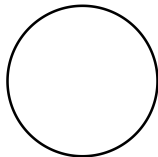# Circles

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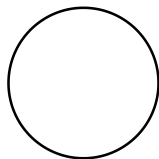We know what a circle looks like!

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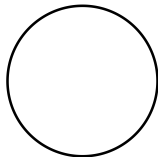We know what a circle looks like!
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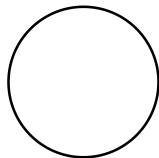We know what a circle looks like!
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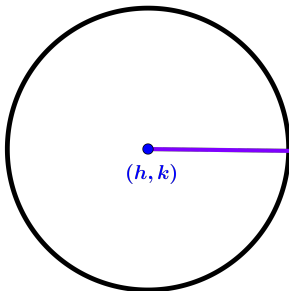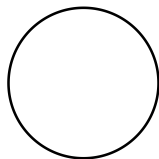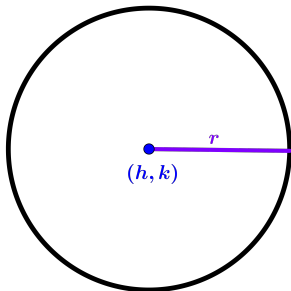The shared distance from the center is called the radius *r*

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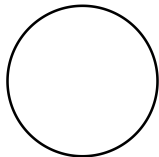A circle is a collection of points that are equally distanced from a single point, called the center



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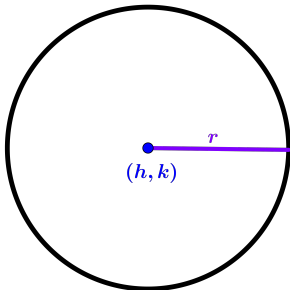**Definition:** A circle of radius $r$ and center $(h, k)$ is the set of points distance $r$ from $(h, k)$

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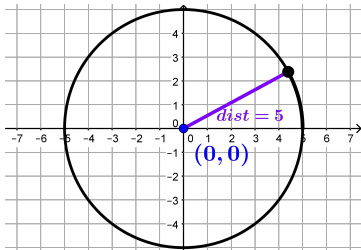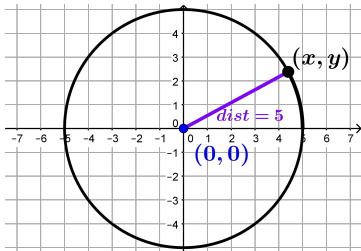**Definition:** A circle of radius $r$ and center $(h, k)$ is the set of points distance $r$ from $(h, k)$

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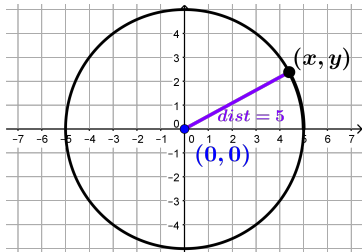**Example:** Draw the circle of radius $r = 5$ with center at the origin $(0, 0)$



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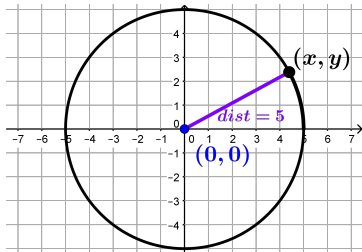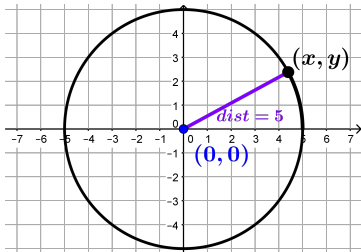
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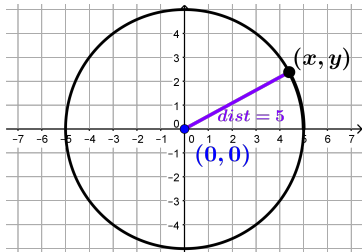
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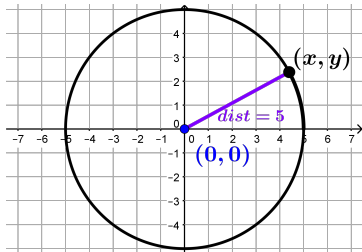▸ We learned that the distance between points $(x, y)$ and $(0, 0)$ is given by:

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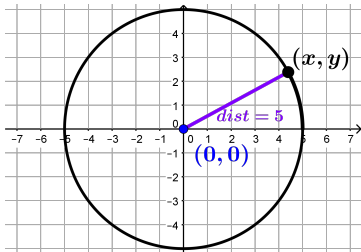
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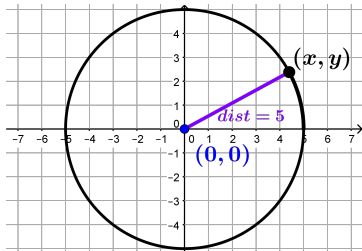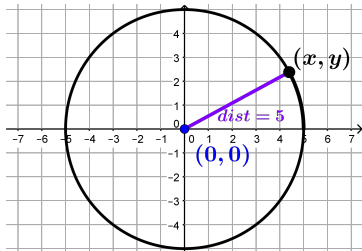$$5^2 = x^2 + y^2$$

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