

### 5B-4 Changing Standard to General

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

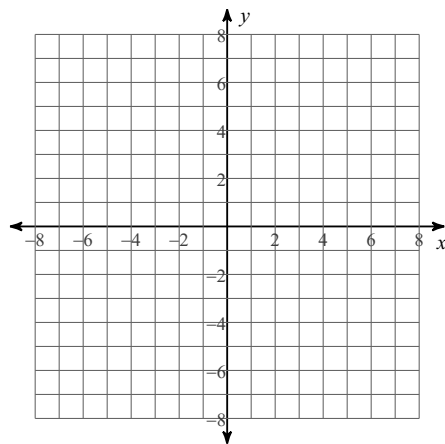
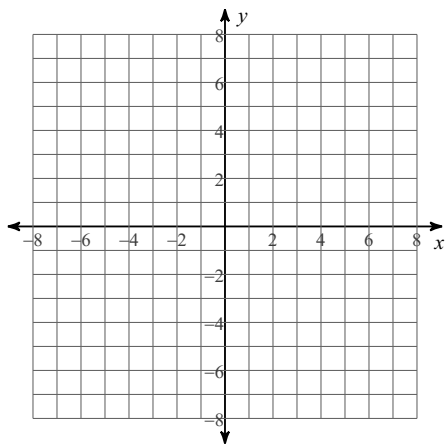
1)  $(x + 6)^2 + (y - 6)^2 = 144$

2)  $(x + 1)^2 + (y + 12)^2 = 36$

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

3)  $(x + 1)^2 + (y + 1)^2 = 36$

4)  $x^2 + y^2 = 16$



Write the equation in standard form. State CENTER and RADIUS.

5)  $x^2 + y^2 - 6x - 2y - 6 = 0$

6)  $x^2 + y^2 + 6x - 8y + 18 = 0$

$$7) x^2 + y^2 - 6x + 5 = 0$$

$$8) x^2 + y^2 - 2x + 4y - 20 = 0$$

$$9) x^2 + y^2 + 8x + 8y + 23 = 0$$

$$10) x^2 + y^2 + 8x - 8y + 26 = 0$$

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

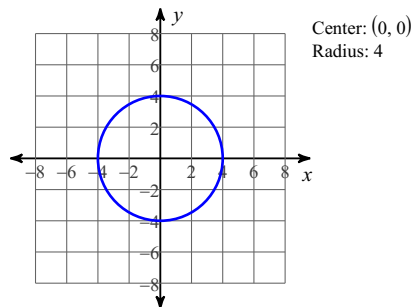
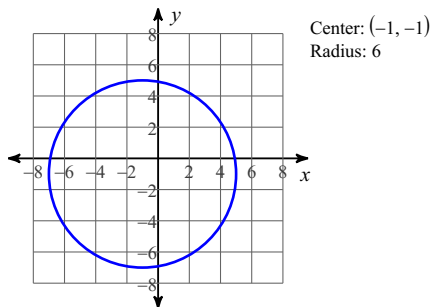
$$11) x^2 + y^2 + 28x - 28y + 367 = 0$$

$$12) x^2 + y^2 - 14x + 28y + 236 = 0$$

## Answers to 5B-4 Changing Standard to General

1)  $x^2 + y^2 + 12x - 12y - 72 = 0$       2)  $x^2 + y^2 + 2x + 24y + 109 = 0$

3)      4)



5)  $(x - 3)^2 + (y - 1)^2 = 16$

Center: (3, 1)

Radius: 4

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

Center: (1, -2)

Radius: 5

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

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

Center: (-3, 4)

Radius:  $\sqrt{7}$

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

Center: (-4, -4)

Radius: 3

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

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

Center: (3, 0)

Radius: 2

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

Center: (-4, 4)

Radius:  $\sqrt{6}$