



$$\begin{cases} R_x = \sum F_x: & -3.5 \cos 15^\circ = -F_1 \sin 30^\circ - 2.8 \cos \theta & (1) \\ R_y = \sum F_y: & 3.5 \sin 15^\circ = F_1 \cos 30^\circ - 2.8 \sin \theta & (2) \end{cases}$$

Solving (1) AND (2)...

$$\begin{cases} F_1 = 1.165 \text{ kN} \\ \theta = 2.11^\circ \end{cases} \quad \text{OR} \quad \begin{cases} F_1 = 3.78 \text{ kN} \\ \theta = 57.9^\circ \end{cases}$$