

(6,2) (x_1, y_1)
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$6x_1 + 2y_1 = 20$
 $6x_2 + 2y_2 = 20$

$-\frac{x}{y} = \frac{y_1 - y_2}{x_1 - x_2} \leftarrow x(x_1 - x_2) + y(y_1 - y_2) = 0$

$-3 = -\frac{6}{2} = \frac{y_1 - y_2}{x_1 - x_2}$

$y - y_1 = -3(x - x_1)$
 $y + 3x = y_1 + 3x_1 \quad / \cdot 2 \rightarrow 2y + 6x = 2y_1 + 6x_1 \stackrel{(*)}{=} 20$

$y + 3x = 10$

(7)

$$\begin{cases} y + 3x = 10 \\ x^2 + y^2 = 20 \end{cases} \rightarrow \begin{cases} x^2 + (10 - 3x)^2 = 20 \\ 10x^2 - 60x + 80 = 0 \\ x^2 - 6x + 8 = 0 \end{cases}$$

$x = 4 \rightarrow (4, -2)$
 $x = 2 \rightarrow (2, 4)$

$$\sqrt{(4-2)^2 + (-2-4)^2} = \sqrt{4+36} = \sqrt{40} = 2\sqrt{10}$$