

# Vertex Form Worksheet A

Name: \_\_\_\_\_ Hr: \_\_\_\_\_

Vertex form:  $y = a(x - h)^2 + k$

Change the equation from standard form to vertex form. Identify the vertex and axis of symmetry.

1.  $y = x^2 + 4x - 12$

2.  $y = x^2 - 6x + 21$

3.  $y = x^2 - 8x + 4$

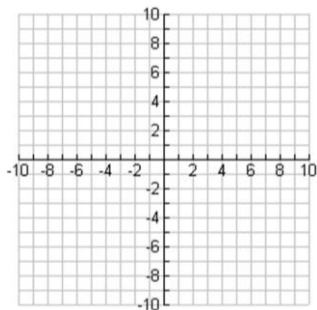
4.  $y = x^2 + 3x - 5$

5.  $y = 2x^2 + 4x - 12$

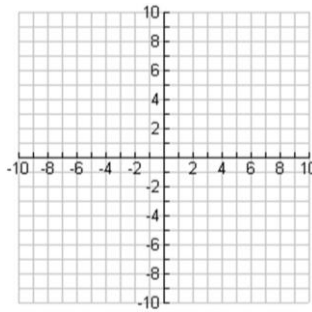
6.  $y = -x^2 - 3x + 18$

Sketch the graph

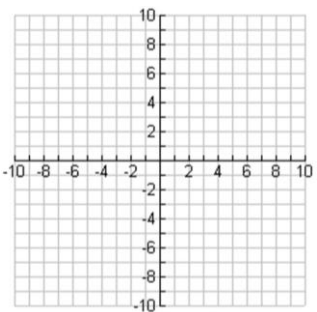
7.  $y = (x - 6)^2 + 3$



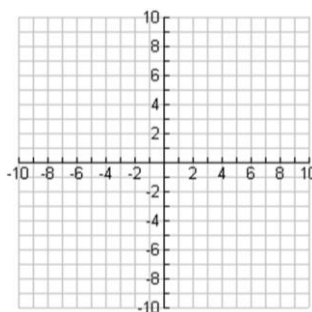
8.  $y = x^2 - 2x - 5$



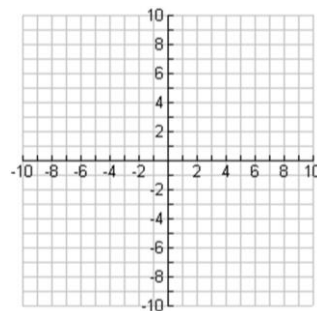
9.  $y = x^2 + 4x$



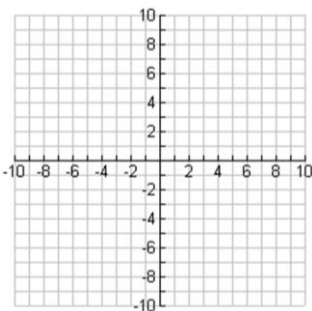
10.  $y = 2(x + 1)^2 - 4$



11.  $f(x) = -3(x + 2)^2 + 5$

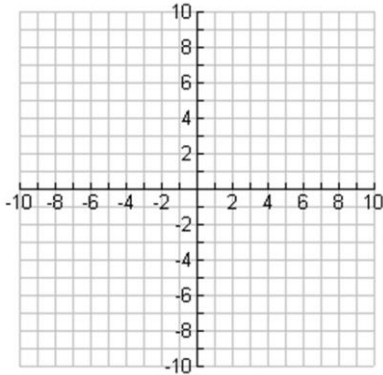


12.  $y = 3x^2 + 6x + 9$



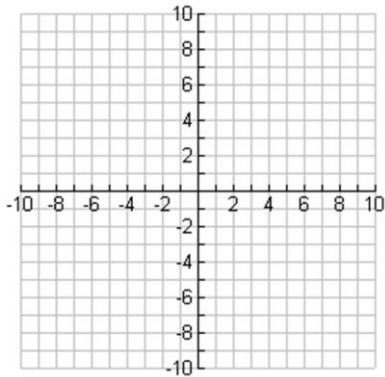
Given the quadratic equations in standard form, find the following and graph:

13.  $y = x^2 + 4x + 5$



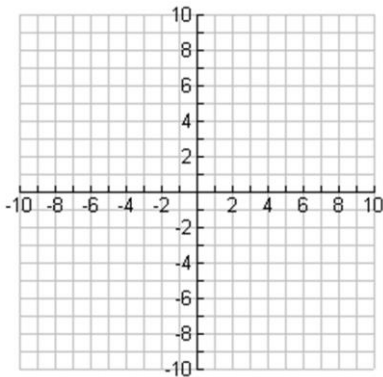
- A) Vertex Form \_\_\_\_\_
- B) Vertex \_\_\_\_\_
- C) Axis of Symmetry \_\_\_\_\_
- D) Max/Min \_\_\_\_\_
- E) y-intercept \_\_\_\_\_

14.  $y = x^2 - 8x + 7$



- A) Vertex Form \_\_\_\_\_
- B) Vertex \_\_\_\_\_
- C) Axis of Symmetry \_\_\_\_\_
- D) Max/Min \_\_\_\_\_
- E) y-intercept \_\_\_\_\_

15.  $y = -2x^2 + 6x + 8$



- A) Vertex Form \_\_\_\_\_
- B) Vertex \_\_\_\_\_
- C) Axis of Symmetry \_\_\_\_\_
- D) Max/Min \_\_\_\_\_
- E) y-intercept \_\_\_\_\_