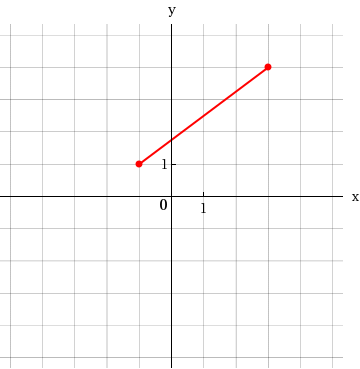
**Section 1.9**

1. A pair of points is graphed. Find the distance between them. Find the midpoint of the segment that joins them.



~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

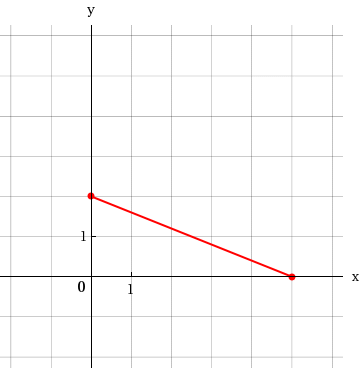
3. Show that the triangle with vertices , and is isosceles.

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

To show that the triangle is isosceles (two sides have equal lengths) we must first find the length of all three sides of the triangle.

Since BC and AC have the same length, then the triangle is isosceles.

2. A pair of points is graphed. Find the distance between them. Find the midpoint of the segment that joins them.



~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

4. Which of the points or is closer to the origin?

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

5. Find the center and radius of the circle. Then sketch its graph.

a.

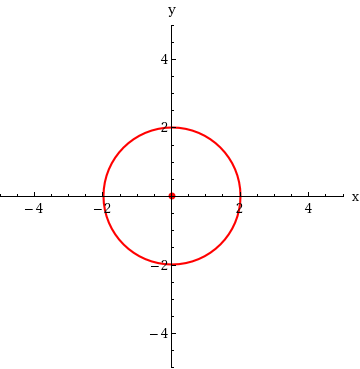
b.

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

a. Center =

Radius

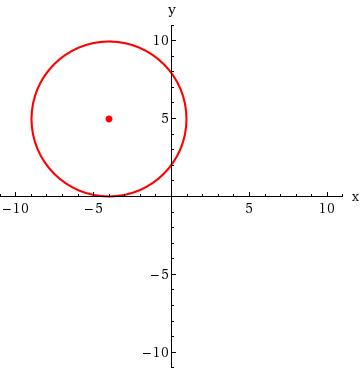
Graph:



b. Center =

Radius

Graph:



7. Find an equation of the circle that satisfies the given conditions.

a. Center ; Radius 4

b. Center ; Passes through

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

a.

b. Radius:

6. Find the center and radius of the circle. Then sketch its graph.

a.

b.

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

8. Find an equation of the circle that satisfies the given conditions.

a. Center ; Radius 6

b. Endpoints of a diameter are P and Q

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

10. Show that the equation represents a circle by rewriting it in standard form. Find the center and radius of the circle.

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

9. Show that the equation represents a circle by rewriting it in standard form. Find the center and radius of the circle.

a.

b.

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

a.

Center =

Radius =

b.

Center =

Radius =