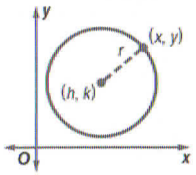
Equation of a Circle in Standard Form

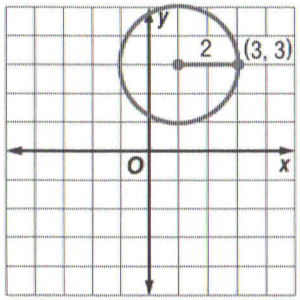
KeyConcept Equation of a Circle in Standard Form

The standard form of the equation of a circle with center at (h, k) and radius r is $(x - h)^2 + (y - k)^2 = r^2$.

The standard form of the equation of a circle is also called the *center-radius* form.

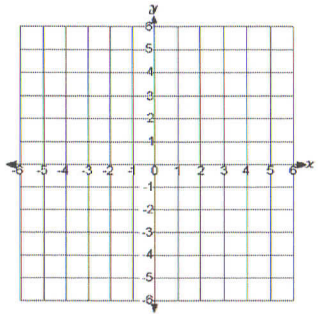


1. Write the equation of the circle graphed below.



2. Write the equation of a circle that has its center at (-3, -2) and passes through (1, -2).

3. Strategically located substations are extremely important in the transmission and distribution of a power company's electric supply. Suppose three substations are modeled by the points $D(3, 6)$, $E(-1, 1)$, and $F(3, -4)$. Determine the location of a town equidistant from all three substations, and write an equation for the circle.



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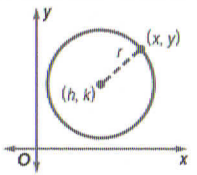

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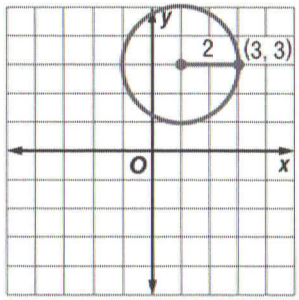

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