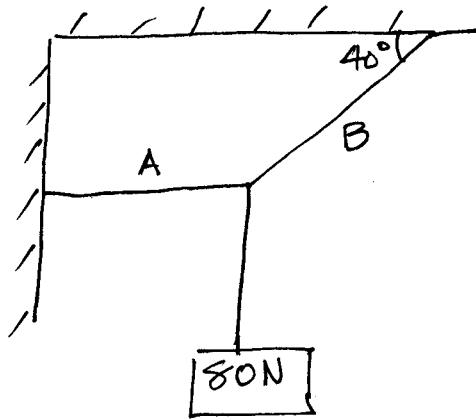
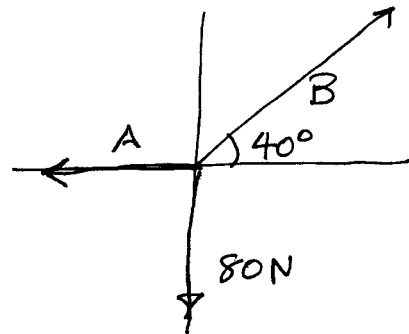


4.5

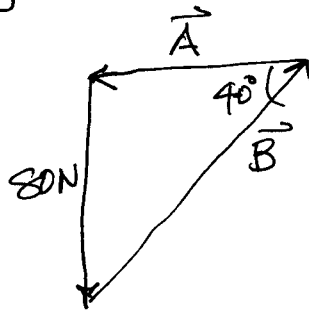
Free-body diagram:Solving Analytically:

$$\sum F_y = 0 \Rightarrow B \sin 40^\circ = 80 \text{ N}$$

$$B = \frac{80}{\sin 40^\circ} = \boxed{124 \text{ N}}$$

$$\sum F_x = 0 \Rightarrow$$

$$A = B \cos 40^\circ = (124)(\cos 40^\circ) = \boxed{95.3 \text{ N}}$$

Solving Geometrically

$$\frac{80}{A} = \tan 40^\circ$$

$$A = \frac{80}{\tan 40^\circ} = \boxed{95.3 \text{ N}}$$

$$\frac{80}{B} = \sin 40^\circ$$

$$B = \frac{80}{\sin 40^\circ} = \boxed{124 \text{ N}}$$