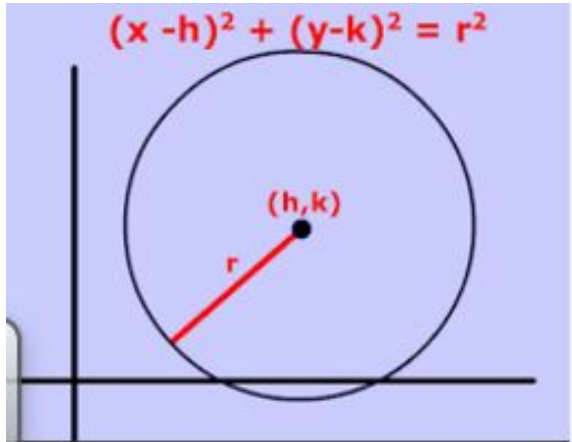


## WRITING AN EQUATION OF A CIRCLE GIVEN ITS CENTER AND A POINT ON THE CIRCLE

 <p>The diagram shows a circle on a Cartesian coordinate system. The center of the circle is marked with a black dot and labeled <math>(h, k)</math> in red. A red line segment, representing the radius, is drawn from the center to the circle's edge and labeled <math>r</math>. Above the circle, the standard form equation <math>(x - h)^2 + (y - k)^2 = r^2</math> is written in red. The circle is positioned in the first quadrant, touching the x-axis at its lowest point.</p>	1	Find the radius from the center to the point the circle passes through using the distance formula.
	2	Use center and radius to write the equation of your circle in standard form. BOOM!

EXAMPLE 1: Find an equation of the circle that has center  $(-2, 2)$  and passes through  $(4, 0)$ .

EXAMPLE 2: Find an equation of the circle that has center  $(-5, 6)$  and passes through  $(2, -4)$ .