



$$|F| = 80$$

Solution

a) Angle between  $\vec{F}$  & BC,  $\theta = \tan^{-1}\left(\frac{3}{5}\right) = 39.6$

$$\begin{aligned} \text{Part of } \vec{F} \perp AB &= |F| \sin(39.6^\circ + 35^\circ) \angle 90^\circ \\ &= 80 \sin(74.6^\circ) \angle 90^\circ \\ &= 77.1 \angle 90^\circ \end{aligned}$$

b) Part of  $\vec{F}$  parallel to BC

Projection of  $\vec{F}$  onto BC is

$$|F| \cos(39.6^\circ) \angle 35^\circ$$

$$80 \cos(39.6^\circ) \angle 35^\circ$$

$$61.6 \angle 35^\circ$$

Real  
Answers

a)  $50.2 \angle 90^\circ$

b)  $39.8 \angle 35^\circ$

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