

Math 2 Unit 11 Worksheet 2
Solving by Completing the Square

Name: _____
Date: _____ **Per:** _____

[1-12] Solve for x by completing the square and square rooting. If no real value of x makes the equation true, write none.

1. $x^2 + 8x - 12 = 0$

2. $x^2 + 12x + 14 = 0$

3. $x^2 - 18x = -57$

4. $x^2 + 6x + 12 = 0$

5. $x^2 - 10x = 26$

6. $x^2 - 20x - 46 = -2$

5. $x^2 + 14x + 47 = 5$

8. $x^2 + 8x + 24 = 0$

9. $x^2 - 16x + 20 = 12$

10. $x^2 + 18x + 27 = -5$

11. $x^2 - 8x + 20 = 0$

12. $x^2 + 2x - 20 = -3$

[13-17] Write the following equations in vertex form and find the vertex, x -intercept(s), y -intercept, and graph for each quadratic function.

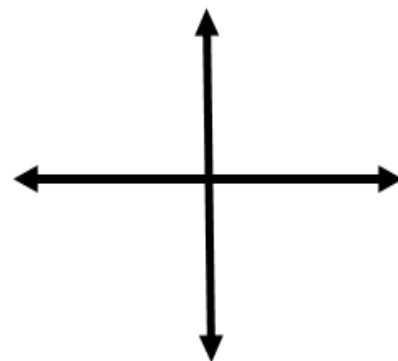
13. $y = x^2 + 2x - 15$

Vertex Form: _____

Vertex: _____

x -intercept(s): _____

y -intercept: _____



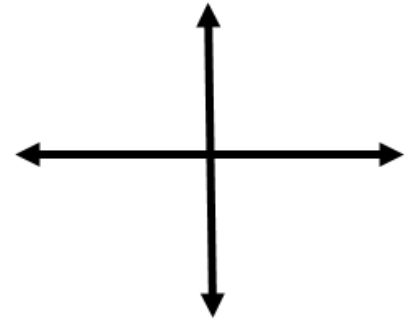
14. $y = x^2 - 12x + 32$

Vertex Form: _____

Vertex: _____

x -intercept(s): _____

y -intercept: _____



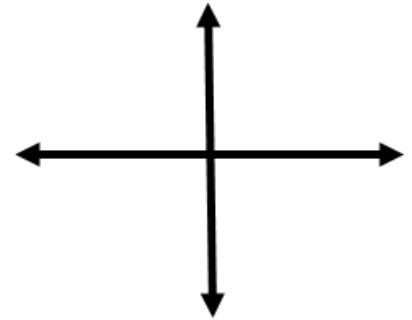
15. $y = x^2 - 2x + 5$

Vertex Form: _____

Vertex: _____

x -intercept(s): _____

y -intercept: _____



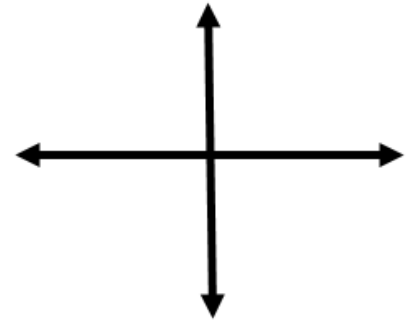
16. $y = x^2 + 6x + 7$

Vertex Form: _____

Vertex: _____

x -intercept(s): _____

y -intercept: _____



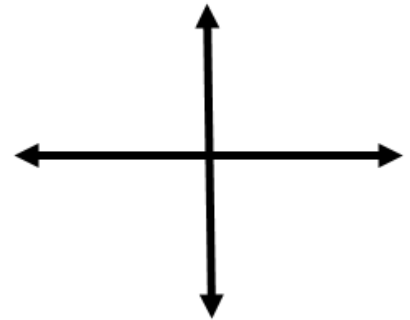
17. $y = x^2 + 4x + 7$

Vertex Form: _____

Vertex: _____

x -intercept(s): _____

y -intercept: _____



18. When a parabola does not cross the x -axis, what happens algebraically when you try to solve for the x -intercept(s)?