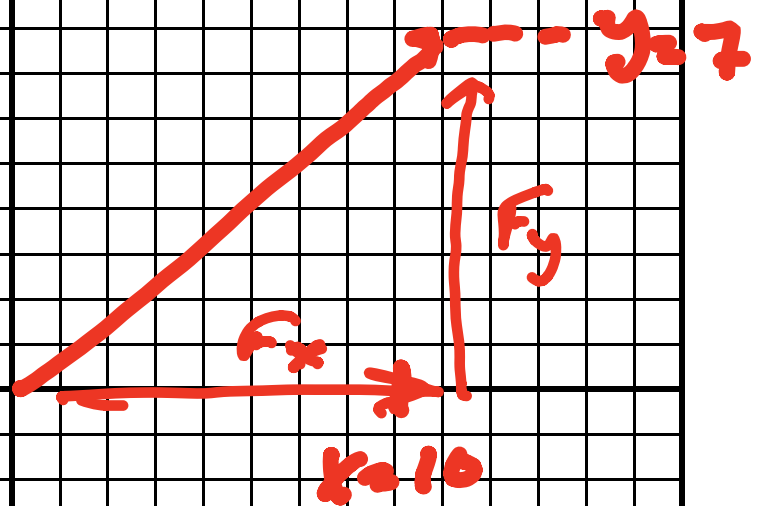


$$\vec{F} = 11,662 \text{ lb}$$



$$r = \sqrt{10^2 + 7^2} = 12.206$$

$$F_x = \vec{F} \left(\frac{10}{12.206} \right)$$

$$= \boxed{9554.317 \text{ lb}_F}$$

$$F_y = \vec{F} \left(\frac{7}{12.206} \right) = \boxed{6688.022 \text{ lb}_F}$$

Check:

$$\vec{F} = \sqrt{F_x^2 + F_y^2} = 11662.0$$

$$\vec{F} = 177.20 \text{ kips}$$

$$F_x = F \left(\frac{5}{18.681} \right)$$

$$= 177.20 \left(\frac{5}{18.681} \right)$$

$$F_x = 47.426 \text{ kips}$$

$$F_y = 177.20 \left(\frac{-18}{18.681} \right) = -170.74 \text{ kips}$$

-18

5

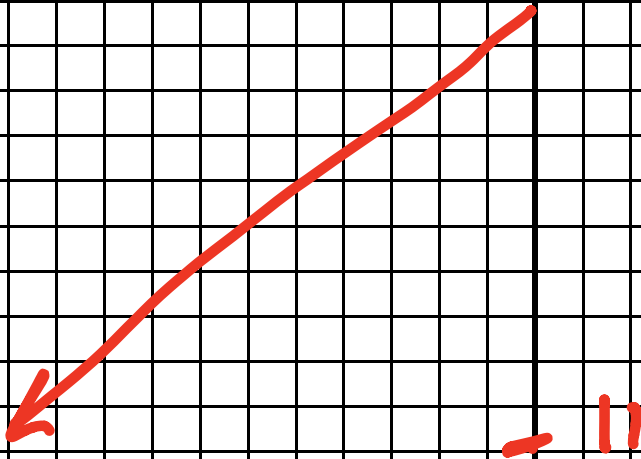
$$\vec{F} = 31.1 \text{ N}$$

$$r = \sqrt{11^2 + 11^2} \\ = 15.55$$

$$F_x = 31.1 \left(\frac{-11}{15.55} \right) \quad F_y = 31.1 \left(\frac{-11}{15.55} \right)$$

$$F_x = -21.99 \text{ N}$$

$$F_y = -21.99 \text{ N}$$

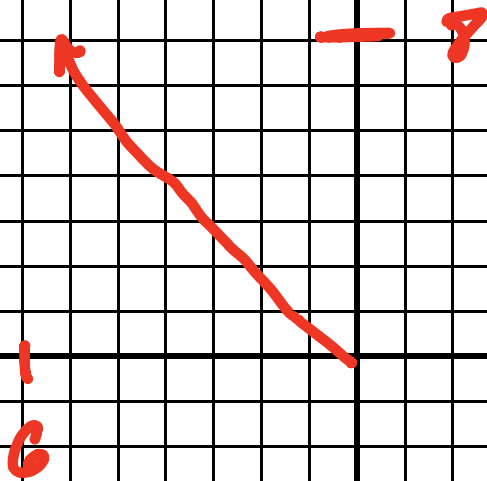


-11

$$\vec{F} = 400,000 \text{ lbs}$$

$$r = \sqrt{6^2 + 8^2}$$

$$= 10$$



$$F_x = F \cdot \frac{6}{10} = 400,000 (0.6)$$

$$= 240,000 \text{ lbs}$$

$$F_y = F \cdot \frac{8}{10} = 400,000 (0.8)$$

$$= 320,000 \text{ lbs}$$