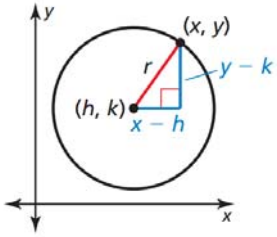
Geometry
Ch. 10: Lesson #2: Graphing Circles

Name: _____
Period: ____

Core Concept

Standard Equation of a Circle

Let (x, y) represent any point on a circle with center (h, k) and radius r. By the Pythagorean Theorem



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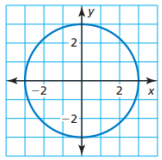
This is the **standard equation of a circle** with center (h, k) and radius r.

Note: If the center is $(0,0)$ then the equation of the circle is:

1) Find the equation of the circle.

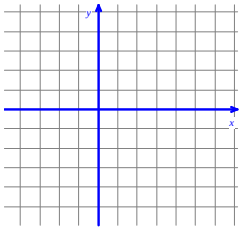


Center: _____

Radius: _____

Equation:

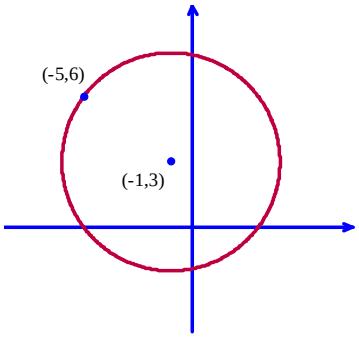
2) Graph: $(x-3)^2 + y^2 = 4$



Center: _____

Radius: _____

3) Find the radius using Distance Formula or the Pythagorean Theorem and then write the equation of the circle in Standard Form and General Form.
Find the length of the radius:



Equation of circle in Standard Form:

Equation of circle in General Form:

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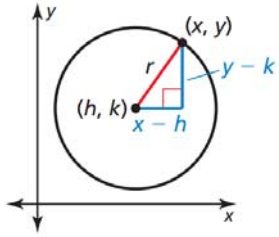

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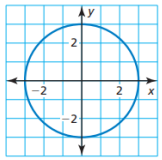

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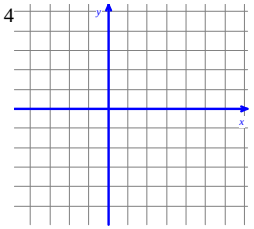

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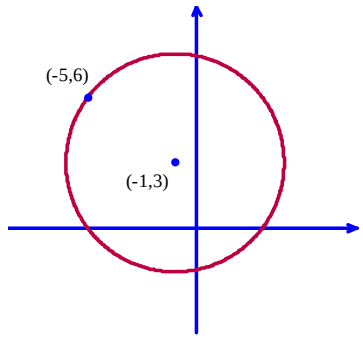

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Equation of circle in General Form: