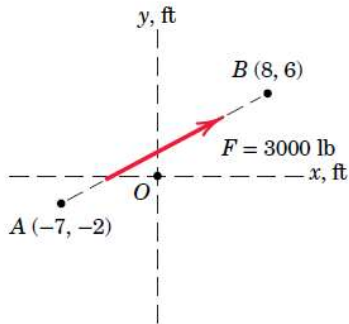


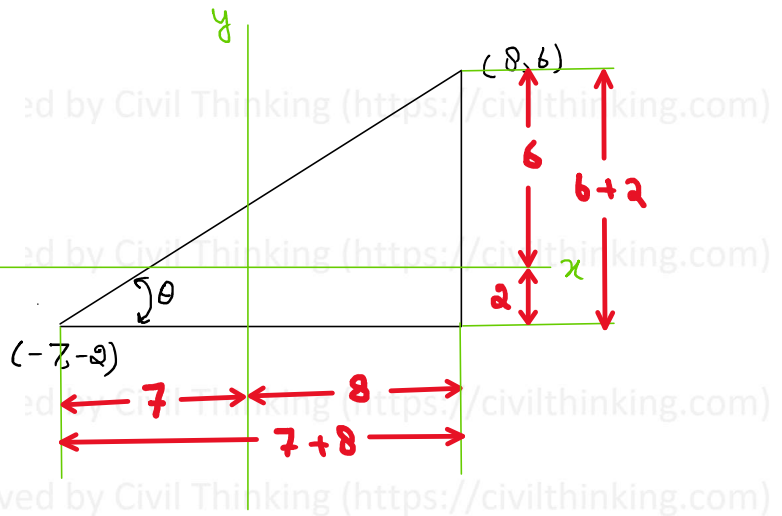
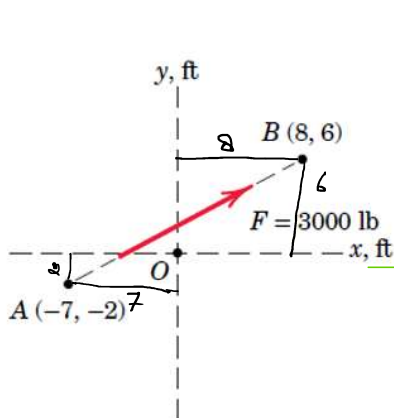
Solution of Problem 2/4 Resolving an Inclined Force with coordinates

2/4 The line of action of the 3000-lb force runs through the points A and B as shown in the figure. Determine the x and y scalar components of $\mathbf{F}$.

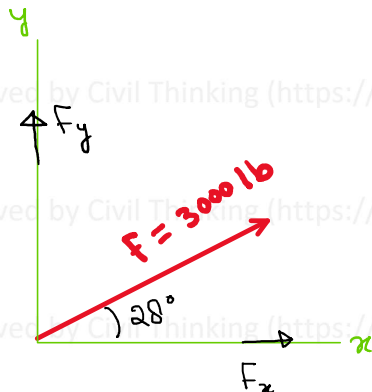


PROBLEM 2/4

Solution:



$$\theta = \tan^{-1}\left(\frac{6+2}{7+8}\right) = \tan^{-1}\left(\frac{8}{15}\right) \approx 28^\circ$$



$$F_x = F \cdot \cos(28^\circ) = 3000 \cdot \cos(28^\circ) \approx 2648.843 \text{ lb}$$

$$F_y = F \cdot \sin(28^\circ) = 3000 \cdot \sin(28^\circ) \approx 1408 \text{ lb}$$

This problem was solved by Civil Thinking (<https://civilthinking.com>)

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