

8.1 & 8.3 WKST

1. What is the standard form of the equation of a circle?
2. Identify the center and radius of the circle. Then sketch the graph. a) $(x-1)^2 + (y+3)^2 = 4$ b) $x^2 + (y+5)^2 = 1$ c) $x^2 + y^2 - 10x - 6y + 25 = 0$ d) $x^2 + y^2 - 2y = 0$
3. Find the standard form of the equation of the circle with the given characteristics. a) Center: $(-3,7)$ Radius: $4\sqrt{2}$ b) Center: $(5,1)$ Point on circle: $(-2,4)$ c) Center: $(2,4)$ Tangent to x -axis d) Center in the second quadrant Tangent to $y = 1$, $y = 5$ and the y -axis
4. Find the distance between the two points. a) $(0,0), (4, 2)$ b) $(-1, -2), (8, 4)$
5. Find the midpoint of the line segment joining the two points. a) $(0,0), (4, 2)$ b) $(-1, -2), (8, 4)$

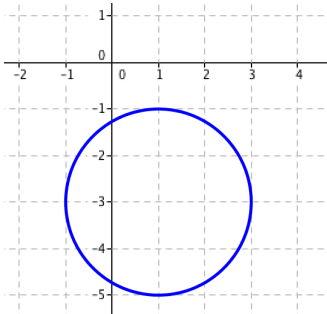
ANSWERS

1. $(x-h)^2 + (y-k)^2 = r^2$

2. gg

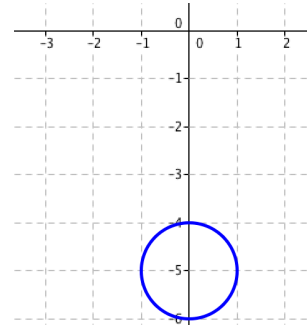
a) Center: $(1, -3)$

Radius: 2



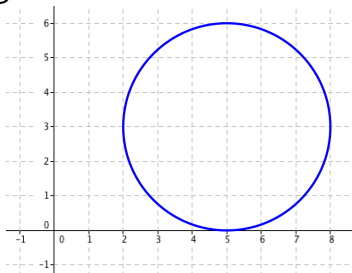
b) Center: $(0, -5)$

Radius: 1



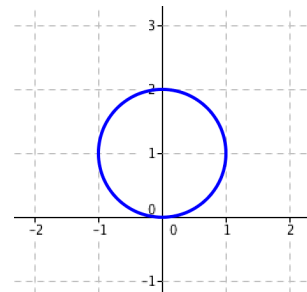
c) Center: $(5, 3)$

Radius: 3



d) Center: $(0, 1)$

Radius: 1



3.

a) $(x+3)^2 + (y-7)^2 = 32$

b) $(x-5)^2 + (y-1)^2 = 58$

c) $(x-2)^2 + (y-4)^2 = 16$

d) $(x+2)^2 + (y-3)^2 = 4$

4.

a) $2\sqrt{5}$

b) $3\sqrt{13}$

5.

a) $(2, 1)$

b) $(3.5, 1)$