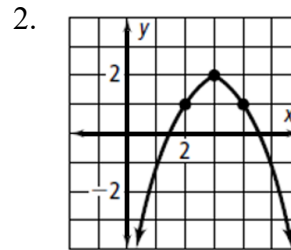
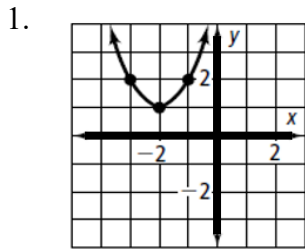


Math 2 Unit 10 Worksheet 1
Quadratic Functions

Name: _____
 Date: _____ Per: _____

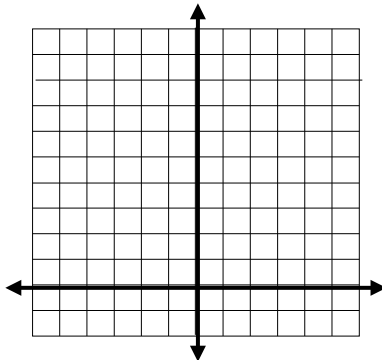
[1-2] Identify the vertex of each parabola. State whether it is a maximum or a minimum.



[3-10] Graph each function. Then identify the vertex, domain, and range of the function.

3. $y = x^2$

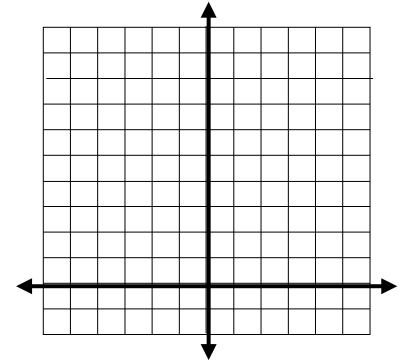
| x | y |
|-----|-----|
| -3 | |
| -2 | |
| -1 | |
| 0 | |
| 1 | |
| 2 | |
| 3 | |



Vertex: _____ Domain: _____
 Range: _____

4. $y = x^2 + 1$

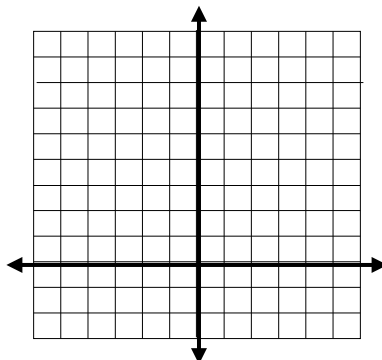
| x | y |
|-----|-----|
| -3 | |
| -2 | |
| -1 | |
| 0 | |
| 1 | |
| 2 | |
| 3 | |



Vertex: _____ Domain: _____
 Range: _____

5. $y = 2x^2$

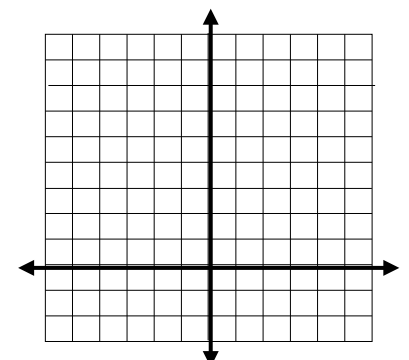
| x | y |
|-----|-----|
| -2 | |
| -1 | |
| 0 | |
| 1 | |
| 2 | |



Vertex: _____ Domain: _____
 Range: _____

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

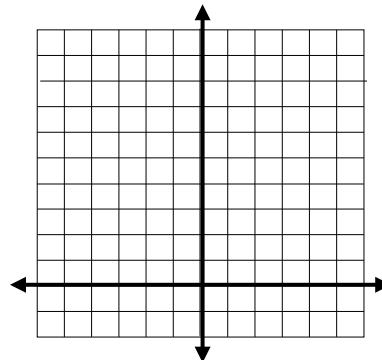
| x | y |
|-----|-----|
| -2 | |
| -1 | |
| 0 | |
| 1 | |
| 2 | |



Vertex: _____ Domain: _____
 Range: _____

7. $y = \frac{1}{2}x^2$

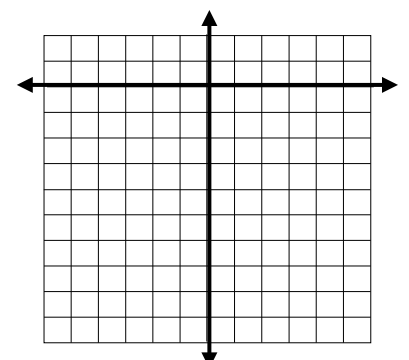
| x | y |
|-----|-----|
| -4 | |
| -2 | |
| 0 | |
| 2 | |
| 4 | |



Vertex: _____ Domain: _____
 Range: _____

8. $y = -\frac{1}{2}x^2$

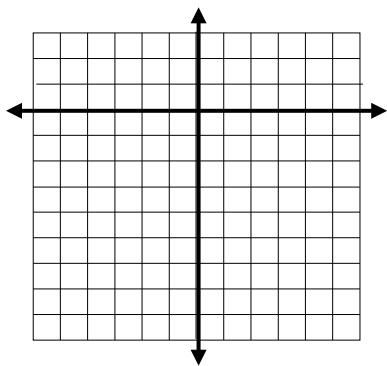
| x | y |
|-----|-----|
| -4 | |
| -2 | |
| 0 | |
| 2 | |
| 4 | |



Vertex: _____ Domain: _____
 Range: _____

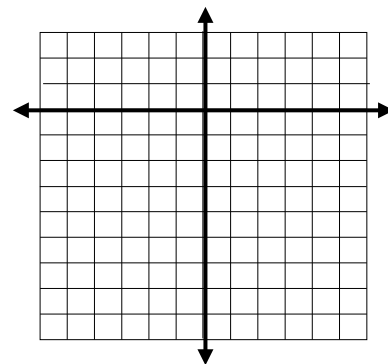
9. $y = -3x^2$

| x | y |
|-----|-----|
| -2 | |
| -1 | |
| 0 | |
| 1 | |
| 2 | |



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

| x | y |
|-----|-----|
| -2 | |
| -1 | |
| 0 | |
| 1 | |
| 2 | |



Vertex: _____ Domain: _____

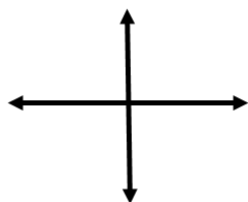
Range: _____

Vertex: _____ Domain: _____

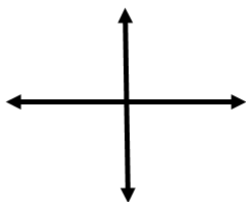
Range: _____

[11-14] Draw a rough sketch of each quadratic function that shows the direction of the graphs opening and the relative width.

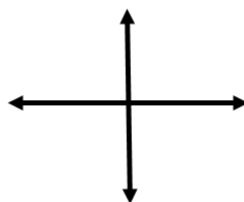
11. $y = x^2$



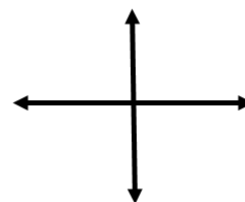
12. $y = -3x^2$



13. $y = -\frac{1}{4}x^2$



14. $y = \frac{7}{3}x^2$



[15-16] Order each group of quadratic functions from widest to narrowest graph.

15. $y = -2x^2$, $y = -4x^2$, $y = -3x^2$

16. $y = \frac{1}{3}x^2$, $y = 3x^2$, $y = \frac{1}{6}x^2$

[17-22] Review: Factor

17. $x^2 + 30x - 64$

18. $x^2 - 14x + 24$

19. $x^2 - 121$

20. $36x^2 - 49$

21. $2x^2 + 11x + 12$

22. $9x^2 - 30x + 25$