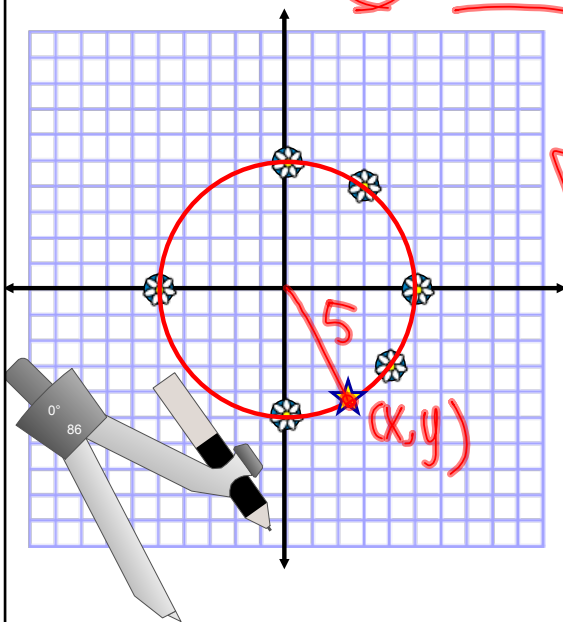


How do we find an equation of a circle?

List 6 points that are 5 units away from the origin.



$$\sqrt{(x-0)^2 + (y-0)^2} = 5$$

$$(x-0)^2 + (y-0)^2 = 25$$

$$x^2 + y^2 = 25$$

Find an equation of a circle centered at $(0,0)$ with radius of 7.

$$\sqrt{(x-0)^2 + (y-0)^2} = 7$$

$$(x^2 + y^2 = 49)$$

Find an equation of a circle
centered at $(2, 1)$ with radius of 3 .

$$\begin{aligned} \sqrt{(x-2)^2 + (y-1)^2} &= 3 \\ (x-2)^2 + (y-1)^2 &= 9 \\ (x^2 - 2x - 2x + 4) + (y^2 - y - y + 1) &= 9 \\ x^2 - 4x + 4 + y^2 - 2y + 1 &= 9 \\ x^2 - 4x + y^2 - 2y &= 4 \end{aligned}$$

Find an equation of a circle
centered at (h, k) with radius of r .

$$\begin{aligned} \sqrt{(x-h)^2 + (y-k)^2} &= r \\ (x-h)^2 + (y-k)^2 &= r^2 \end{aligned}$$

