Goals:

* I can write equations of circles.
* I can graph circles.

**Midpoint Formula:**

**Distance Formula: or**

**Example 1: Find the midpoint of the line segment with endpoints at the given coordinates.**

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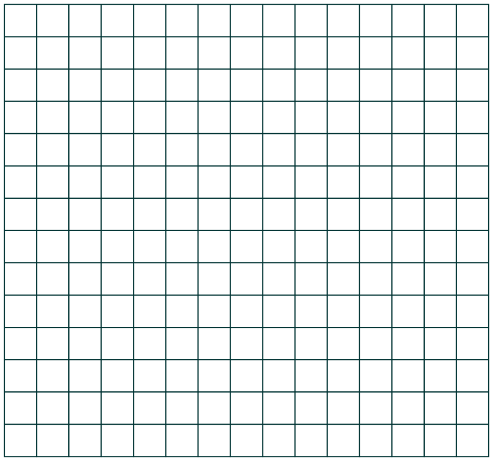
**Example 2: Find the distance between each pair of points with the given coordinates.**

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**Example 3: Write each equation in standard form. Identify the vertex, axis of symmetry, and direction of opening of the parabola.**

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| Standard form: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Vertex:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  AOS: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Direction of opening of the parabola: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

**Example 4: Identify the Center and the Radius**

Center: Graph:

Radius:

**Example 6: Finding Center and Radius with Complex Equations**

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| \_\_\_\_\_\_\_\_\_\_\_\_\_\_ | * Original Equation * Group *x*’s and *y*’s together and constants on the other side. * Complete the square TWO TIMES * Factor each set of parentheses * Simplify the Right side   Center: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Radius: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |