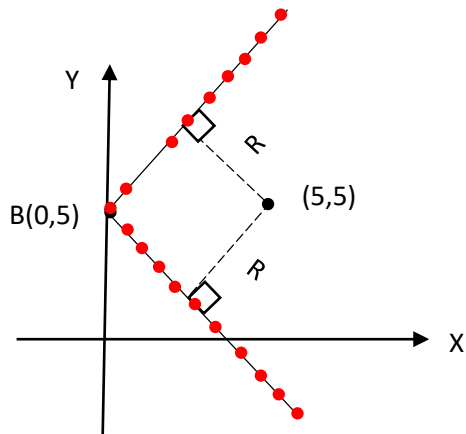


Circle and Target



(5,5) Is the center of a circle

$a = ?$ the slope of the target

The Radius is $R = 4$, the line

$$y - y_1 = a(x - x_1)$$

$$y - 5 = a(x - 0)$$

$$\frac{ax - y + 5}{\sqrt{a^2 + 1}} = 0$$

$$\frac{5a - 5 + 5}{\sqrt{a^2 + 1}} = 4 \Rightarrow 5a = 4\sqrt{a^2 + 1}, \quad C(5,5)$$

$$25a^2 = 16(a^2 + 1)$$

$$9a^2 = 16$$

$$a^2 = \frac{16}{9} \Rightarrow a = \pm \frac{4}{3} \quad \text{the slope}$$

The equation of the circle

$$(x - 5)^2 + (y - 5)^2 = 16$$

The Target

$$y = \frac{4}{3}x + 5$$

$$y = -\frac{4}{3}x + 5$$

The center (5,5)

$$R = 4$$