



b)

$$\sum m_x: \frac{-3T}{5} + F_x = 0 \Rightarrow F_x = \frac{3T}{5}$$

$$\sum m_y: \frac{4T}{5} + F_y - 60 = 0 \Rightarrow F_y - \frac{4T}{5} = 60$$

$$M_B: -30 + 60 \cdot 2 + F_y \cdot 1 + F_x \cdot 3$$

$$F_y + 3F_x = 150$$

$$\begin{cases} F_y + 3F_x = 150 \\ F_x = \frac{3T}{5} \\ F_y = 60 + \frac{4T}{5} \end{cases} \quad \begin{cases} F_y + 3F_x = 60 + \frac{13T}{5} \\ 60 + \frac{13T}{5} = 150 \end{cases}$$

$$\frac{13T}{5} = 90 \Rightarrow T = 34,615 \text{ kN}$$

$$\begin{aligned} I &= 34,615 \text{ kN} & \alpha &= 216,869^\circ \\ \vec{F}_x &= 20,769 \text{ kN} \\ \vec{F}_y &= 27,090 \text{ kN} \end{aligned}$$