

Prueba 1 - Guillermo D. Gual

①

$$C = 8 - 1$$

$$C = 7$$

②

$$m = \frac{8 - (-1)}{3 - (-3)} = \frac{9}{6} = \frac{3}{2}$$

$$A = (3, 8)$$

$$B = 1,5 \cdot 3 + n \Rightarrow m = 8 - 4,5 \Rightarrow m = 3,5 \text{ ou } \frac{7}{2}$$

$$B = (-3, -1)$$

$$y = \frac{3}{2}x + \frac{7}{2}$$

Reduzida

$$y - 8 = 1,5(x - 3)$$

$$y - 8 = 1,5x - 4,5$$

$$1,5x - y + 3,5 = 0$$

Geral

③

$$d(P, r) = \frac{|4 \cdot 1 - 1 \cdot 0 - 1|}{\sqrt{16 + 1}}$$

$$P = (1, 0)$$

$$R = 4x - y - 1 = 0$$

$$A = 4$$

$$B = -1$$

$$C = -1$$

$$d = \frac{3}{\sqrt{17}}$$

4

$$13^2 = 10^2 + c^2$$

$$169 = 100 + c^2$$

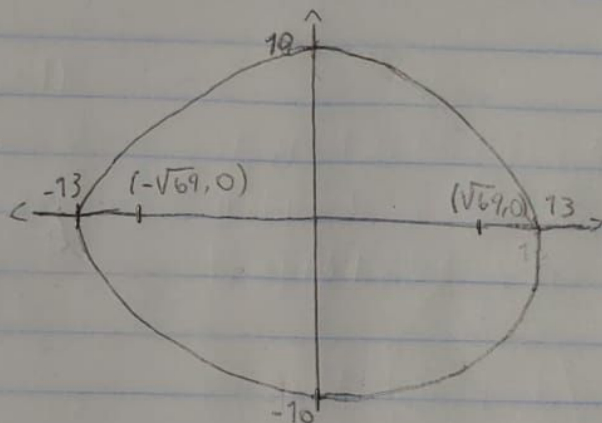
$$c = \sqrt{69}$$

$$(0, 10) \text{ e } (13, 0)$$

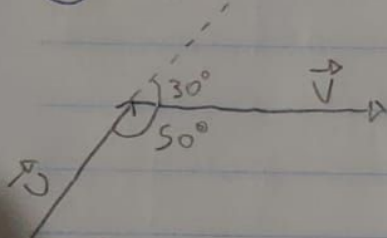
$$\frac{x^2}{169} + \frac{y^2}{100} = 1$$

Equação

$$F_1(\sqrt{69}, 0) F_2(-\sqrt{69}, 0)$$



5 a) $\vec{U} + \vec{V}$



$$|\vec{U}| = 11$$

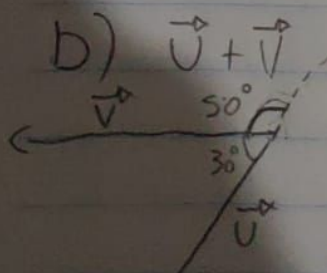
$$|\vec{V}| = 13$$

$$|\vec{U} + \vec{V}|^2 = 121 + 169 - 2 \cdot 11 \cdot 13 \cdot \cos(190^\circ)$$

$$|\vec{U} + \vec{V}|^2 = 290 - (-247,683)$$

$$|\vec{U} + \vec{V}| = \sqrt{537,683} \approx \boxed{23,188}$$

b) $\vec{U} - \vec{V}$



$$|\vec{U} - \vec{V}|^2 = 121 + 169 - 2 \cdot 11 \cdot 13 \cdot \cos(30^\circ)$$

$$|\vec{U} - \vec{V}|^2 = 290 - 247,683$$

$$|\vec{U} - \vec{V}| = \sqrt{42,317} \approx \boxed{6,505}$$