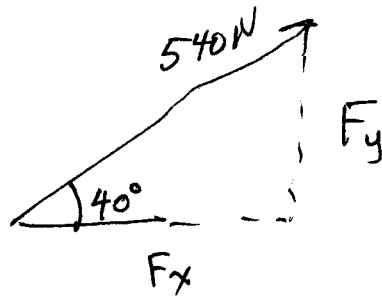


3.22

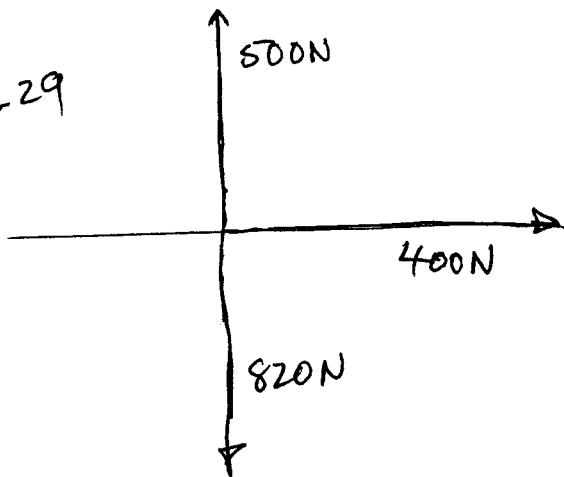


$$\frac{F_x}{540} = \cos 40^\circ$$

$$F_x = 540 \cos 40^\circ = \boxed{413.7 \text{ N}}$$

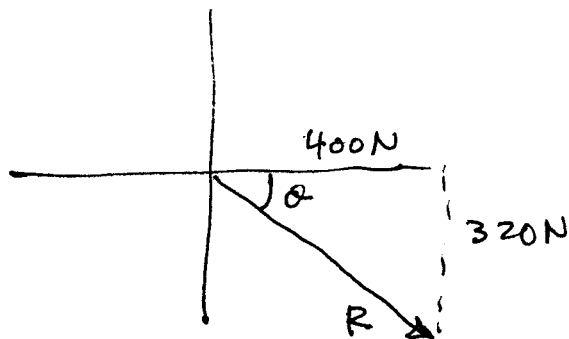
$$F_y = 540 \sin 40^\circ = \boxed{347.1 \text{ N}}$$

3.29



$$R_x = 400 \text{ N} + 0 + 0 = 400 \text{ N}$$

$$R_y = 500 \text{ N} + 0 - 820 \text{ N} = -320 \text{ N}$$



$$\tan \theta = \frac{320}{400}$$

$$\theta = 38.7^\circ$$

$$R = \sqrt{400^2 + 320^2} = 512.2 \text{ N}$$

$$\text{Ans. } \boxed{\vec{R} = 512.2 \text{ N} \angle -38.7^\circ}$$