

1-3: State the center and the radius of the given circle.

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

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

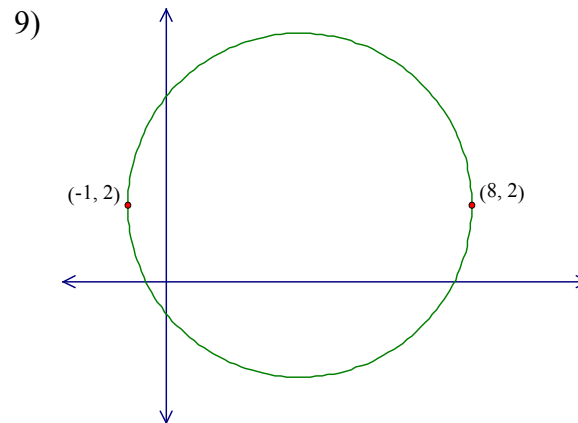
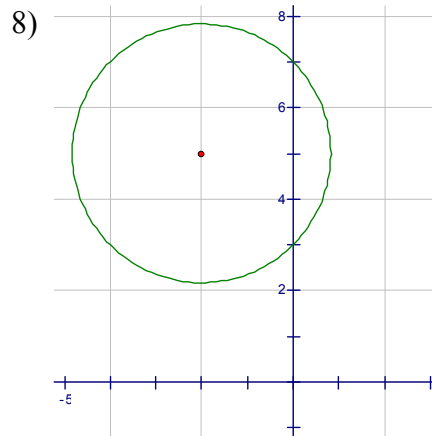
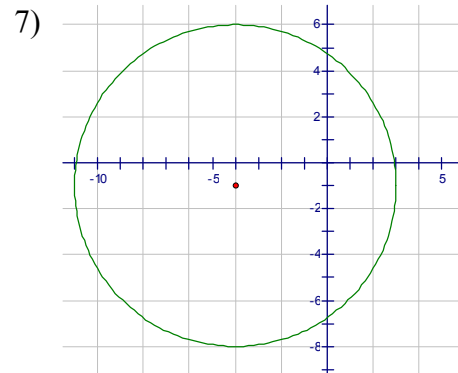
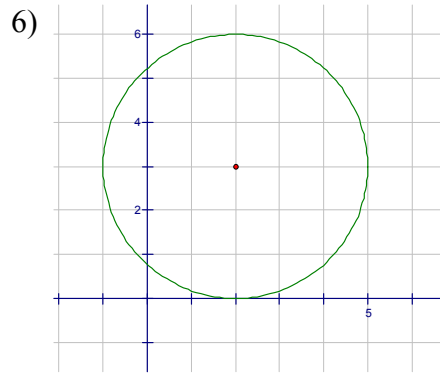
3)  $(x+4)^2 + (y-3)^2 = 12$

4-5: Put the following equations in standard form. State the center and the radius and then graph.

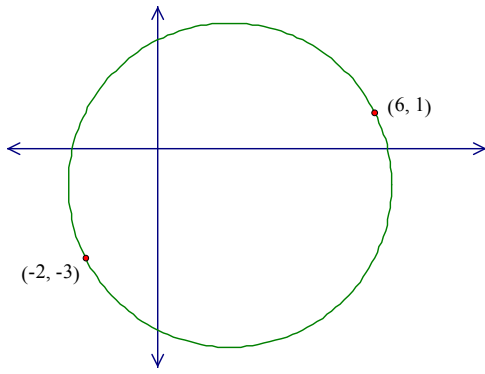
4)  $(x^2 - 6x + 9) + (y^2 + 10y + 25) = 4$

5)  $x^2 - 8x + y^2 + 2y + 11 = 0$

6-10: Find the equation of the circle in standard form.



10)



11-14: Put the following equations in standard form. State the center and the radius.

11)  $x^2 - 5x + y^2 + 4y = -3$

12)  $3y + x^2 + y^2 - 6x + 10 = 0$

13)  $-5 + 2x + 2y + x^2 = -y^2$

14)  $2x^2 - 12x + y^2 + 4y = -2$