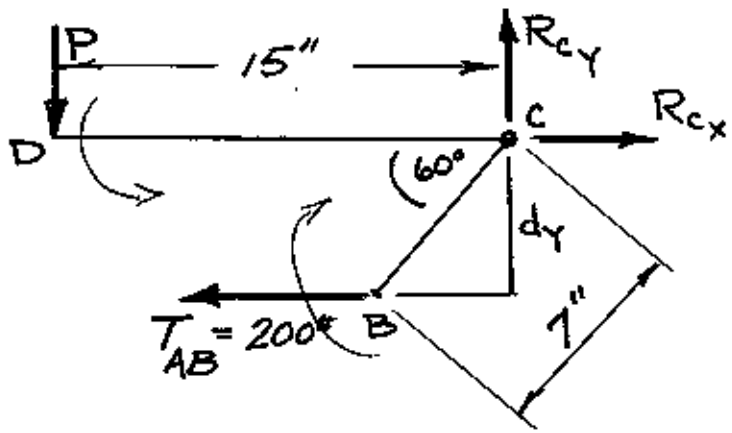
TENSION IN AB = 200#

? P and ? R_c

4.17 p. 169

MILANO



(+)

$\Sigma F_x = 0 = R_{cx} - T_{AB}$

$\therefore \boxed{R_{cx} = 200^{\#} \rightarrow}$

$\Sigma F_y = 0 = -P + R_{cy}$

$\therefore R_{cy} = P$?

$\Sigma M_c = 0 = P(15") - T_{AB}(d_y)$

PINNED END

$15P = 200\,(7" \sin 60°)$

$\boxed{P = 80.83^{\#} \downarrow}$

BACK SUBSTITUTE

$\therefore \boxed{R_{cy} = 80.83^{\#} \uparrow}$

REMEMBER FROM CHAPT. 2

$$R_c = \sqrt{R_{cx}^2 + R_{cy}^2} = 215.72^{\#} \text{ MAG.}$$

$$\text{DIR.} = \theta = \tan^{-1}\frac{R_{cy}}{R_{cx}} = \tan^{-1}\frac{80.83}{200} = 22°$$

ANSWERS – $P = 80.83^{\#} \downarrow$

$R_c = 215.72^{\#} \angle 22°$