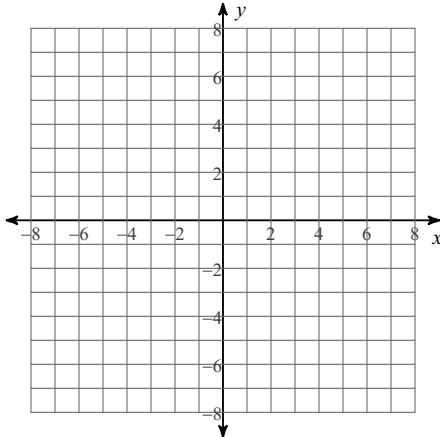


## SM2 HW #8-1 (circles)

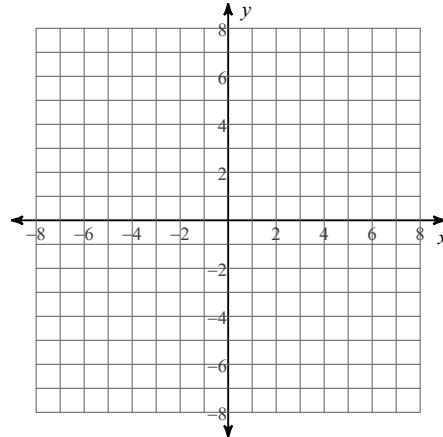
Date \_\_\_\_\_ Period \_\_\_\_\_

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

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



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

**Identify the center and radius of each.**

3)  $(x - 1)^2 + (y - 9)^2 = 4$

4)  $(x - 12)^2 + (y + 16)^2 = 6$

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

6)  $(x + 8)^2 + (y + 10)^2 = 70$

7)  $(x - 15)^2 + (y - 5)^2 = 13$

8)  $(x + 6)^2 + (y - 12)^2 = 16$

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

9) Center:  $(-2, -12)$   
Radius: 4

10) Center:  $(-14, 14)$   
Radius: 2

11) Center:  $(9, -5)$   
Radius: 3

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

13) Center:  $(0, 9)$   
Radius:  $\sqrt{95}$

14) Center:  $(12, 16)$   
Radius: 3

**Identify the center and radius of each.**

15) Hint: complete the square for the "x" part then the "y" part  
 $x^2 + y^2 - 10x - 6y + 25 = 0$

16) Hint: complete the square for the "x" part then the "y" part  
 $x^2 + y^2 - 12x + 10y = 25$

17) Prove that the point (6, -5) is on the circle:  
 $(x - 4)^2 + (y + 1)^2 = 20$

18) Prove that the point (-8, -1) is on the circle:  
 $(x + 6)^2 + (y - 5)^2 = 40$

**Write each expression in exponential form.**

19)  $(\sqrt[5]{2x})^4$

**Write each expression in radical form.**

20)  $(6m)^{\frac{2}{3}}$

**Simplify.**

21)  $\sqrt[3]{375x^5y^6}$

22)  $\sqrt{3}(\sqrt{10} + \sqrt{6})$