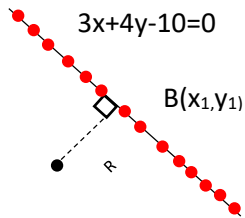


## Meeting between the tangent and circle



We know the tangent

$$3x + 4y - 10 = 0$$

We know the equation of the circle

$$x^2 + y^2 = 4$$

To find  $B(x_1, y_1) = ?$

$$x^2 + y^2 = 4$$

$$x \cdot x + y \cdot y = 4$$

$$x_1 \cdot x + y_1 \cdot y - 4 = 0 \quad \text{Target}$$

$$3x + 4y - 10 = 0$$

$$\left. \begin{array}{l} \frac{4}{y_1} = \frac{5}{2} \quad \Rightarrow y_1 = 1.6 \\ \frac{4}{x_1} = \frac{-10}{-4} = \frac{5}{2} \quad \Rightarrow x_1 = 1.2 \end{array} \right\} B(1.2, 1.6)$$

We want to see that

$$x_1^2 + y_1^2 = 4$$

$$1.44 + 2.56 = 4$$