**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Distance Formula and Midpoint Formula**

**Find the distance between each pair of points. Round off to two decimal places.**

**Find the coordinates of the midpoint for each segment joining the points A and B.**

**Read each problem carefully then do as required.**

1. has endpoints at and . How long is ?
2. Segment *XY* has the endpoints at and *Y* is at the origin. What is the length of segment *XY?*
3. The endpoint of the diameter of a circle has coordinates and . What are the coordinates of the center of the circle?
4. Find the center of a circle if the endpoints of its diameter are at points and
5. The coordinates of the endpoints of the diameter of a circle are at points and . What is the length of its diameter?
6. The midpoint of segment AB is at point M. If the coordinates of A are , the coordinates of B are (x,6) and the midpoint M is , what is the value of x?
7. The midpoint of segment *XY* is point *W*. IF the coordinates of Y are and *W* are , find the coordinates of the other endpoint *X*?

**For the figure, find the length of each side then find the perimeter.**

1. ***Triangle***