

Writing the Center-Radius Form of the Equation of a Circle

Use the information provided to write the standard form equation of each circle.

1) Center: $(2, 2)$
Radius: 11

2) Center: $(0, 12)$
Radius: $4\sqrt{3}$

3) Center: $(1, -1)$
Radius: $3\sqrt{33}$

4) Center: $(-10, -16)$
Radius: 2

5) Center: $(12, 3)$
Radius: 7

6) Center: $(-15, -11)$
Radius: $2\sqrt{3}$

7) Center: $(-12, -14)$
Radius: 2

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

9) Center: $(9, 7)$
Radius: 7

10) Center: $(3, 11)$
Radius: 4

11) Center: $(-16, 4)$
Radius: 1

12) Center: $(14, -12)$
Radius: $\sqrt{3}$

13) Center: $(0, -5)$
Radius: $\sqrt{185}$

14) Center: $(0, 13)$
Radius: $\sqrt{7}$

15) Center: $(-6, -12)$
Radius: 3

16) Center: $(13, -2)$
Radius: 5

17) Center: $(2, -12)$
Radius: 2

18) Center: $\left(\frac{31}{2}, 5\sqrt{10}\right)$
Radius: 1

19) Center: $(-3, 8)$
Radius: 4

20) Center: $(6, -2)$
Radius: 12

Answers to Writing the Center-Radius Form of the Equation of a Circle

- 1) $(x-2)^2 + (y-2)^2 = 121$
- 2) $x^2 + (y-12)^2 = 48$
- 3) $(x-1)^2 + (y+1)^2 = 297$
- 4) $(x+10)^2 + (y+16)^2 = 4$
- 5) $(x-12)^2 + (y-3)^2 = 49$
- 6) $(x+15)^2 + (y+11)^2 = 12$
- 7) $(x+12)^2 + (y+14)^2 = 4$
- 8) $(x-5)^2 + y^2 = 25$
- 9) $(x-9)^2 + (y-7)^2 = 49$
- 10) $(x-3)^2 + (y-11)^2 = 16$
- 11) $(x+16)^2 + (y-4)^2 = 1$
- 12) $(x-14)^2 + (y+12)^2 = 3$
- 13) $x^2 + (y+5)^2 = 185$
- 14) $x^2 + (y-13)^2 = 7$
- 15) $(x+6)^2 + (y+12)^2 = 9$
- 16) $(x-13)^2 + (y+2)^2 = 25$
- 17) $(x-2)^2 + (y+12)^2 = 4$
- 18) $\left(x - \frac{31}{2}\right)^2 + (y - 5\sqrt{10})^2 = 1$
- 19) $(x+3)^2 + (y-8)^2 = 16$
- 20) $(x-6)^2 + (y+2)^2 = 144$