**Name:** _____ ***Algebra I Honors***

**Date:** _____ **Bell:** _____ ***Unit 8:*** Quadratic Equations

# **Quiz 8-1:** Graphing Quadratic Equations

***Match the following.***

_____**1.** The standard form of a quadratic equation.

_____**2.** The U-shaped curve created by a quadratic equation.

_____**3.** The vertical line that divides the parabola into two equal parts.

_____**4.** The formula for the axis of symmetry.

_____**5.** The turning point of a parabola.

_____**6.** A vertex that is the highest point.

_____**7.** A vertex that is the lowest point.

_____**8.** The points at which the parabola intersects the x-axis.

_____**9.** Used to determine the number of solutions of a quadratic equation.

_____**10.** The formula for the Discriminant.

**A.** $d = b^2 - 4ac$

**B.** Minimum

**C.** Axis of Symmetry

**D.** $y = ax^2 + bx + c$

**E.** Parabola

**F.** Vertex

**G.** $x = \frac{-b}{2a}$

**H.** Maximum

**I.** Roots

**J.** Discriminant

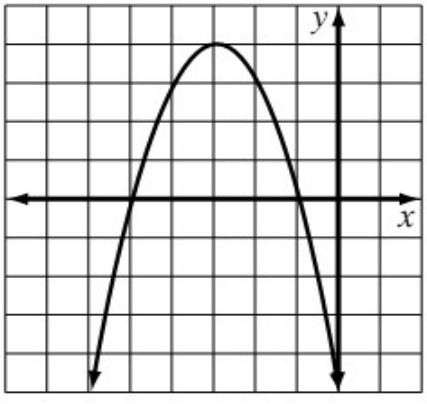
***Find the axis of symmetry and vertex for the following quadratic equations:***

**11.** $y = -x^2 - 2x - 8$ ***Axis of Symmetry*:** _____ ***Vertex*:** _____

**12.** $y = 2x^2 + 6$ ***Axis of Symmetry:*** _____ ***Vertex*:** _____

***Fill in the blanks given the following graphs.***

**13.**




***Axis of Symmetry:*** _____

***Vertex:*** _____

***Domain:*** _____

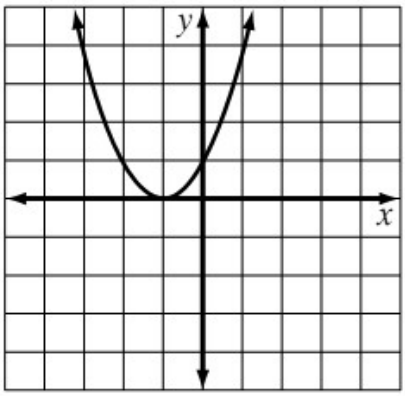
***Range:*** _____

***Zeros:*** _____

***Equation:*** **A.** $y = x^2 + 6x - 5$ **C.** $y = -x^2 + 6x - 5$

**B.** $y = x^2 - 6x - 5$ **D.** $y = -x^2 - 6x - 5$

**14.**




***Axis of Symmetry:*** _____

***Vertex:*** _____

***Domain:*** _____

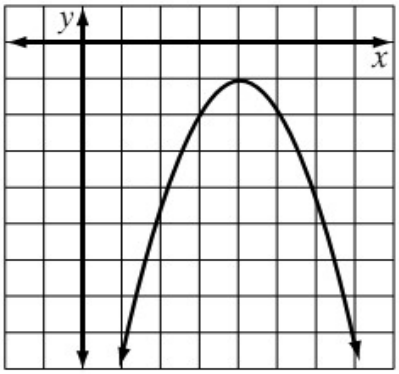
***Range:*** _____

***Zeros:*** _____

***Equation:*** **A.** $y = x^2 + 2x + 1$ **C.** $y = x^2 - 2x + 1$

**B.** $y = -x^2 + 2x + 1$ **D.** $y = -x^2 - 2x + 1$

**15.**




***Axis of Symmetry:*** _____

***Vertex:*** _____

***Domain:*** _____

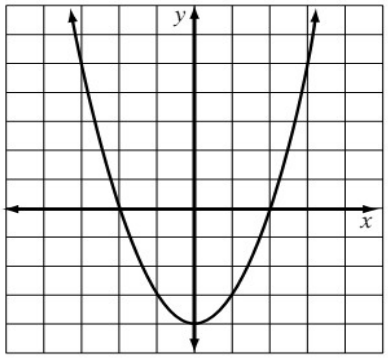
***Range:*** _____

***Zeros:*** _____

***Equation:*** **A.** $y = x^2 + 8x - 17$ **C.** $y = x^2 - 8x - 17$

**B.** $y = -x^2 + 8x - 17$ **D.** $y = -x^2 - 8x - 17$

**16.**




***Axis of Symmetry:*** _____

***Vertex:*** _____

***Domain:*** _____

***Range:*** _____

***Zeros:*** _____

***Equation:*** **A.** $y = x^2 - 4x$ **C.** $y = x^2 + 4x$

**B.** $y = x^2 - 4$ **D.** $y = x^2 + 4$

***Use the Discriminant to determine the number of solutions.***

**17.** $y = x^2 - 10x + 25$

❑ **2**

❑ **1**

❑ ∅

**18.** $y = -3x^2 + 7x + 6$

❑ **2**

❑ **1**

❑ ∅

**19.** $y = -x^2 - 5$

❑ **2**

❑ **1**

❑ ∅

**20.** $y = 2x^2 + 9x$

❑ **2**

❑ **1**

❑ ∅