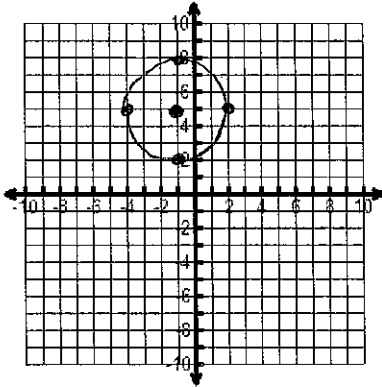


Find the center and radius and draw the graph.

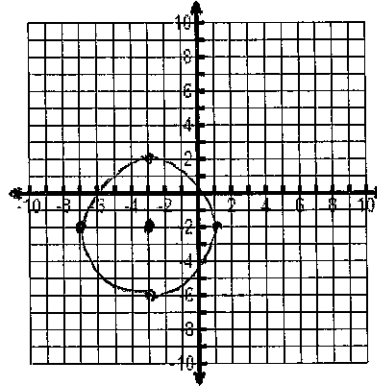
1.  $(x+1)^2 + (y-5)^2 = 9$

Center:  $(-1, 5)$   
Radius: 3



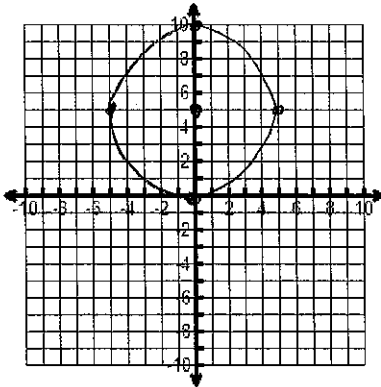
2.  $(x+3)^2 + (y+2)^2 = 16$

Center:  $(-3, -2)$   
Radius: 4



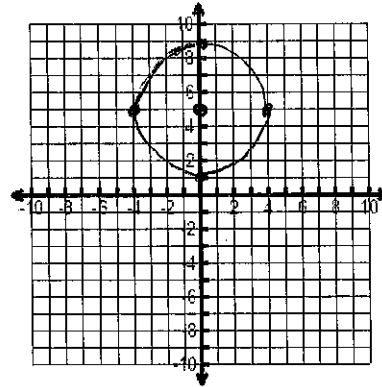
3.  $x^2 + (y-5)^2 = 25$

Center:  $(0, 5)$   
Radius: 5



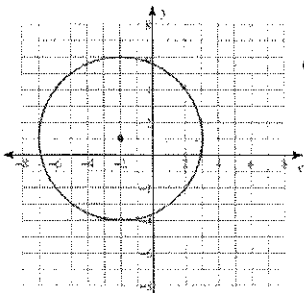
4.  $\frac{3x^2}{3} + \frac{3(y-5)^2}{3} = \frac{48}{3}$

$x^2 + (y-5)^2 = 16$   
Center:  $(0, 5)$   
Radius: 4



Write the equation of the circles based on the given information.

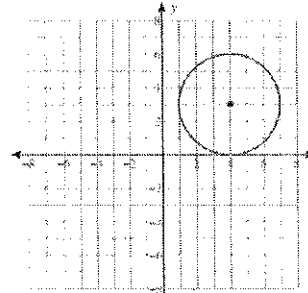
5.



center:  $(-2, 1)$   
radius: 5

Equation:  $(x+2)^2 + (y-1)^2 = 25$

6.



center:  $(4, 3)$   
radius: 3

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

7. Center:  $(-13, -16)$  Point on the Circle:  $(-10, -20)$

$$r = \sqrt{(-10 - (-13))^2 + (-20 - (-16))^2}$$

$$= \sqrt{3^2 + (-4)^2} = 5$$

Equation:  $(x+13)^2 + (y+16)^2 = 25$