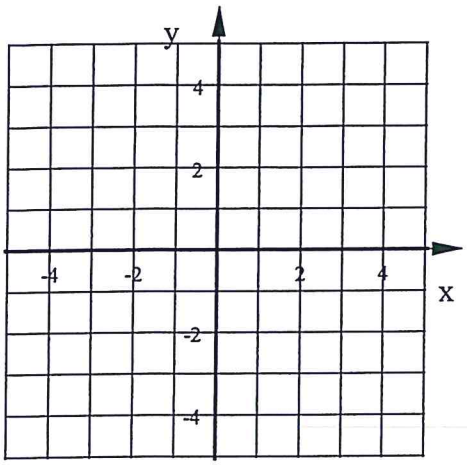
Algebra 1 6th hr Bellwork Friday, January 8, 2015

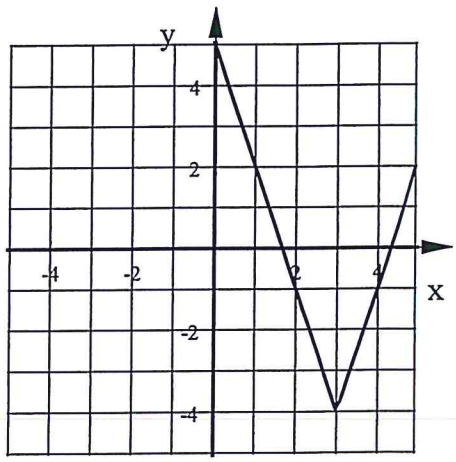
1. Graph this equation with at least 5 points.

$y = -2x^2 - 8x - 3$




2. Write the equation of this graph.

$EQ:$




3. The value of a painting you own is dropping. The value of the painting is a function of how many years you've owned it. At first the painting was worth $100,000. The price dropped $1250each year. Write a function rule to model this situation. Define your variables.

EQ: Variables:

a. In how many years will the painting be worth $70,000?

4. Use these two functions: $h(c) = c^2 - 4$ *and* $p(a) = 7 - a$

Find $2h(-3) - 4p(-2)$

5. The ordered pairs are from the same Direct Variation relationship. Write a direct variation equation then find the missing value.

$(2,5)\&(x,16)$

6. Use this function: $f(x) = 10x^2 - 4x$ Find the Range for this Domain: $\{-5,0,5\}$

Range:

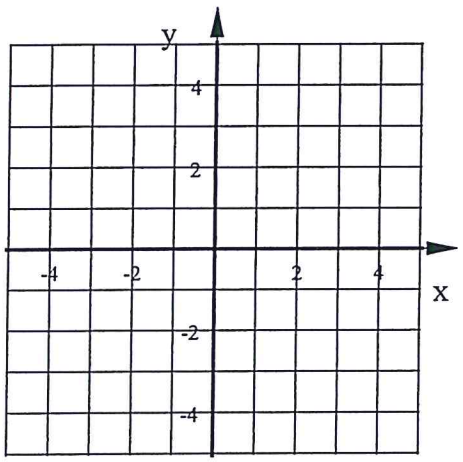
7. The amount of spaghetti required for a meal varies directly with the number of people that are served.

| # of people served | lbs of Spaghetti |
|---|---|
| 12 | 9 |
| 28 | 21 |
| 48 | 36 |
| 68 | 51 |

a. Find the variation constant including units.

b. Find amount of spaghetti needed to feed 100 people.

8. Graph this equation: $y = \frac{2}{3}x + 1$

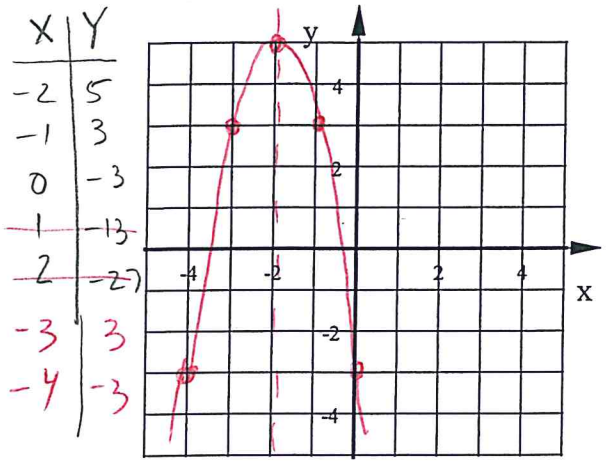


Algebra 1 6th hr Bellwork Friday, January 8, 2015

1. Graph this equation with at least 5 points.

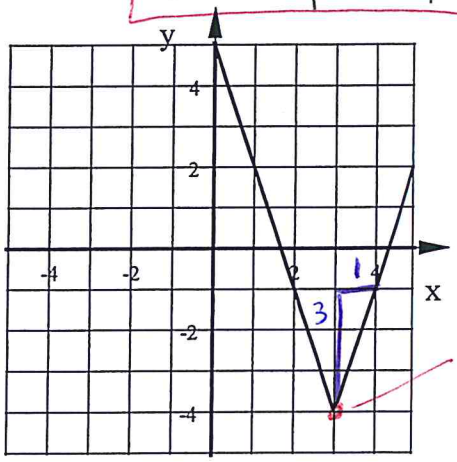
$y = -2x^2 - 8x - 3$

| X | Y |
|---|---|
| -2 | 5 |
| -1 | 3 |
| 0 | -3 |
| 1 | -13 |
| 2 | -27 |
| -3 | 3 |
| -4 | -3 |




2. Write the equation of this graph.

EQ : $y = 3|x-3|-4$




3. The value of a painting you own is dropping. The value of the painting is a function of how many years you've owned it. At first the painting was worth $100,000. The price dropped $1250each year. Write a function rule to model this situation. Define your variables.

EQ: $V = 100{,}000 - 1250y$ Variables: $V$ = value of the painting, $y$ = # years

a. In how many years will the painting be worth $70,000?

$70{,}000 = 100{,}000 - 1250y$ → $V = 70{,}000$

$-100{,}000 \quad -100{,}000$

$-30{,}000 = -1250y$

$\frac{-30{,}000}{-1250} = \frac{-1250y}{-1250}$

$y = 24$ years

4. Use these two functions: $h(c) = c^2 - 4$ and $p(a) = 7 - a$

Find $2h(-3) - 4p(-2)$

$10 - 36$

$-26$

$h(-3) = (-3)^2 - 4 = 9 - 4 = 5$

$2h(-3) = 2(5) = 10$

$p(-2) = 7 - (-2) = 7 + 2 = 9$

$4p(-2) = 4(9) = 36$

5. The ordered pairs are from the same Direct Variation relationship. Write a direct variation equation then find the missing value.

$(2,5)\&(x,16)$

$X = 6.4$

write a direct variation eq: $K = 5/2 = 2.5$

$y = 2.5x$

$(x,16) \rightarrow 16 = 2.5x$

$6.4 = x$

OR USE A PROPORTION

$\frac{16}{x} = \frac{5}{2}$ $x = 2(16) \div 5 = 6.4$

6. Use this function: $f(x) = 10x^2 - 4x$ Find the Range for this Domain: $\{-5, 0, 5\}$

Range: $\{0, 230, 270\}$

$f(-5) = 10(-5)^2 - 4(-5) = 10(25) - 4(-5) = 250 + 20 = 270$

$f(0) = 10(0)^2 - 4(0) = 0 - 0 = 0$

$f(5) = 10(5)^2 - 4(5) = 10(25) - 4(5) = 230$

7. The amount of spaghetti required for a meal varies directly with the number of people that are served.

| # of people served | lbs of Spaghetti |
|---|---|
| 12 | 9 |
| 28 | 21 |
| 48 | 36 |
| 68 | 51 |

X (# of people served) Y (lbs of Spaghetti)

$K = \frac{Y}{X} = \frac{9}{12} = 0.75$

a. Find the variation constant including units. 0.75 lbs/person

b. Find amount of spaghetti needed to feed 100 people. → x

(1) Direct Var. EQ &

$Y = 0.75X = 0.75(100) = 75 \text{ lbs}$

OR

(2) use a proportion

$\frac{9 \text{ lbs}}{12 \text{ people}} = \frac{Y \text{ lbs}}{100 \text{ people}}$

$Y = 75 \text{ lbs}$

8. Graph this equation: $y = \frac{2}{3}x + 1$

slope ↗ y-intercept ↑