Algebra 1 Bellwork Tuesday, January 26, 2016

1. Simplify. $4x^2y - 8xy^2 + xy - 9x^2y^2 + 6x^2y - 7xy - 3(x^2y^2 + 4xy^2) - 9x^2y$

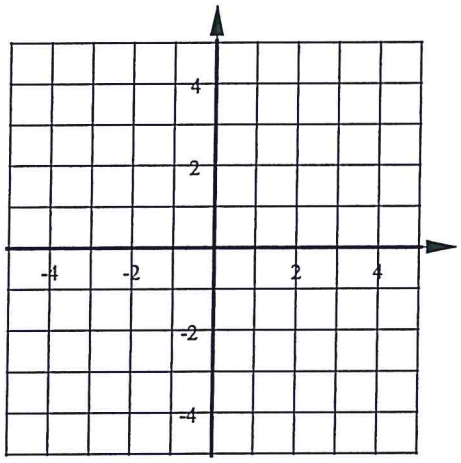
2. There are 144 nails in a box. Write an equation for the number of boxes if there is an unknown number of nails. Define your variables.

EQ: Variables:

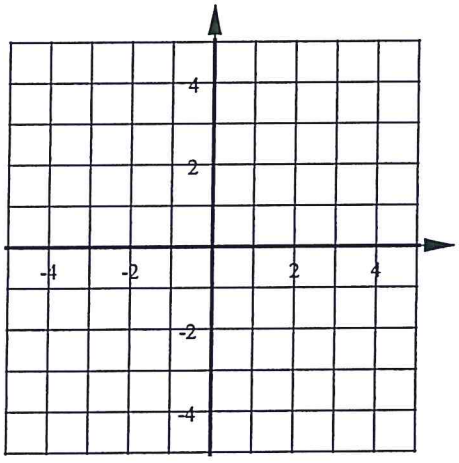
3. Solve. $9 + 5x - 2 + x = 2x$

Graph each with at least 5 points.

5. $y = 2|x + 3| - 5$



6. $y = -2(x - 1)^2 + 4$



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1. Simplify. $4x^2y - 8xy^2 + xy - 9x^2y^2 + 6x^2y - 7xy - 3(x^2y^2 + 4xy^2) - 9x^2y$

$-3x^2y^2 \quad -12xy^2$

$$x^2y - 20xy^2 - 6xy - 12x^2y^2$$

2. There are 144 nails in a box. Write an equation for the number of boxes if there is an unknown number of nails. Define your variables.

EQ: $B = \frac{N}{144}$

Variables: N = # of nails
B = # of boxes

3. Solve. $9 + 5x - 2 + x = 2x$

$7 + 6x = 2x$
$-6x \quad -6x$

$7 = -4x$
$\frac{}{-4} \quad \frac{}{-4}$

$$x = -\frac{7}{4}$$

or

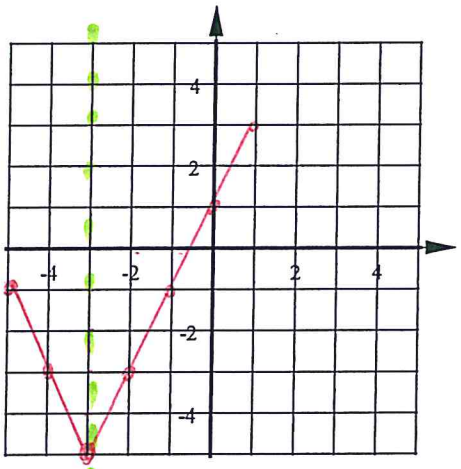
$7 + 6x = 2x$
$-2x \quad -2x$

$7 + 4x = 0$
$-7 \quad -7$

$\frac{4x}{4} = \frac{-7}{4}$

Graph each with at least 5 points.

5. $y = 2|x + 3| - 5$



$2|x+3| - 5$

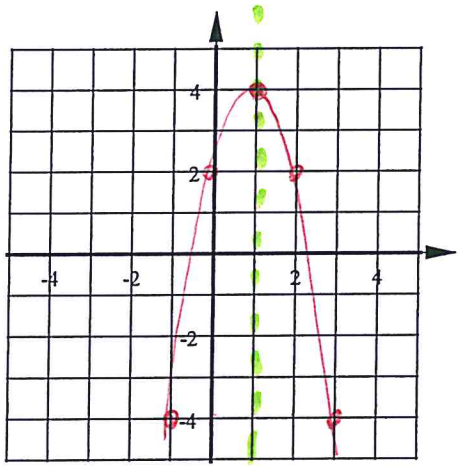
3 Left

5 down

Vertex → $(-3, -5)$

sides have a slope of $\frac{2}{1}$

6. $y = -2(x - 1)^2 + 4$



x	y
2	2
3	-4

$-2(x-1)^2 + 4$

opens down

1 RIGHT

4 up

Vertex → $(1, 4)$