Unit 3 – 5

(REVIEW Unit 2-12) Name: _____

Consider the following EQUATIONS, make a table, plot the points, and graph what you think the graph looks like.

1. $y = x^2$

x	y
-3	
-2	
-1	
0	
1	
2	
3	

2. $y = 2x^2$

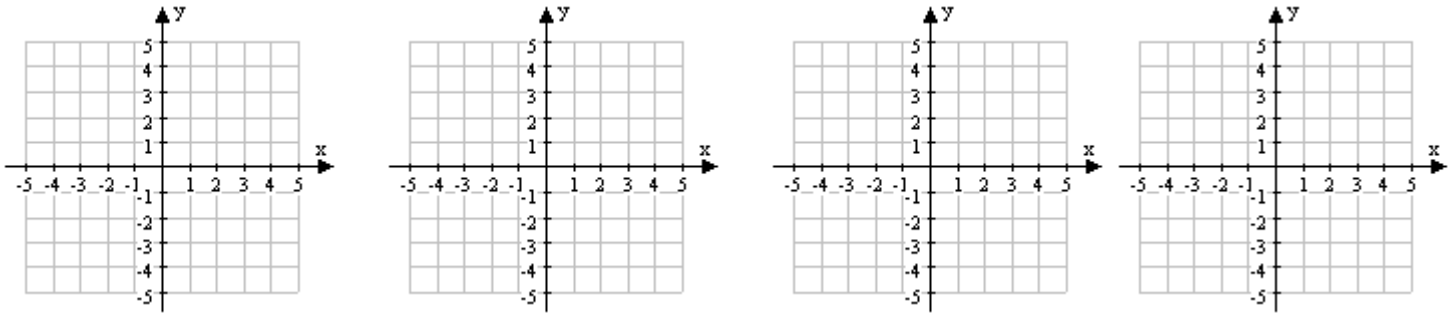
x	y
-2	
-1.5	
-1	
0	
1	
1.5	
2	

3. $y = 5x^2$

x	y
-1.5	
-1	
-0.5	
0	
0.5	
1	
1.5	

4. $y = 0.2x^2$

x	y
-4	
-2	
-1	
0	
1	
2	
4	



5. What happens to the graph as the number in front of x^2 gets larger? Smaller? _____

_____

_____

6. $y = -2x^2$

x	y
-2	
-1.5	
-1	
0	
1	
1.5	
2	

7. $y = -0.5x^2$

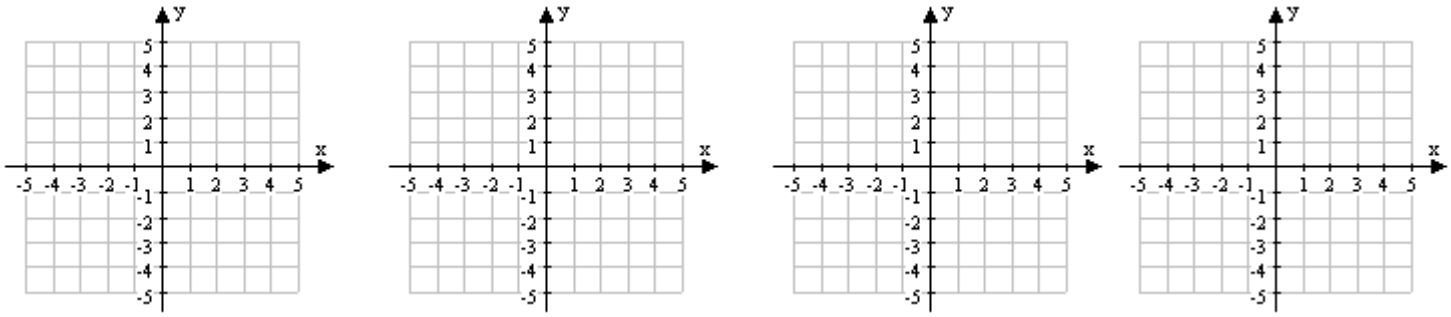
x	y
-3	
-2	
-1	
0	
1	
2	
3	

8. $y = x^2 + 1$

x	y
-3	
-2	
-1	
0	
1	
2	
3	

9. $y = x^2 - 2$

x	y
-3	
-2	
-1	
0	
1	
2	
3	



10. What happens to the graph as the number in front of x^2 is negative? _____

11. What happens when you add a number or subtract a number from x^2? _____

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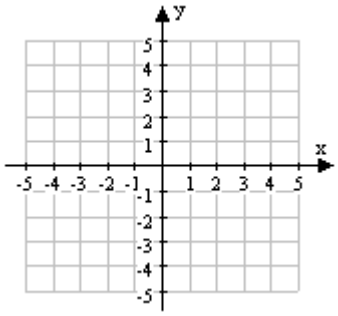
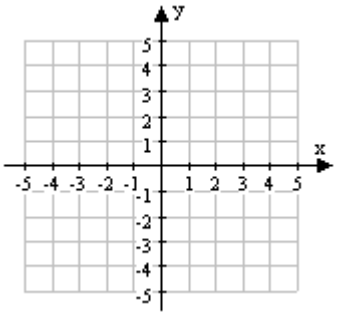
12. $y=(x+2)^2$

x	y
-3	
-2	
-1	
0	
1	
2	
3	



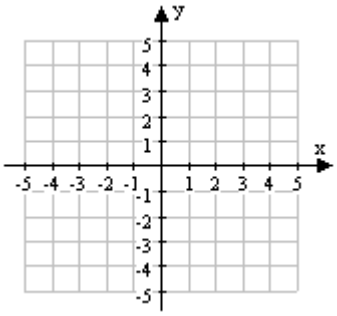
13. $y=(x-3)^2$

x	y
-3	
-2	
-1	
0	
1	
2	
3	



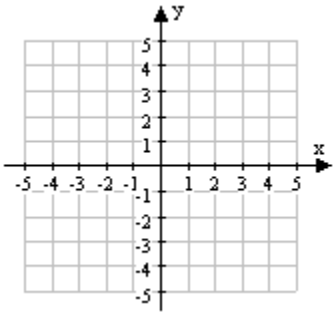
14. $y=(x+4)^2$

x	y
-5	
-4	
-3	
-2	
-1	
0	
1	



15. $y=-2(x-3)^2+2$

x	y
-1	
0	
1	
2	
3	
4	
5	



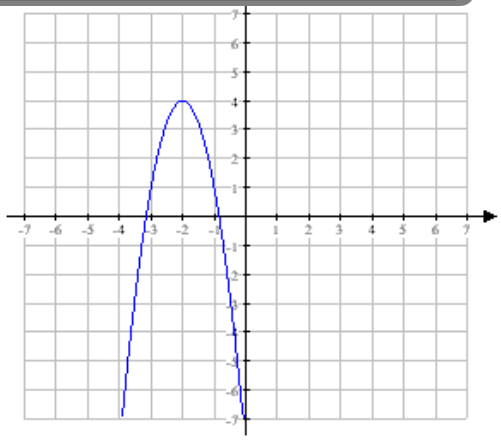
16. What happens when you add a number or subtract a number from x inside the parenthesis? _____

_____

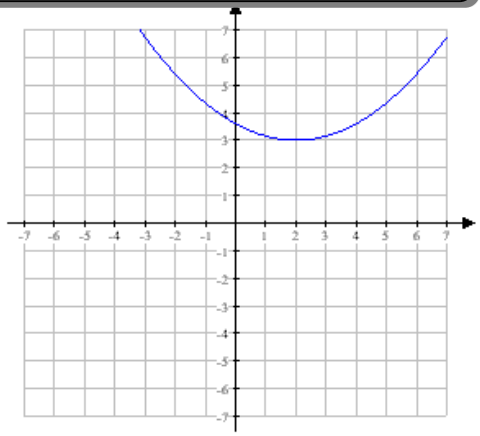
_____

17.What is a possible equation for the following graphs.

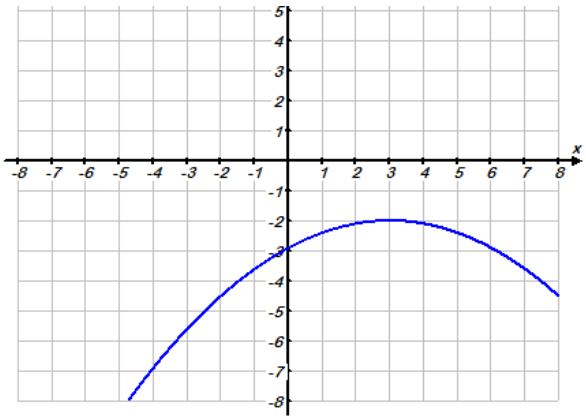
y = ____(x ____)^2____



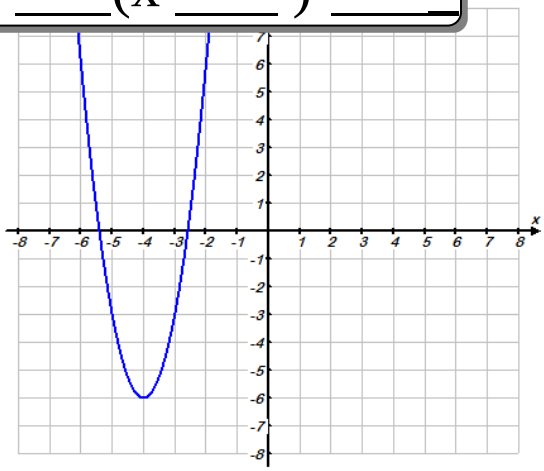
y = ____(x ____)^2____



y = ____(x ____)^2____

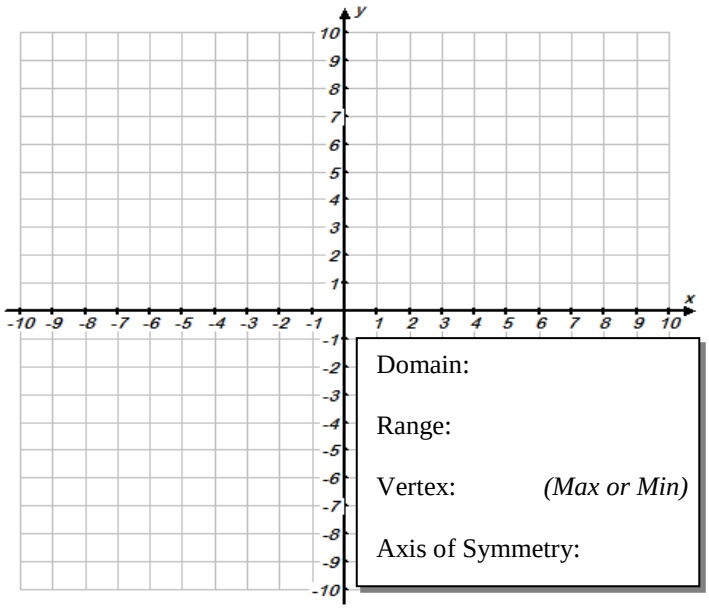


y = ____(x ____)^2____



18. Rewrite each of the following quadratics in vertex form by completing the square and graph.

a. $y = x^2 + 4x + 1$



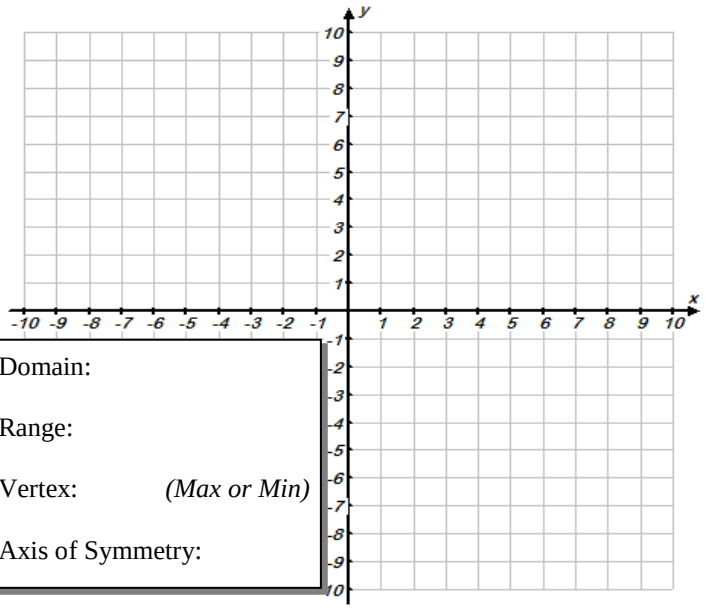
Domain:

Range:

Vertex: *(Max or Min)*

Axis of Symmetry:

b. $y = x^2 - 6x + 3$



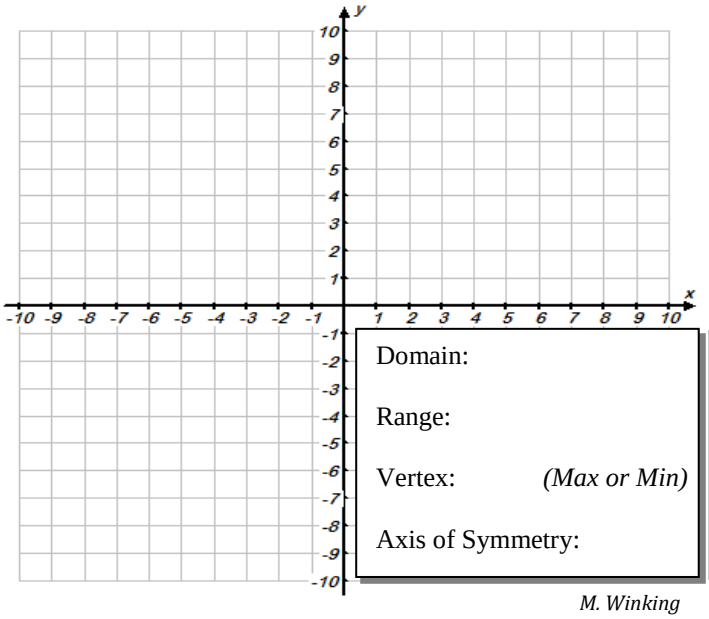
Domain:

Range:

Vertex: *(Max or Min)*

Axis of Symmetry:

c. $y = 2x^2 + 12x + 13$



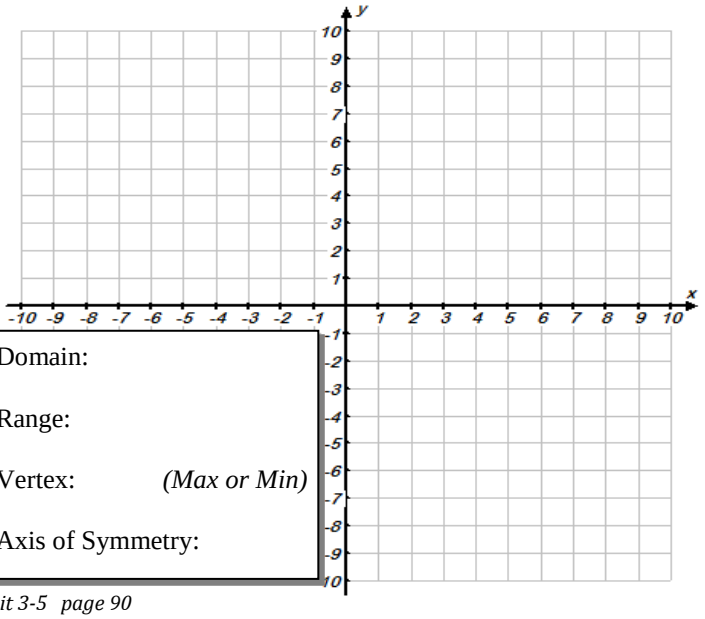
Domain:

Range:

Vertex: *(Max or Min)*

Axis of Symmetry:

d. $y = -2x^2 + 16x - 27$



Domain:

Range:

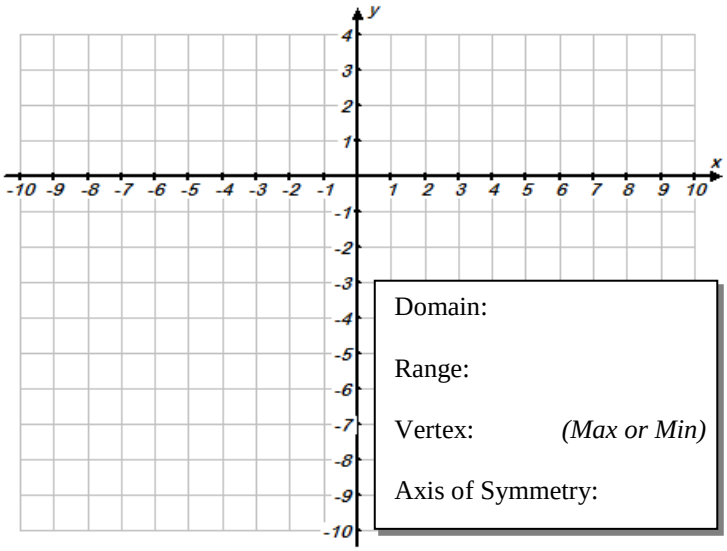
Vertex: *(Max or Min)*

Axis of Symmetry:

(18 continued) Rewrite each of the following quadratics in vertex form by completing the square and graph.

e. $y = x^2 + 7x + 6$

f. $y = x^2 - 11x + 24$

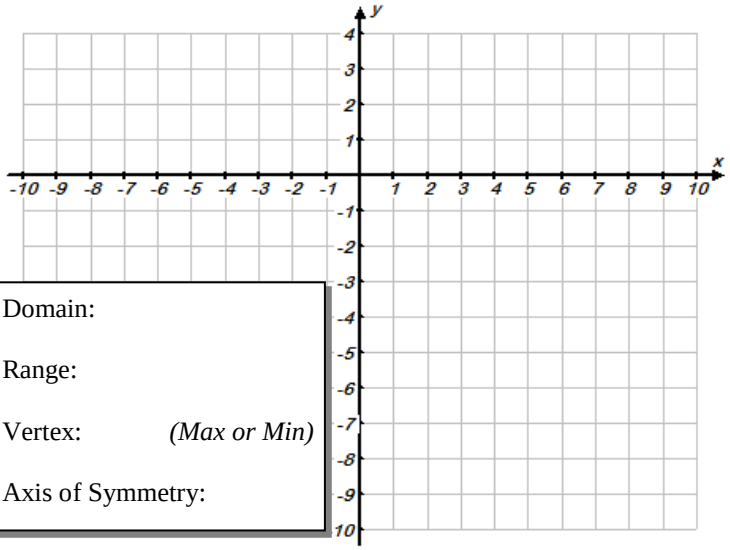


Domain:

Range:

Vertex: *(Max or Min)*

Axis of Symmetry:



Domain:

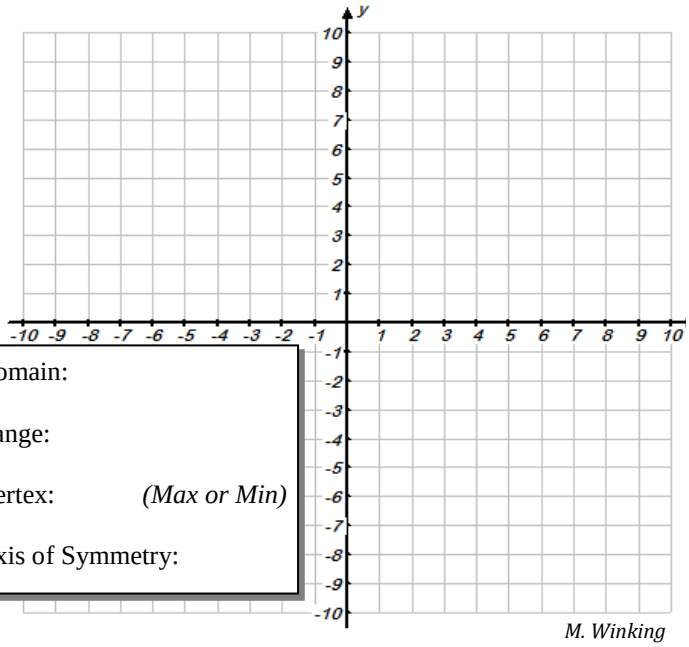
Range:

Vertex: *(Max or Min)*

Axis of Symmetry:

g. $y = -3x^2 + 15x - 10$

h. $y = 2x^2 + 15x + 22$

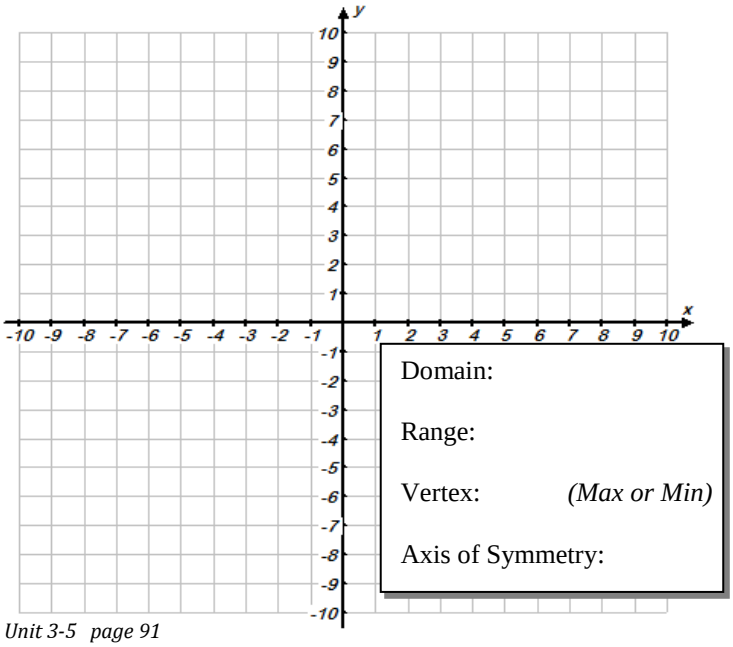


Domain:

Range:

Vertex: *(Max or Min)*

Axis of Symmetry:



Domain:

Range:

Vertex: *(Max or Min)*

Axis of Symmetry: