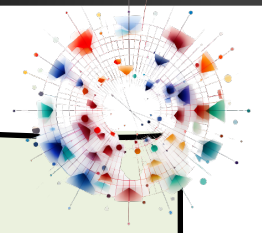


Name: _____

Standard Equation of a Circle



Equation of a Circle

$$(x - h)^2 + (y - k)^2 = r^2$$

Where (h,k) are the coordinates of the center point and r is the radius.

Part I: Identify the coordinates of the center point and the length of the radius of each circle.

1.) $(x + 7)^2 + (y - 9)^2 = 49$

2.) $(x - 12)^2 + (y + 4)^2 = 121$

3.) $x^2 + (y - 5)^2 = 64$

4.) $(x - 1)^2 + (y + 1)^2 = 100$

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

6.) $x^2 + y^2 = 256$

7.) $(x + 6)^2 + (y - 9)^2 = 144$

8.) $(x + 11)^2 + y^2 = 169$

Part II: Write the standard equation for each circle given it's radius and center point.

9.) $r = 3$, center: $(-3, -4)$

10.) $r = 6$, center: $(-2, 12)$

11.) $r = 20$, center: $(9, 0)$

12.) $r = 5$, center: $(7, 8)$

13.) $r = 14$, center: $(0, -6)$

14.) $r = 15$, center: $(1, -1)$

15.) $r = 4$, center: $(13, -3)$

16.) $r = 12$, center: $(-14, 0)$

ANSWER KEY

Part I: Identify the coordinates of the center point and the length of the radius of each circle.

1.) $(x + 7)^2 + (y - 9)^2 = 49$
 $r = 7$, center: $(-7, 9)$

2.) $(x - 12)^2 + (y + 4)^2 = 121$
 $r = 11$, center: $(12, -4)$

3.) $x^2 + (y - 5)^2 = 64$
 $r = 8$, center: $(0, 5)$

4.) $(x - 1)^2 + (y + 1)^2 = 100$
 $r = 10$, center: $(1, -1)$

5.) $(x - 16)^2 + (y - 16)^2 = 16$
 $r = 4$, center: $(16, 16)$

6.) $x^2 + y^2 = 256$
 $r = 16$, center: $(0, 0)$

7.) $(x + 6)^2 + (y - 9)^2 = 144$
 $r = 12$, center: $(-6, 9)$

8.) $(x + 11)^2 + y^2 = 169$
 $r = 13$, center: $(-11, 0)$

Part II: Write the standard equation for each circle given it's radius and center point.

9.) $r = 3$, center: $(-3, -4)$
 $(x + 3)^2 + (y + 4)^2 = 9$

10.) $r = 6$, center: $(-2, 12)$
 $(x + 2)^2 + (y - 12)^2 = 36$

11.) $r = 20$, center: $(9, 0)$
 $(x - 9)^2 + y^2 = 400$

12.) $r = 5$, center: $(7, 8)$
 $(x - 7)^2 + (y - 8)^2 = 25$

13.) $r = 14$, center: $(0, -6)$
 $x^2 + (y + 6)^2 = 196$

14.) $r = 15$, center: $(1, -1)$
 $(x - 1)^2 + (y + 1)^2 = 225$

15.) $r = 4$, center: $(13, -3)$
 $(x - 13)^2 + (y + 3)^2 = 16$

16.) $r = 12$, center: $(-14, 0)$
 $(x + 14)^2 + y^2 = 144$