

Quiz 5.16.14 B key

Friday, May 16, 2014

Boss Mathematician Key

Period _____

1) Simplify $2(-3x + 5) - 3(4x - 6)$
distribute $-6x + 10 - 12x + 18$
re-write $-6x - 12x + 10 + 18$
combine like terms $-18x + 28$

2) Solve $5x + 7 = 3x - 9$
 $\begin{array}{r} 5x + 7 = 3x - 9 \\ -3x \quad -3x \\ \hline 2x + 7 = -9 \\ -7 \quad -7 \\ \hline 2x = -16 \\ \hline x = -8 \end{array}$

solve by using opposite operations

$x = -8$

3) Identify the slope and y-intercept of the linear equation

get y by itself

$-5x + 3y = -12$
 $+5x \quad +5x$
 $\frac{3}{3}y = \frac{5x - 12}{3}$
 $y = \frac{5}{3}x - 4$

$m = \frac{5}{3}$
 $b = -4$

4) Solve $\frac{3}{4}x - 3 = \frac{3}{2} + 3 \cdot 2$
 $\frac{3}{4}x = \frac{3}{2} + \frac{6}{2}$
 $\frac{3}{4}x = \frac{9}{2}$
 $x = \frac{36}{6}$
 $x = 6$

need common denominators when adding fractions

5) **Candy Shop:** Charlie went to the chocolate factory and purchased gobstoppers and gummy bears. He purchased 12 items and spent \$9.75. If each gobstopper costs \$1 and a bag of gummy bears costs 75 cents, how many of each candy did Charlie buy?

$g = \#$ of gobstoppers
 $b = \#$ of gummy bears

Charlie bought 3 gobstoppers and 9 gummy bears

$g + b = 12$
 $-1 \cdot (1g + .75b = 9.75) \rightarrow -1g + -.75b = -9.75$
 $\begin{array}{r} 1g + b = 12 \\ -1g + -.75b = -9.75 \\ \hline .25b = 2.25 \\ \hline b = 9 \end{array}$

$b = 9$

$g + b = 12$
 $g + 9 = 12$
 $-9 \quad -9$
 $g = 3$

6) Graph the system of inequalities

- $y > -2x - 1$
- $y \leq \frac{3}{5}x + 2$

