

Intro Precalculus: 8.1 Circles Homework

Name Key

#1 – 5: Write the standard form of the equation of the circle.

1) Center (0, 0), $r = 7$

$x^2 + y^2 = 49$

2) Center (3, 2), $r = 5$

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

3) Center (-1, 4), $r = 2$

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

4) Center (-3, -1), $r = \sqrt{3}$

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

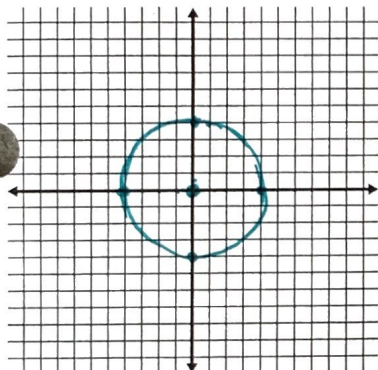
5) Center (-4, 0), $r = 10$

$(x+4)^2 + y^2 = 100$

#6 – 11: Give the center & radius, then graph.

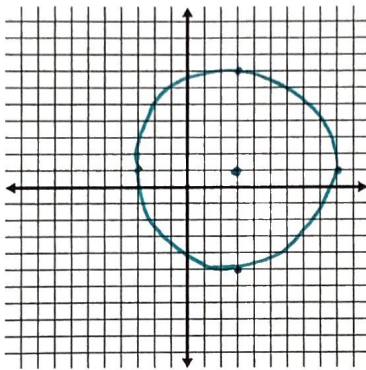
6) $x^2 + y^2 = 16$

Center: (0, 0) $r = 4$



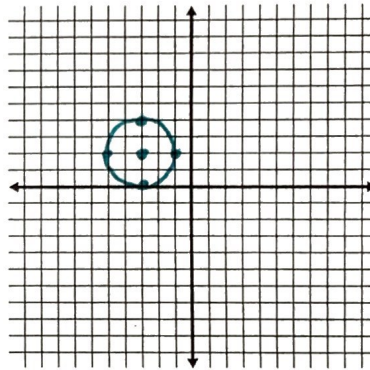
7) $(x-3)^2 + (y-1)^2 = 36$

Center: (3, 1) $r = 6$



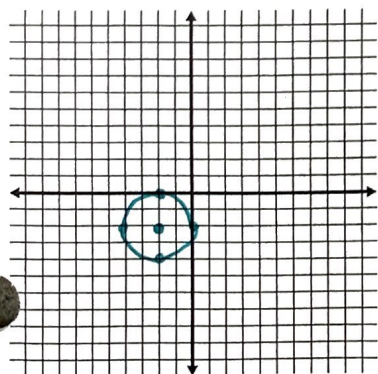
8) $(x+3)^2 + (y-2)^2 = 4$

Center: (-3, 2) $r = 2$



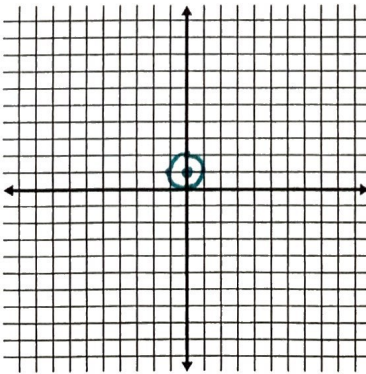
9) $(x+2)^2 + (y+2)^2 = 4$

Center: (-2, -2) $r = 2$



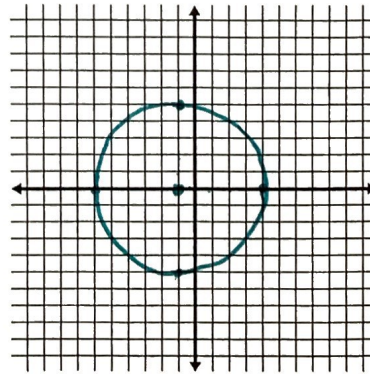
10) $x^2 + (y-1)^2 = 1$

Center: (0, 1) $r = 1$



11) $(x+1)^2 + y^2 = 25$

Center: (-1, 0) $r = 5$



#12 – 15: Complete the square and write the equation in standard form. Also, identify the center and radius.

12) $x^2 + y^2 + 6x + 2y + 6 = 0$

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

Center: $(-3, -1)$

Radius: 2

13) $x^2 + y^2 - 10x - 6y - 30 = 0$

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

Center: $(5, 3)$

radius: 8

14) $x^2 + y^2 + 8x - 2y - 8 = 0$

$$(x+4)^2 + (y-1)^2 = 25$$

center: $(-4, 1)$

radius: 5

15) $x^2 - 2x + y^2 - 15 = 0$

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

center: $(1, 0)$

radius: 4