

Circles HW Lesson 2

Write an equation of a circle with the given center and radius.

1. $(0, 0), r = 10$

$$x^2 + y^2 = 100$$

2. $(-4, -6), r = 7$

$$(x+5)^2 + (y+6)^2 = 49$$

3. $(2, 3), r = 4$

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

4. $(-6, 5), r = 5$

$$(x+6)^2 + (y-5)^2 = 25$$

Write an equation for each translation.

5. $x^2 + y^2 = 9$; left 2, down 1

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

6. $x^2 + y^2 = 36$; right 4, up 5

$$(x-4)^2 + (y-5)^2 = 36$$

For each equation, find the center and radius of the circle.

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

C: $(1, -1)$

R: 1

8. $(x-3)^2 + (y-1)^2 = 25$

C: $(3, 1)$

R: 5

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

C: $(-2, 10)$

R: 2

10. $x^2 + (y+6)^2 = 121$

C: $(0, -6)$

R: 11

Use the given information to write an equation of the circle.

11. center $(1, -2)$, through $(2, 1)$

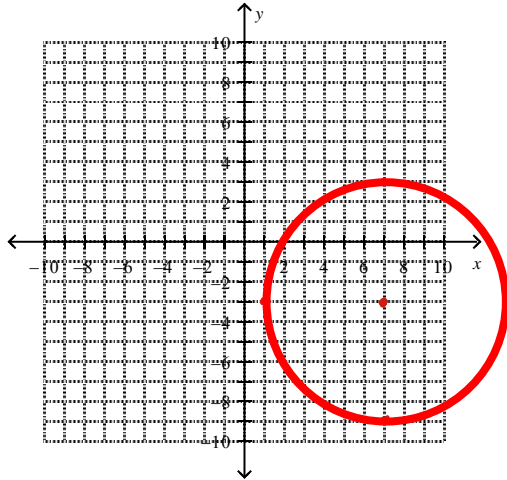
$$(x-1)^2 + (y+2)^2 = 10$$

12. center $(6, 4)$, circumference 6π

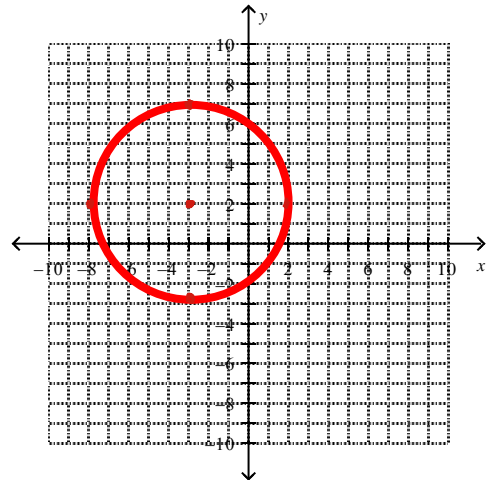
$$(x-6)^2 + (y-4)^2 = 9$$

Sketch the graph of the circle.

13. $(x - 7)^2 + (y + 3)^2 = 36$



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

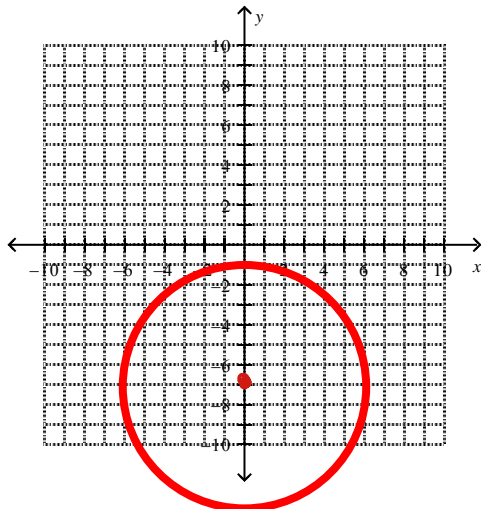


Rewrite the circle in standard form by completing the square. Then identify the center and sketch the graph.

15. $x^2 + y^2 + 14y = -13$

$x^2 + (y+7)^2 = 36$

C: (0, -7)



16. $x^2 + y^2 - 2x + 2y = 7$

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

C: (1, -1)

