Questions on 2.1 HW? Quiz soon...
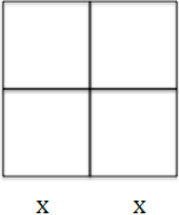
Rebekah Hansen
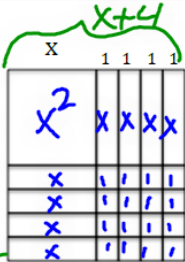
Highland HS
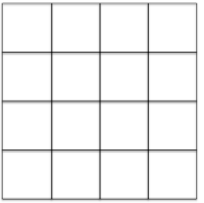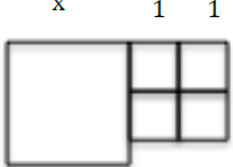
Mar 28-9:24 AM

6.

$y = -1$

$(1.5, -3)$
minimum
$x = 1.5$

he coordinates of the vertex and the equation of the axis

to find the exact value of the coordinates of the vertex.
1 - 5. Explain your conjecture.

bola have?

8.50 x 11.00 in

_____11. $x^2 + 4$ _____12. $(x + 4)^2$ _____13. $(4x)^2$ _____14. $4x^2$

a.

X

X

X   X

b.

$x+4$

X   1 1 1 1

$x+4$ { x^2 x x x x $x^2 + 8x + 16$
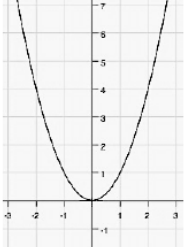
X
X
X
X

$(x+4)^2$

c.

X

X   X

d.

X   1   1

X

1

1

A table of values and the graph for $f(x) = x^2$ is given. Compare the values in the table for $g(x)$ to those for $f(x)$. Identify what stays the same and what changes. a) Use this information to write the vertex form of the equation of $g(x)$. b) Graph $g(x)$. c) Describe how the graph changed from the graph of $f(x)$. Use words such as right, left, up, and down. d) Answer the question.

x	-3	-2	-1	0	1	2	3

A table of values and the graph *for f (x) = x²* is given. Compare the values in the table for *g(x)* to those for *f(x)*. Identify what stays the same and what changes. a) Use this information to write the vertex form of the equation of *g(x)*. b) Graph *g(x)*. c) Describe how the graph changed from the graph of *f(x)*. Use words such as right, left, up, and down. d) Answer the question.
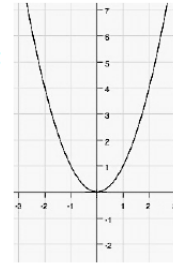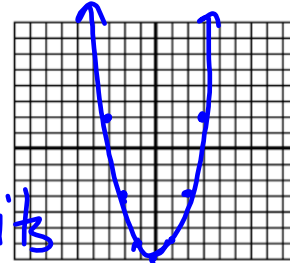
x	-3	-2	-1	0	1	2	3
$f(x) = x^2$	9	4	1	0	1	4	9

15 a) g(x) = $x^2 - 7$ b)

x	-3	-2	-1	0	1	2	3
g(x)	2	-3	-6	-7	-6	-3	2

c) In what way did the graph move? **down 7 units**

d) What part of the equation indicates this move? **−7**

SECONDARY II // MODULE 2

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$$\sqrt{a^2} = \pm a$$

Simplify the following expressions

19. $\sqrt{49a^2b^6} = \sqrt{49} \cdot \sqrt{a^2} \cdot \sqrt{b^6}$ 20. $\sqrt{(x+13)^2} = (x+13)$ 21. $\sqrt{(x-16)^2} = x+16$
$= 7ab^3$ or $\pm 7ab^3$ or $\pm(x+13)$

22. $\sqrt{(36x+25)^2}$ 23. $\sqrt{(11x-7)^2}$ 24. $\sqrt{9m^2(2p^3-q)^2} =$

$\sqrt{9} \cdot \sqrt{m^2} \cdot \sqrt{(2p^3-q)^2} =$

$= 3m(2p^3-q)$ or
$\pm 3m(2p^3-q)$

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$\sqrt{b \cdot b \cdot b \cdot b \cdot b \cdot b} = \sqrt{b^2} \cdot \sqrt{b^2} \cdot \sqrt{b^2} = b \cdot b \cdot b = b^3$

10
SECONDARY MATH II // MODULE 2
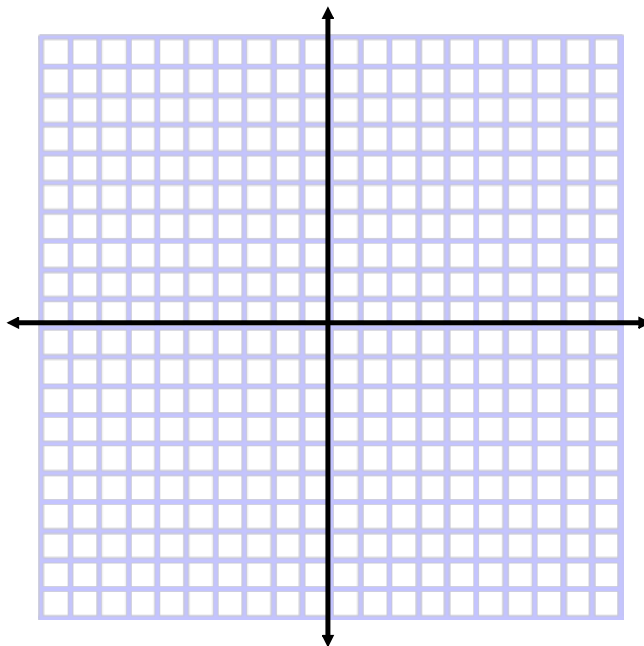STRUCTURES OF EXPRESSIONS

$\sqrt{11} \approx$ $\sqrt{75} = \sqrt{25 \cdot 3} =$
$5\sqrt{3}$ or $\pm 5\sqrt{3}$

Sep 23-12:06 PM

5

Module 2 Quiz #1: Graphing Quadratics

Fill out the following table and graph the quadratic function. Label your points that are in the table!

x	y
-2	
-1	
0	
1	
2	

$$f(x) = (x+1)^2$$

SECONDARY MATH II // MODULE 2

STRUCTURES OF EXPRESSIONS
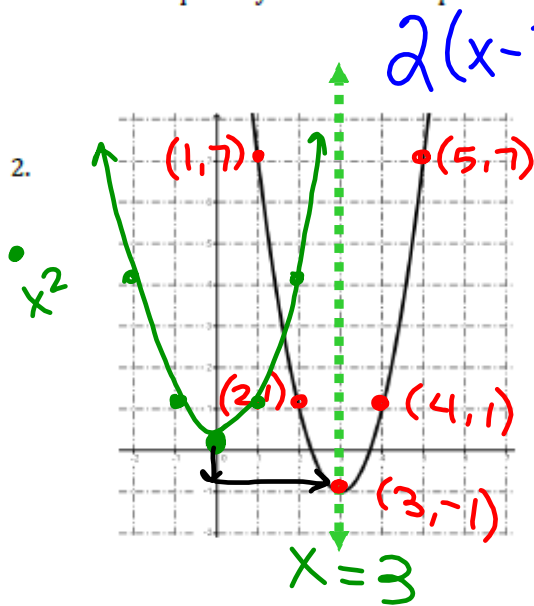
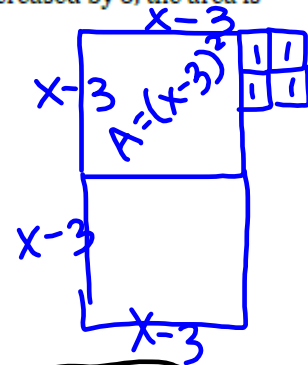# 2.2 Transformers: More Than Meets the y's

A Solidify Understanding Task

Write the equation for each problem below. Use a second representation to check your equation.

1. The area of a square with side length *x*, where the side length is decreased by 3, the area is multiplied by 2 and then 4 square units are added to the area.
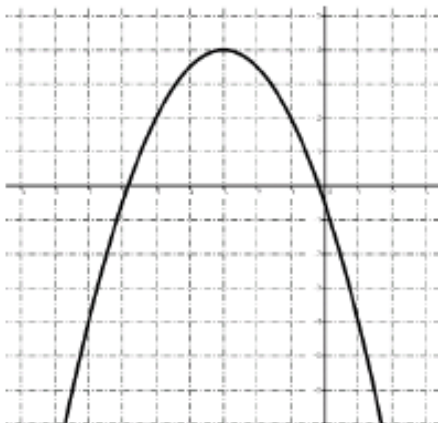
$$2(x-3)^2 + 4$$

2.

x^2

(1,7)   (5,7)

(2,1)   (4,1)

(3,-1)

$x = 3$

x	y
1	7
2	1
3	-1
4	1
5	7

$x-3$

$A=(x-3)^2$

$x-3$

$x-3$

$$y = -2(x-3)^2 - 1$$

3.

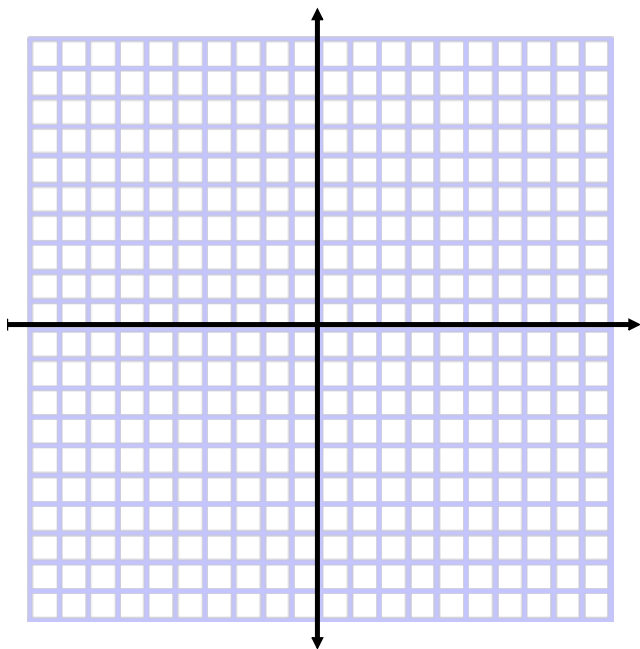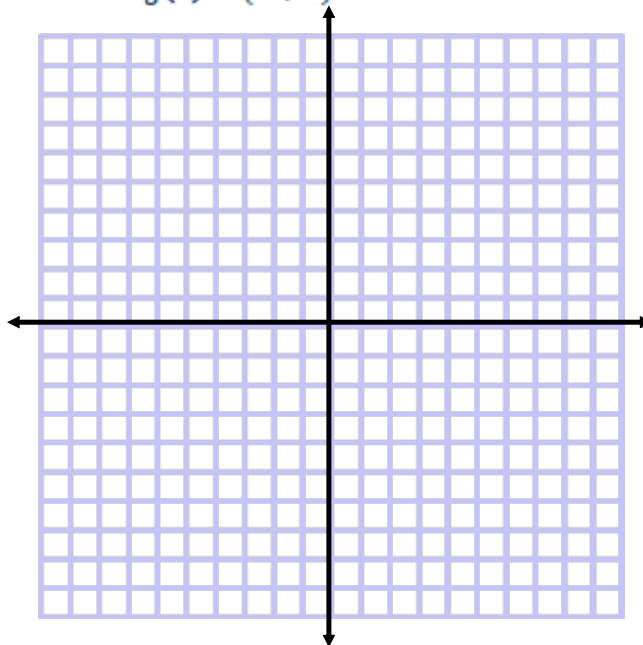| x	f(x)
-4	7
-3	2
-2	-1
-1	-2
0	-1
1	2
2	7
3	14
4	23

4.

Graph each equation without using technology. Be sure to have the exact vertex and at least two correct points on either side of the line of symmetry.
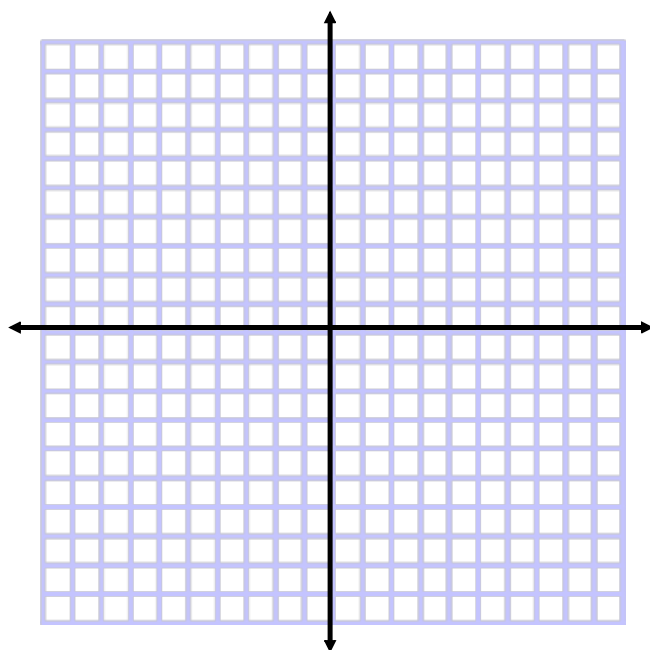
5. $f(x) = -x^2 + 3$

6. $g(x) = (x + 2)^2 - 5$

7. $h(x) = 3(x - 1)^2 + 2$

Sep 21-2:54 PM

8. Given: $f(x) = a(x - h)^2 + k$

    a. What point is the vertex of the parabola?

    b. What is the equation of the line of symmetry?

    c. How can you tell if the parabola opens up or down?

    d. How do you identify the dilation?

9. Does it matter in which order the transformations are done? Explain why or why not.

Sep 21-2:55 PM

Homework

Finish 2.2 "Ready, Set, Go"

Mar 28-9:36 AM