Algebra 1 Bellwork Tuesday, January 12, 2016

1. Write an equation to model each situation. Define your variables. A group of people went to a ballgame. Nachos cost $5.25 each and Cokes cost $3.50 each. The total amount spent was $84.

a) EQ:

b) If only nachos were purchased, how many could they have bought?

c) If only Cokes were purchased, how many could they have bought?

2. Write the equation of the line that passes through the two points $(-5,-12)\&(20,8)$ in Slope-Intercept Form.

EQ:

3. You are saving money to buy a car. After 8 weeks you have $1920. After 15 weeks you have $2445. The relationship between the number of weeks and how much you have is a linear relationship.

a) Model this situation with an equation. Define your variables.

EQ:

b) Find the number of weeks you need to save in order to have $5000.

4. Write the equation of the line that passes through this pair of points: $(13,4)\&(-1,4)$

Algebra 1 Bellwork Tuesday, January 12, 2016 ANSWERS

1. Write an equation to model each situation. Define your variables. A group of people went to a ballgame. Nachos cost $5.25 each and Cokes cost $3.50 each. The total amount spent was $84.

a) EQ: $5.25N + 3.50C = 84$

N = # nachos purchased
C = # cokes purchased

b) If only nachos were purchased, how many could they have bought?

$\frac{5.25N}{5.25} = \frac{84}{5.25}$ $N = 16$

c) If only Cokes were purchased, how many could they have bought?

$\frac{3.50C}{3.50} = \frac{84}{3.50}$ $C = 24$

2. Write the equation of the line that passes through the two points $(-5,-12)$&$(20,8)$ in Slope-Intercept Form.

EQ: $y = \frac{4}{5}x - 8$

$m = \frac{8 - -12}{20 - -5} = \frac{20}{25} = \frac{4}{5}$

$y - 8 = \frac{4}{5}(x - 20)$

$y - 8 = \frac{4}{5}x - 16$
$+8 \quad +8$

3. You are saving money to buy a car. After 8 weeks you have $1920. After 15 weeks you have $2445. The relationship between the number of weeks and how much you have is a linear relationship.

a) Model this situation with an equation. Define your variables.

EQ: $y = 75x + 1320$

$y - 1920 = 75(x - 8)$ $(8, 1920)$
$y - 1920 = 75x - 600$
$+1920 \quad +1920$ $(15, 2445)$
$y = 75x + 1320$

y = Amount of $ saved
x = # weeks saving

$m = \frac{2445 - 1920}{15 - 8} = \frac{525}{7} = 75$

b) Find the number of weeks you need to save in order to have $5000.

$5000 = 75x + 1320$
$-1320 \quad -1320$
$\frac{3680}{75} = \frac{75x}{75}$

$x = 49.07$ wks

4. Write the equation of the line that passes through this pair of points: $(13,4)$&$(-1,4)$

$y = 4$