

$$\gamma_1: x^2 + y^2 = 10x + 10y \quad (1)$$

$$\gamma_2: x^2 + y^2 + 6x + 2y = 40 \quad (2)$$

$$\gamma_1 \cap \gamma_2:$$

$$(2) - (1): 6x + 2y = 40 - 10x - 10y$$

$$16x + 12y = 40$$

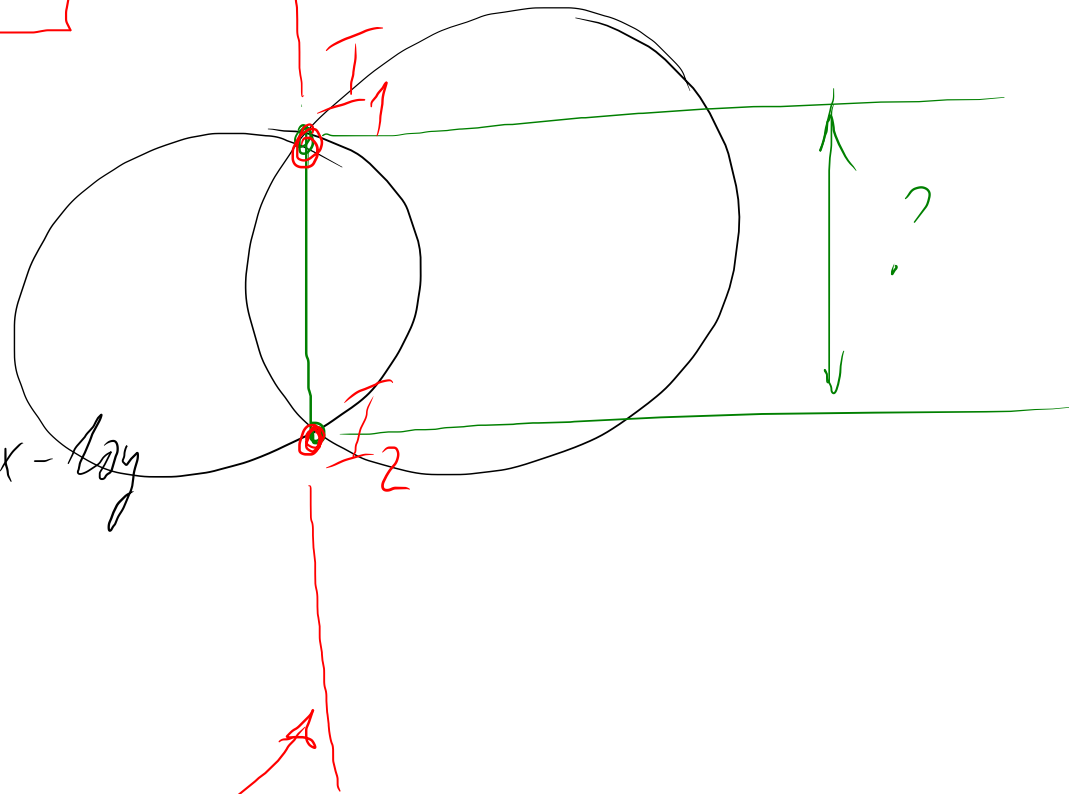
$$4x + 3y = 10$$

$$y = \frac{10 - 4x}{3}$$

$$x^2 + y^2 = 10x + 10y$$

$$I_1 = (4, -2)$$

$$I_2 = (-2, 6)$$



$$x^2 + \left(\frac{10 - 4x}{3}\right)^2 = 10x + 10 \cdot \frac{10 - 4x}{3}$$

$$9x^2 + 100 - 80x + 16x^2 = 90x + 300 - 120x$$

$$25x^2 - 80x + 100 = -30x + 300$$

$$25x^2 - 50x - 200 = 0$$

$$x^2 - 2x - 8 = 0$$

$$(x - 4)(x + 2) = 0$$

3.3.16 $C\left(\frac{1}{3}; 0\right)$

$$\left(x - \frac{1}{3}\right)^2 + y^2 = \frac{34}{9}$$

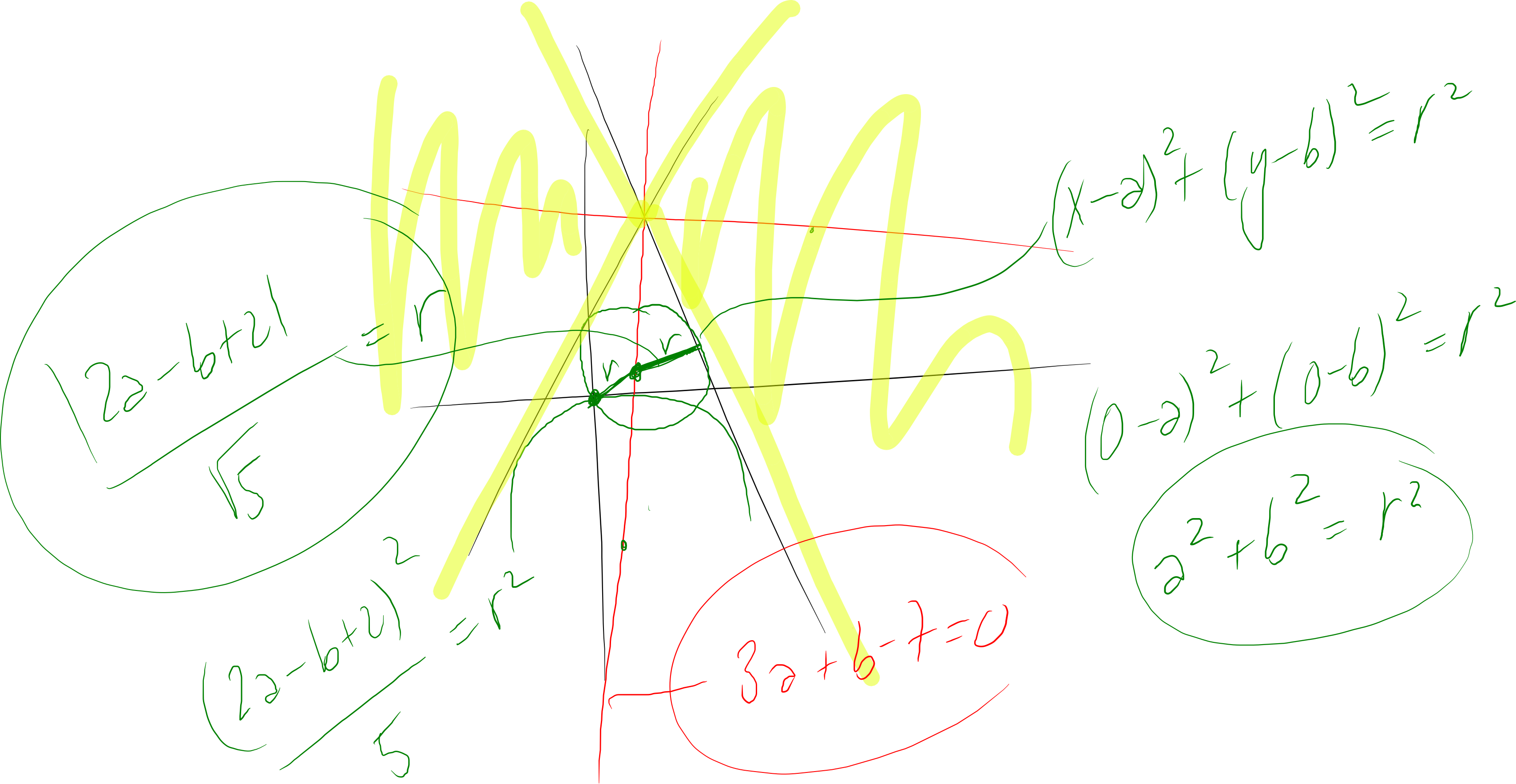
$$\vec{CT} = \begin{pmatrix} 5/3 \\ -1 \end{pmatrix}$$

$$\frac{5}{3}x - y - \frac{7}{3} = 0$$

$T(2; 1)$

$$\frac{5}{3}x - y + k = 0$$

$$k = -\frac{7}{3}$$



$$(x-a)^2 + (y-b)^2 = r^2$$

$$(0-a)^2 + (0-b)^2 = r^2$$

$$a^2 + b^2 = r^2$$

$$\frac{2a-b+2}{\sqrt{5}} = r$$

$$\frac{2a-b+2}{5} = r^2$$

$$3a + b - 7 = 0$$