

Circles

Date _____ Period _____

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

1) Center: $(4, -7)$

Point on Circle: $(16, -7)$

2) Center: $(7, 7)$

Point on Circle: $(14, 4)$

3) Center: $(9, -13)$

Point on Circle: $(14, -13)$

4) Center: $(11, 13)$

Point on Circle: $(14, 13)$

5) Three points on the circle:

$(5, 6)$, $(5, 12)$, and $(11, 6)$

6) Three points on the circle:

$(-7, 13)$, $(-16, -11)$, and $(11, -12)$

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

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

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

9) $x^2 + y^2 - 2x + 2y + 1 = 0$

10) $x^2 + y^2 + 6y - 1 = 0$

Answers to Circles (ID: 1)

1) $(x - 4)^2 + (y + 7)^2 = 144$

2) $(x - 7)^2 + (y - 7)^2 = 58$

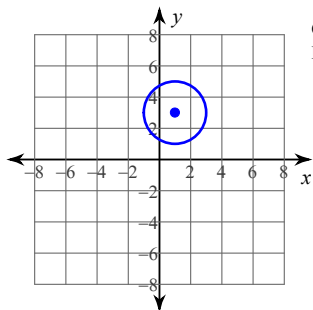
3) $(x - 9)^2 + (y + 13)^2 = 25$

4) $(x - 11)^2 + (y - 13)^2 = 9$

5) $(x - 8)^2 + (y - 9)^2 = 18$

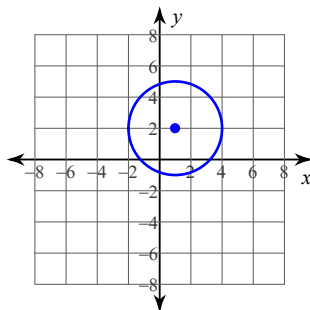
6) $\left(x + \frac{13}{6}\right)^2 + \left(y + \frac{5}{2}\right)^2 = \frac{4745}{18}$

7)



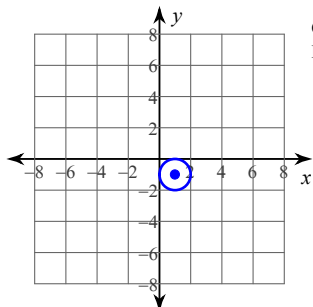
Center: (1, 3)
Radius: 2

8)



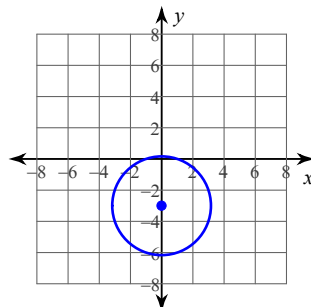
Center: (1, 2)
Radius: 3

9)



Center: (1, -1)
Radius: 1

10)



Center: (0, -3)
Radius: $\sqrt{10}$