

## Final Exam Review #2

Date \_\_\_\_\_ Period \_\_\_\_\_

**Determine if the sequence is arithmetic. If it is, find the common difference and the three terms in the sequence after the last one given.**

1) 1, 4, 9, 16, ...

**Determine if the sequence is geometric. If it is, find the common ratio.**

2) 68, 682, 6822, 68222, ...

**Determine if the sequence is arithmetic. If it is, find the common difference and the three terms in the sequence after the last one given.**

3) -39, -48, -57, -66, ...

4) -25, -35, -45, -55, ...

5) -12, -112, -212, -312, ...

6) 9, 17, 25, 33, ...

**Determine if the sequence is geometric. If it is, find the common ratio and the 8th term.**

7) -2, 10, -50, 250, ...

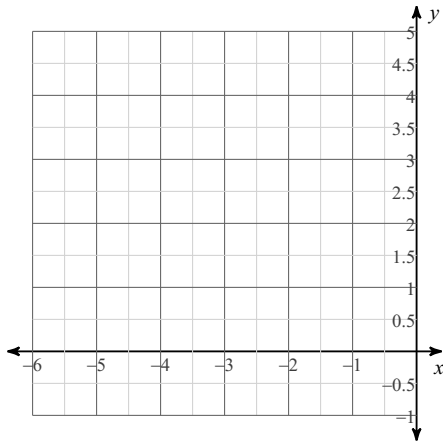
8) 96, 969, 9699, 96999, ...

9) -3, -15, -75, -375, ...

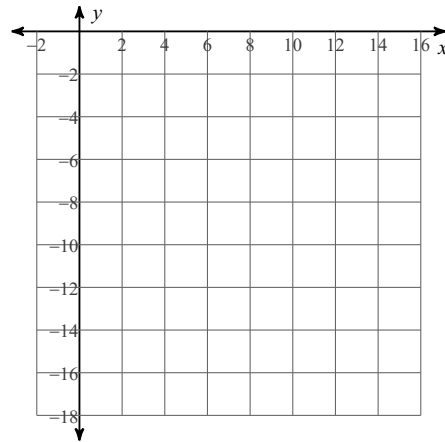
10) 3, -6, 12, -24, ...

Sketch the graph of each function. Give the transformation form from the parent graph  $y = x^2$ .  
Stretch or Shrink, Translated Left or Right, Up or Down.

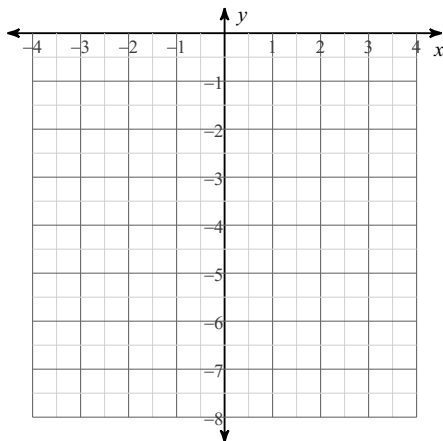
11)  $y = -(x + 3)^2 + 4$



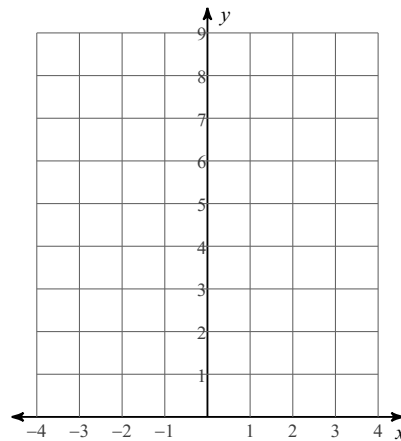
12)  $y = -4(x - 1)^2 - 1$



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

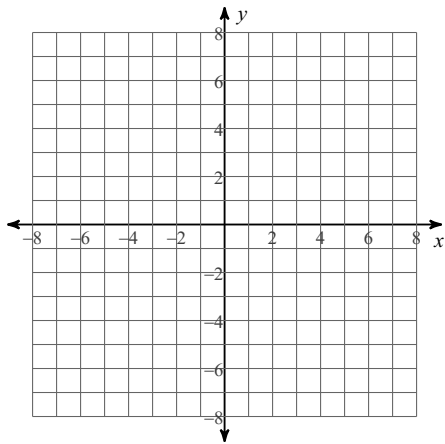


14)  $y = (x + 2)^2 + 4$

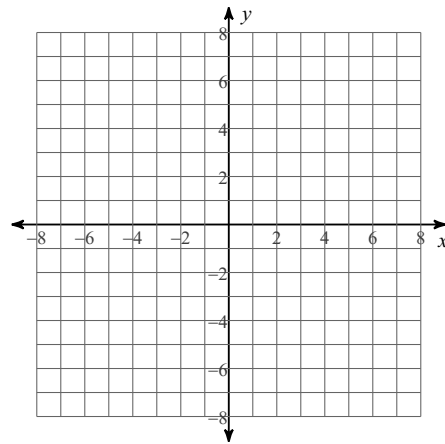


Identify the vertex, direction of opening, and min/max value of each. Then sketch the graph.

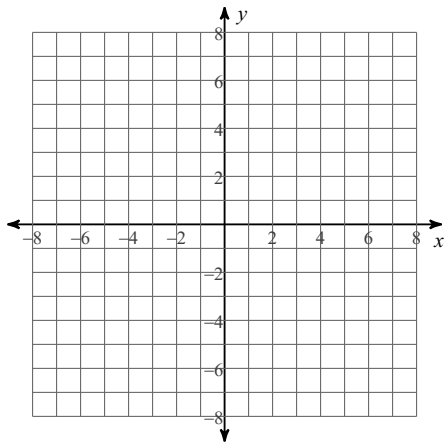
15)  $y = -2(x + 5)^2$



16)  $y = 2(x + 4)^2 - 4$



17)  $y = -(x - 4)^2 + 3$



18)  $y = -\frac{1}{2}(x + 6)^2 + 5$

