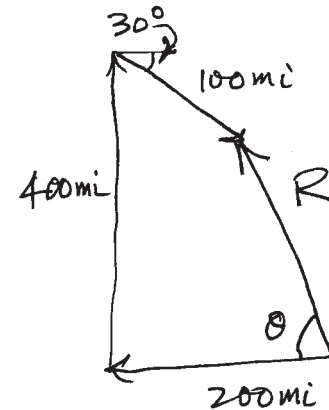


Problem 3.18 done analytically:

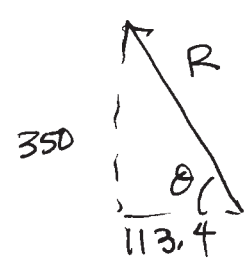


$$R_x = -200 + 0 + 100 \cos 30^\circ$$

$$= -200 + 86.6 = \boxed{-113.4 \text{ mi}}$$

$$R_y = 0 + 400 - 100 \sin 30^\circ$$

$$= 400 - 50 = \boxed{350 \text{ mi}}$$



$$\tan \theta = \frac{350}{113.4}$$

$$\theta = 72^\circ$$

$$R^2 = 113.4^2 + 350^2$$

$$R = 368 \text{ mi}$$

Answer: $\vec{R} = 368 \text{ mi} @ 72^\circ \text{ N of W}$