

## Circles: Naming: Parts to Equation and Equation to Parts

Identify the center and radius of each.

1)  $(x - 7)^2 + (y - 5)^2 = 16$

2)  $\left(x - \frac{17}{2}\right)^2 + (y - \sqrt{237})^2 = 1$

3)  $(x + 2)^2 + (y + 1)^2 = 268$

4)  $(x + 14)^2 + (y + 4)^2 = 9$

5)  $(x + 7)^2 + (y - 5)^2 = 99$

6)  $(x + 11)^2 + (y - 3)^2 = 25$

7)  $(x + 6)^2 + (y + 10)^2 = 81$

8)  $(x + 14)^2 + (y - 12)^2 = 9$

9)  $(x - 3)^2 + (y - 5)^2 = 9$

10)  $(x + 6)^2 + (y - 16)^2 = 9$

11)  $(x + 6)^2 + (y - 1)^2 = 36$

12)  $(x - 5)^2 + \left(y + \frac{25}{2}\right)^2 = 25$

13)  $(x + 8)^2 + (y + 10)^2 = 9$

14)  $(x - 2\sqrt{31})^2 + \left(y - \frac{23}{2}\right)^2 = 36$

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

15) Center:  $(-13, -3)$   
Radius: 5

16) Center:  $(0, -2)$   
Radius: 5

17) Center:  $(0, -6)$   
Radius: 6

18) Center:  $(-9, 11)$   
Radius: 5

19) Center:  $(-3, -1)$   
Radius: 4

20) Center:  $(10, 13)$   
Radius:  $\sqrt{7}$

21) Center:  $(11, 6)$   
Radius: 1

22) Center:  $(8, 16)$   
Radius:  $2\sqrt{2}$

23) Center:  $(14, 7)$   
Radius: 3

24) Center:  $(13, 4)$   
Radius: 2

25) Center:  $(-16, 10)$   
Radius:  $\sqrt{7}$

26) Center:  $(-2, 4)$   
Radius: 8

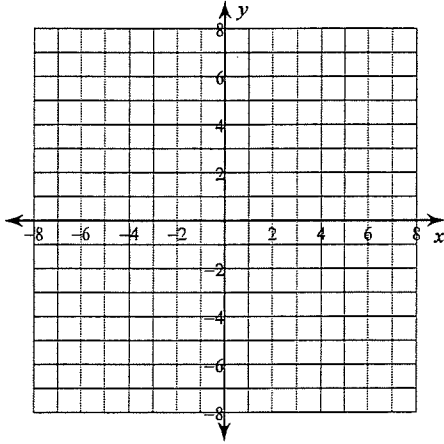
27) Center:  $(15, 13)$   
Radius: 3

28) Center:  $\left(\frac{25}{2}, 4\sqrt{11}\right)$   
Radius:  $\sqrt{14}$

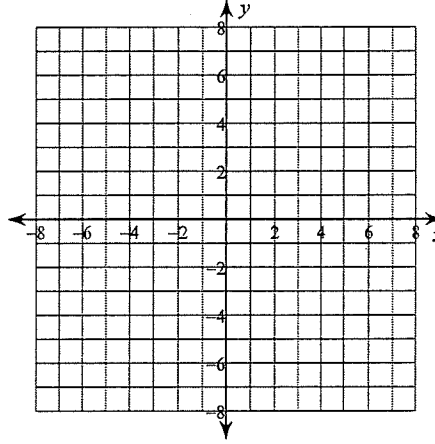
## Circles: Graphing

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

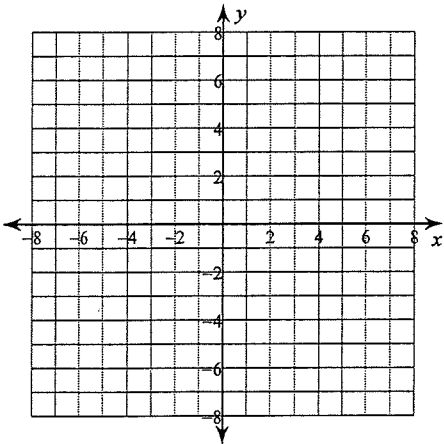
1)  $(x - 1)^2 + (y + 3)^2 = 9$



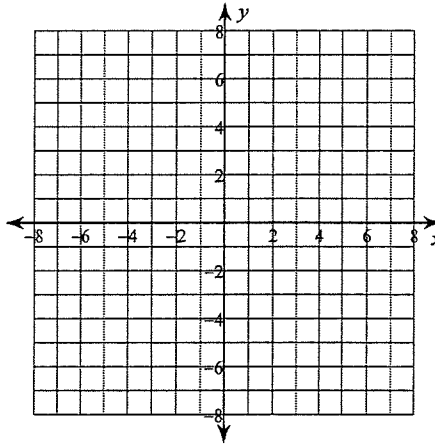
2)  $(x + 4)^2 + y^2 = 1$



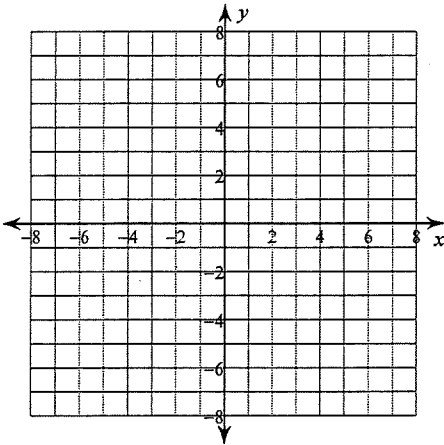
3)  $(x + 4)^2 + (y - 1)^2 = 4$



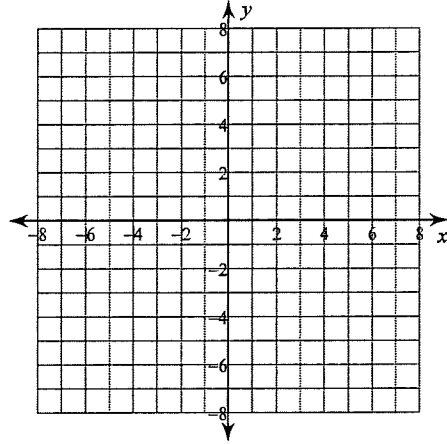
4)  $(x - 2)^2 + (y - 4)^2 = 8$



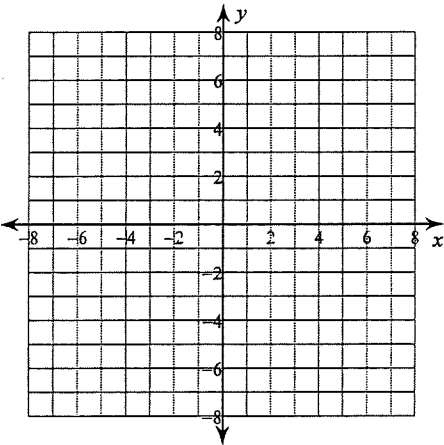
$$5) (x+2)^2 + (y+3)^2 = 9$$



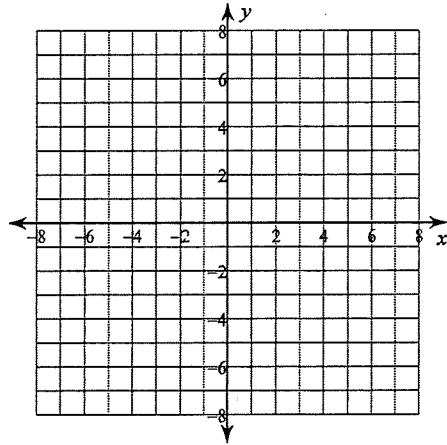
$$6) \left(x + \frac{5}{2}\right)^2 + \left(y - \frac{3}{2}\right)^2 = 9$$



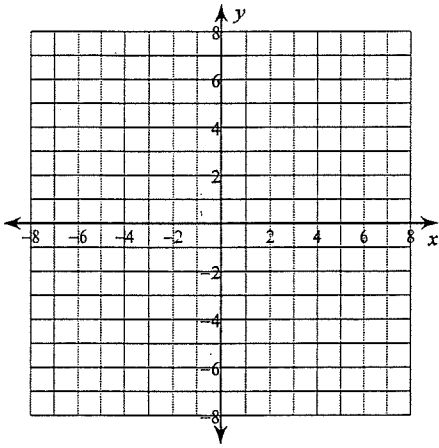
$$7) (x-3)^2 + (y-1)^2 = 4$$



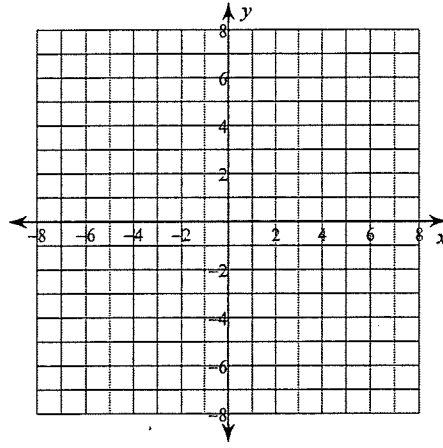
$$8) (x-4)^2 + (y+1)^2 = 6$$



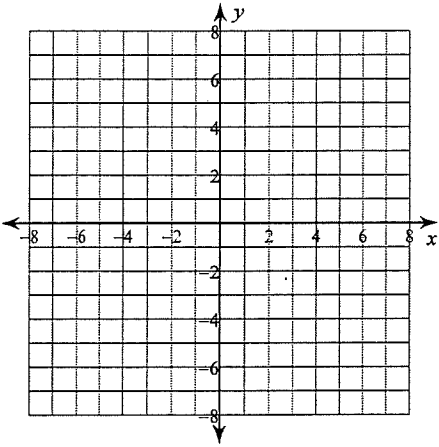
$$9) (x - 3)^2 + (y - 2)^2 = 9$$



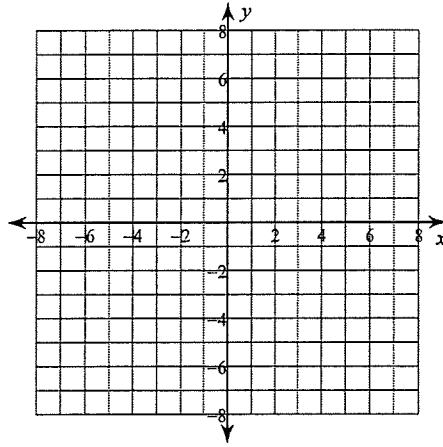
$$10) (x + 3)^2 + (y - 3)^2 = 14$$



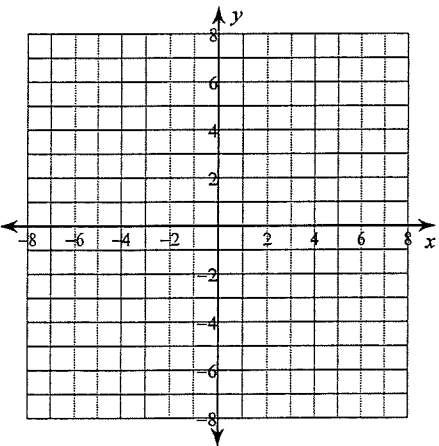
$$11) (x - 1)^2 + (y - \sqrt{6})^2 = 2$$



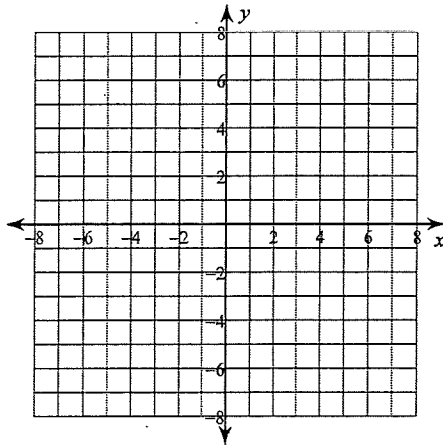
$$12) (x - 3)^2 + y^2 = 8$$



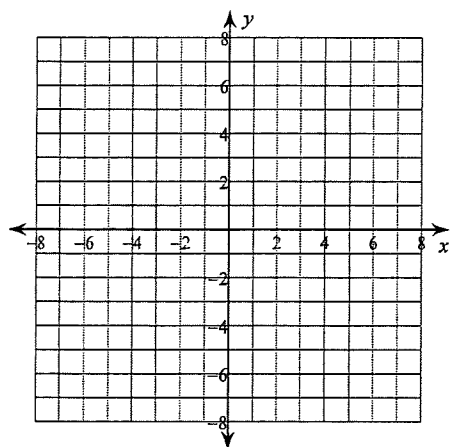
$$13) x^2 + (y - 4)^2 = 9$$



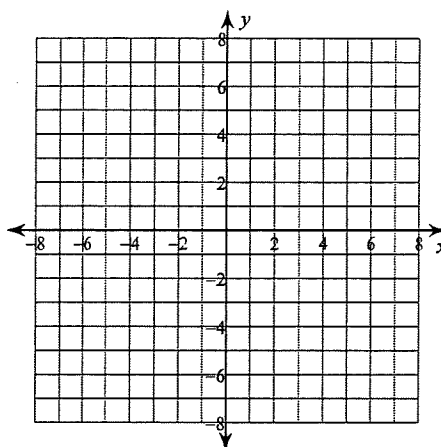
$$14) (x - 1)^2 + (y - 2)^2 = 23$$



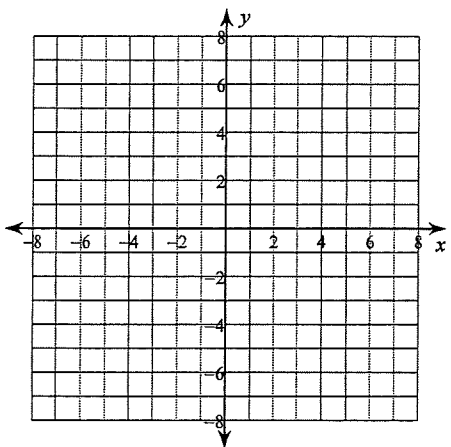
$$15) (x + 4)^2 + (y - 3)^2 = 3$$



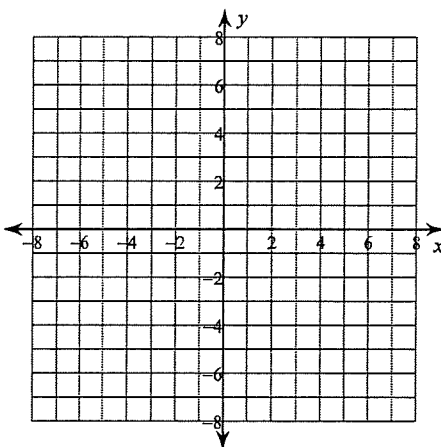
$$16) (x + 1)^2 + (y + 2)^2 = 16$$



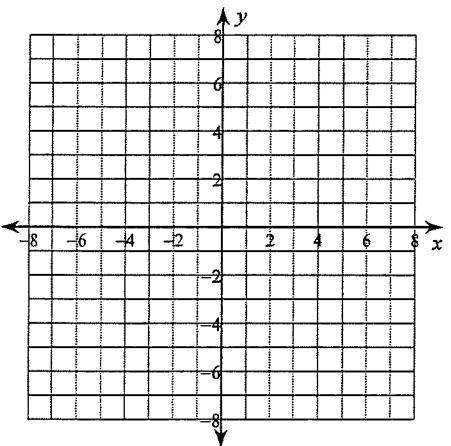
$$17) (x + 3)^2 + (y + 3)^2 = 4$$



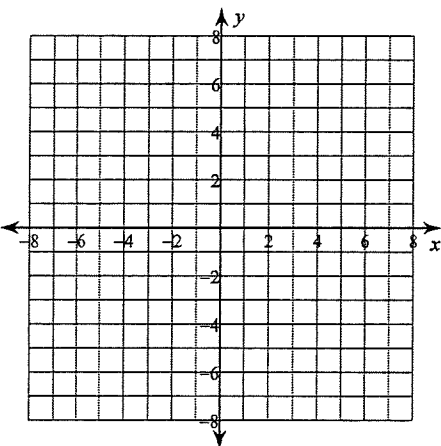
$$18) (x - 4)^2 + (y - 3)^2 = 1$$



$$19) (x + 3)^2 + (y + 4)^2 = 8$$



$$20) (x + 3)^2 + (y - 4)^2 = 2$$



## Standard to Conic: Writing the Circle Formulas

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

1)  $(x - 16)^2 + (y + 13)^2 = 9$

2)  $(x + 14)^2 + (y - 15)^2 = 1$

3)  $(x + 14)^2 + (y + 8)^2 = 25$

4)  $(x + 1)^2 + (y + 10)^2 = 49$

5)  $(x + 8)^2 + (y + 10)^2 = 25$

6)  $(x + 1)^2 + (y + 15)^2 = 1$

$$7) x^2 + (y - 13)^2 = 4$$

$$8) (x - 14)^2 + (y + 3)^2 = 4$$

$$9) (x + 7)^2 + (y + 14)^2 = 7$$

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

$$11) (x - 13)^2 + (y + 8)^2 = 25$$

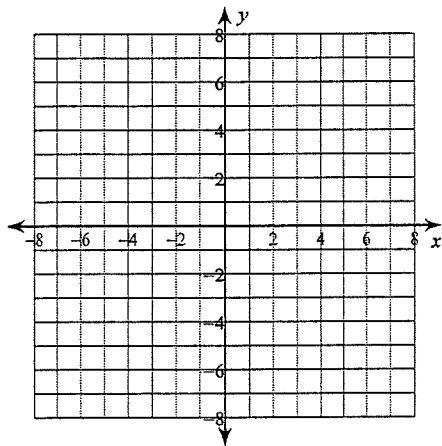
$$12) (x + 5)^2 + (y + 7)^2 = 36$$



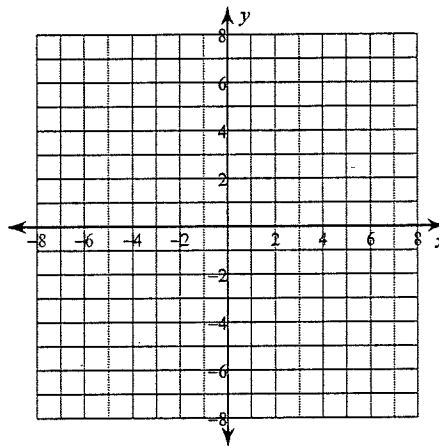
## Circle Review

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

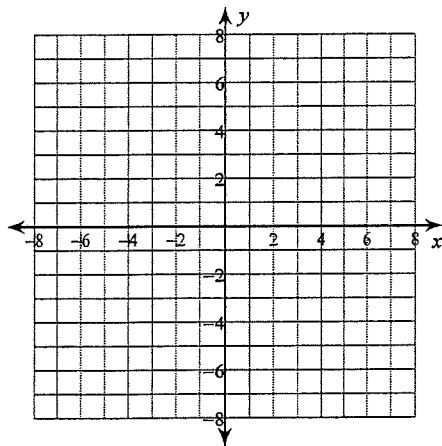
1)  $(x + 2)^2 + (y - 1)^2 = 16$



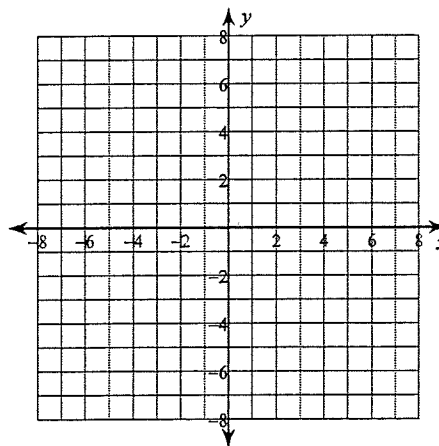
2)  $x^2 + (y - 4)^2 = 1$



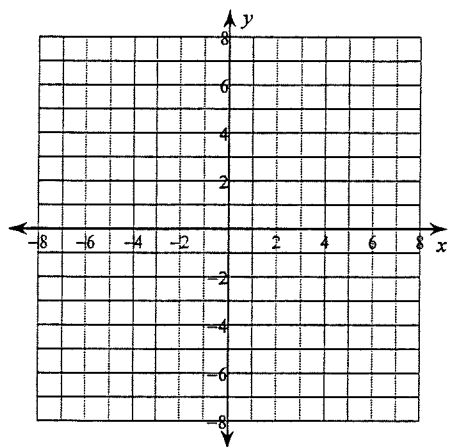
3)  $(x - 2)^2 + (y - 3)^2 = 11$



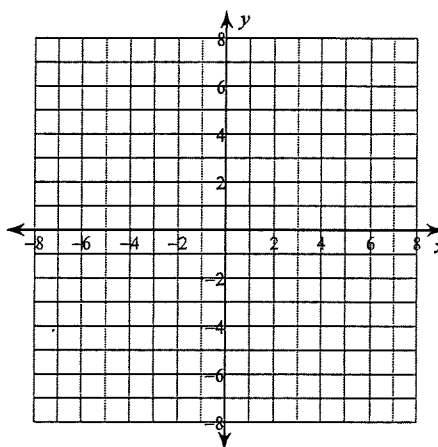
4)  $(x - \sqrt{11})^2 + (y + 2)^2 = 4$



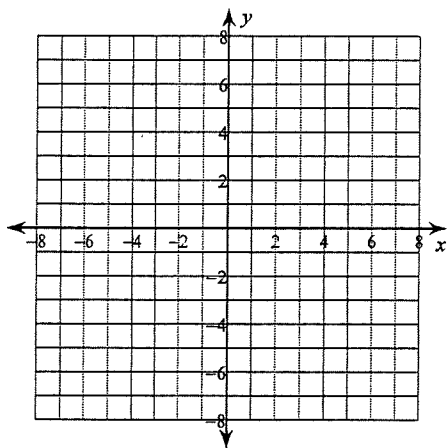
$$5) x^2 + (y - 2)^2 = 13$$



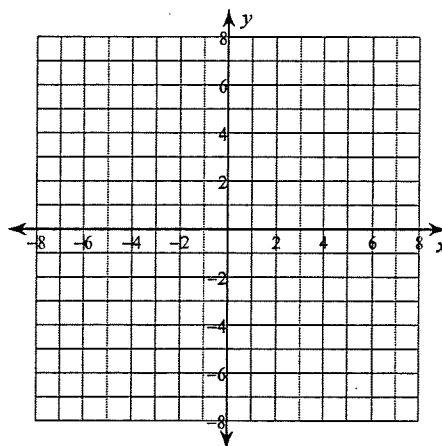
$$6) (x - 4)^2 + (y - 3)^2 = 4$$



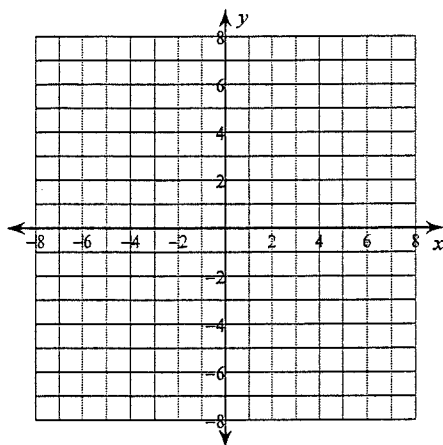
$$7) \left(x - \frac{7}{2}\right)^2 + (y - \sqrt{2})^2 = 9$$



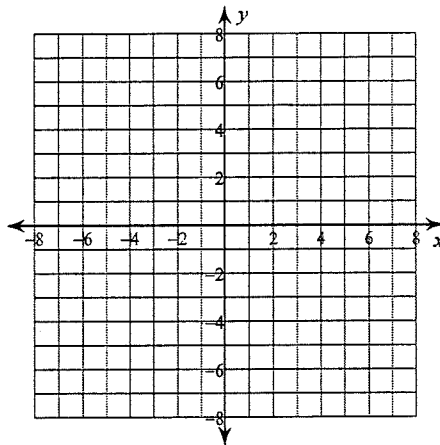
$$8) (x + 3)^2 + (y + 3)^2 = 4$$



9)  $(x + 3)^2 + (y + 2)^2 = 11$



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



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

11) Center:  $(-13, 11)$   
Radius: 4

12) Center:  $(2, 15)$   
Radius: 2

13) Center:  $(-13, -10)$   
Radius: 2

14) Center:  $(-14, 3)$   
Radius: 3

15) Center:  $(9, 11)$   
Radius: 4

16) Center:  $(13, -6)$   
Radius: 5

17) Center:  $(12, 3)$   
Radius: 4

18) Center:  $(-1, 9)$   
Radius: 6

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

20) Center:  $(-15, 4)$   
Radius: 3

**Use the information provided to write the general conic form equation of each circle.**

21)  $(x + 9)^2 + (y + 14)^2 = 25$

22)  $(x + 12)^2 + (y - 13)^2 = 2$

23)  $(x - 5)^2 + (y - 15)^2 = 1$

24)  $(x + 4)^2 + (y - 12)^2 = 9$

25)  $x^2 + y^2 = 144$

26)  $(x - 3)^2 + (y - 1)^2 = 154$

27)  $(x + 9)^2 + (y + 3)^2 = 25$

28)  $(x - 12)^2 + (y + 9)^2 = 10$

29)  $(x - 2)^2 + (y + 13)^2 = 12$

30)  $(x + 6)^2 + (y - 8)^2 = 117$