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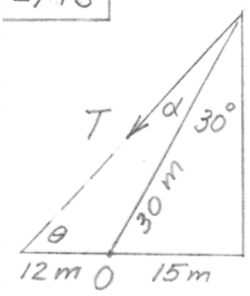

$$\theta = \tan^{-1}\frac{30(0.866)}{12+15} = 43.90^\circ$$

$$\alpha = 90^\circ - (30^\circ + 43.90^\circ) = 16.10^\circ$$

$$M_O = 72 \text{ kN·m}$$

$$= T \sin 16.10^\circ (30) = 8.32T$$

$$T = \frac{72}{8.32} = \underline{8.65 \text{ kN}}$$