

## 6.9 - Changing Forms of Circle Equations

Date \_\_\_\_\_

**Write the standard form of each circle equation. State the center and radius.**

1)  $x^2 + y^2 + 8y - 128 = 0$

2)  $x^2 + y^2 - 14x + 16y + 88 = 0$

3)  $x^2 + y^2 - 26x + 6y + 163 = 0$

4)  $x^2 + y^2 - 28x + 2y + 193 = 0$

5)  $x^2 + y^2 + 24x + 133 = 0$

6)  $x^2 + y^2 - 18x + 24y + 182 = 0$

7)  $x^2 + y^2 + 16x - 28y + 259 = 0$

8)  $x^2 + y^2 + 26x + 18y + 219 = 0$

**Write the general form of each circle equation.**

9)  $(x + 10)^2 + (y - 4)^2 = 46$

10) Center:  $(-10, -15)$   
Radius: 3

11) Center:  $(13, -8)$   
Area:  $\pi$

12) Center:  $(-4, 2)$   
Circumference:  $14\pi$

13) Center:  $(11, 0)$   
Point on Circle:  $(3, 0)$

14) Center:  $(15, 13)$   
Point on Circle:  $(19, 13)$

15) Center:  $(-5, 9)$   
Point on Circle:  $(-7, 11)$

16) Center:  $(-11, 11)$   
Point on Circle:  $(-15, 17)$

17) Ends of a diameter:  $(-9, 5)$  and  $(1, 1)$

18) Ends of a diameter:  $(6, 8)$  and  $(16, 6)$

19) Ends of a diameter:  $(19, 5)$  and  $(-5, 1)$

20) Ends of a diameter:  $(11, -5)$  and  $(11, -7)$