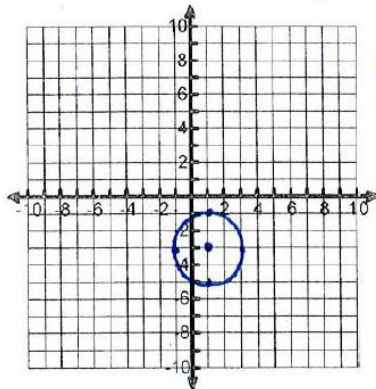


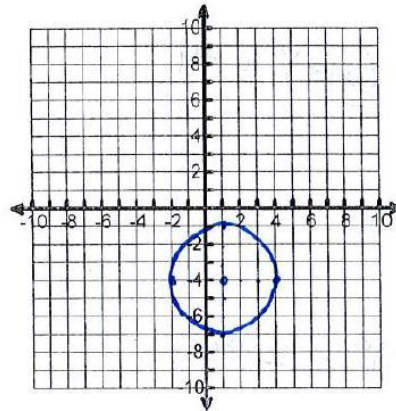
Identify the center and radius of each graph. Then sketch the graph.

1. $(x-1)^2 + (y+3)^2 = 4$



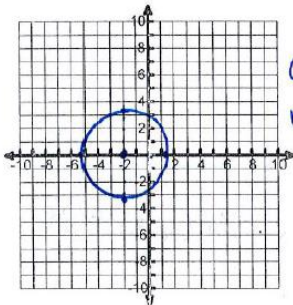
$C = (1, -3)$
 $r = 2$

3. $(x-1)^2 + (y+4)^2 = 9$



$C = (1, -4)$
 $r = 3$

5. $(x+2)^2 + y^2 = 10$



$C = (-2, 0)$
 $r = 3.16$

7. Center (2, -1), radius = 4

$(x-2)^2 + (y+1)^2 = 16$

9. Center (3, -2), and (-1, 1) is a point on the circle

$r = \sqrt{(-1-3)^2 + (1-(-2))^2}$
 $r = \sqrt{16+9}$
 $r = \sqrt{25}$

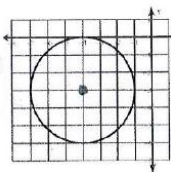
$(x-3)^2 + (y+2)^2 = 25$

11. Center (2, 3) and Area = 25π

$A = 25\pi = \pi r^2$
 $25 = r^2$
 $5 = r$

$(x-2)^2 + (y-3)^2 = 25$

13.



$C = -4, -3$
 $r = 3$

$(x+4)^2 + (y+3)^2 = 9$