Find the center and radius of each of the circles whose equations are given.

1. $x^2 + y^2 - 2y = 0$

2. $x^2 + 2x + y^2 = 0$

3. $x^2 - 2x + y^2 - 6y = 6$

4. $x^2 + 4x + y^2 - 8y + 16 = 0$

Write the equation of each circle whose center and radius are given.

5. C = (0,0) r = 7

6. C = (2, 3) r = 6

7. C = (5, 6) r = 2

8. C = (–3, –4) r = $\sqrt{2}$

Sketch the graph of each of the circles in exercise 5 – 8.

9. Sketch the set of points that are three units from (3, -5). Describe the graph. Find the equation of the graph.

10. Sketch the set of points that are five units from (-4,-7). Describe the graph. Find the equation of the graph.