5 Mid-Chapter Review Packet