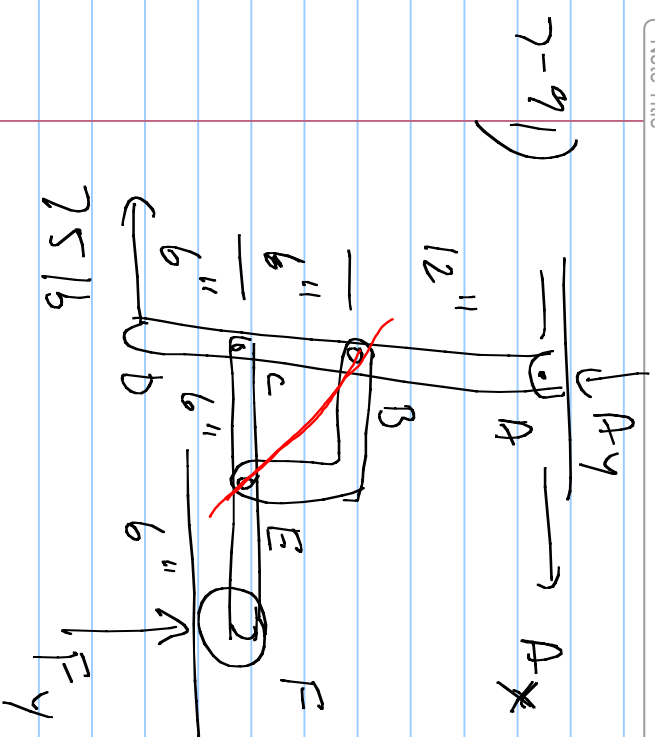


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$$\sum M_A = -24 \cdot 25 + 12 F_y = 0$$

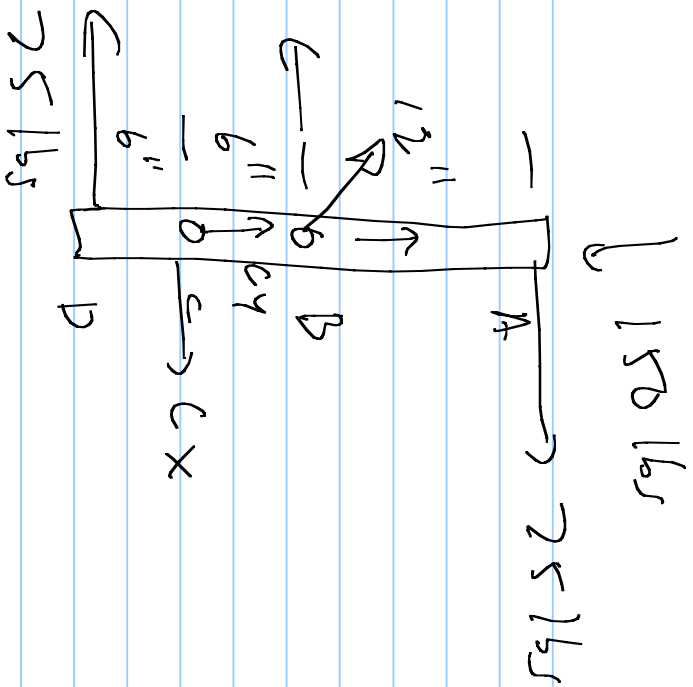
$$F_y = 150 \text{ lbs}$$

$$\sum F_y = 150 - A_y = 0$$

$$A_y = 150 \text{ lbs}$$

$$\sum F_x = A_x - 25 = 0$$

$$A_x = 25 \text{ lbs}$$



$$\sum M_c = -12 \cdot 25 - 12 \cdot 25 + 6 B_x = 0$$

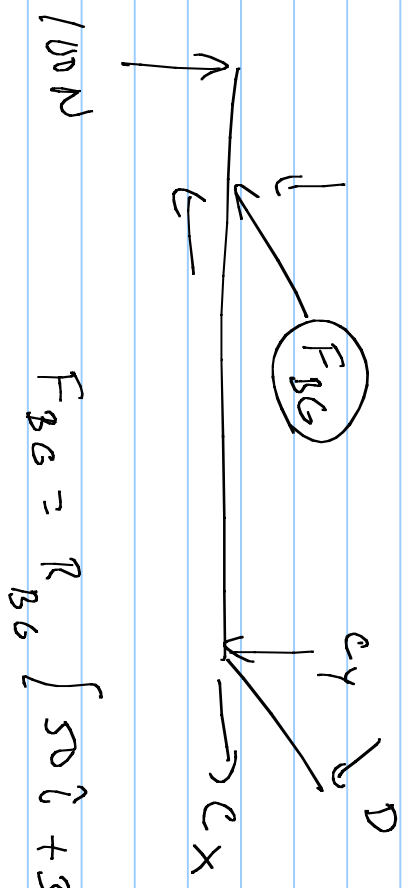
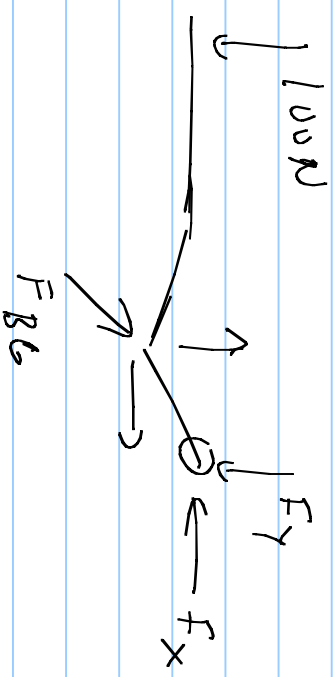
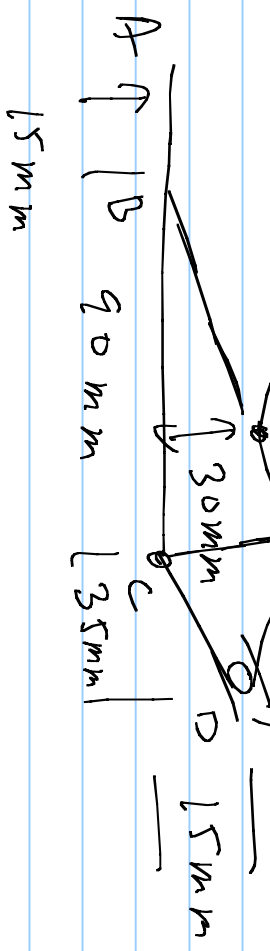
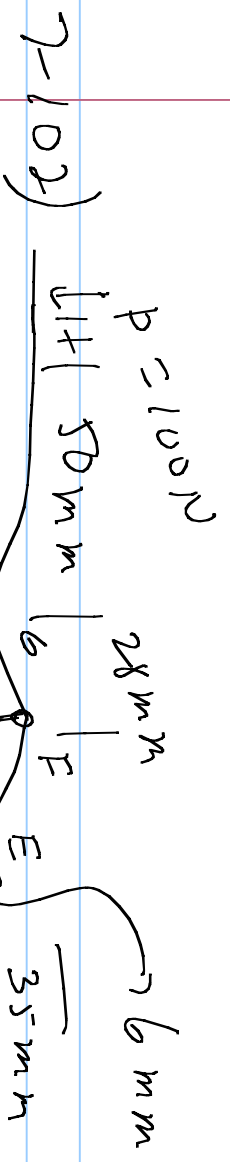
$$B_y = B_x = 300 \text{ lbs}$$

$$\sum F_x = 25 - 25 + C_x - 300 = 0$$

$$C_x = 300 \text{ lbs}$$

$$\sum F_y = -150 + 300 + C_y = 0$$

$$C_y = -150 \text{ lbs}$$



$$\sum M_F = (50 + 28 + 15) 100 - 28 F_{BCy} + 5 F_{BCx} = 0$$

$$F_{BC} = R_{BC} [50\hat{i} + 36\hat{j}] = \frac{F_{BC}}{\sqrt{34}} [5\hat{i} + 3\hat{j}]$$

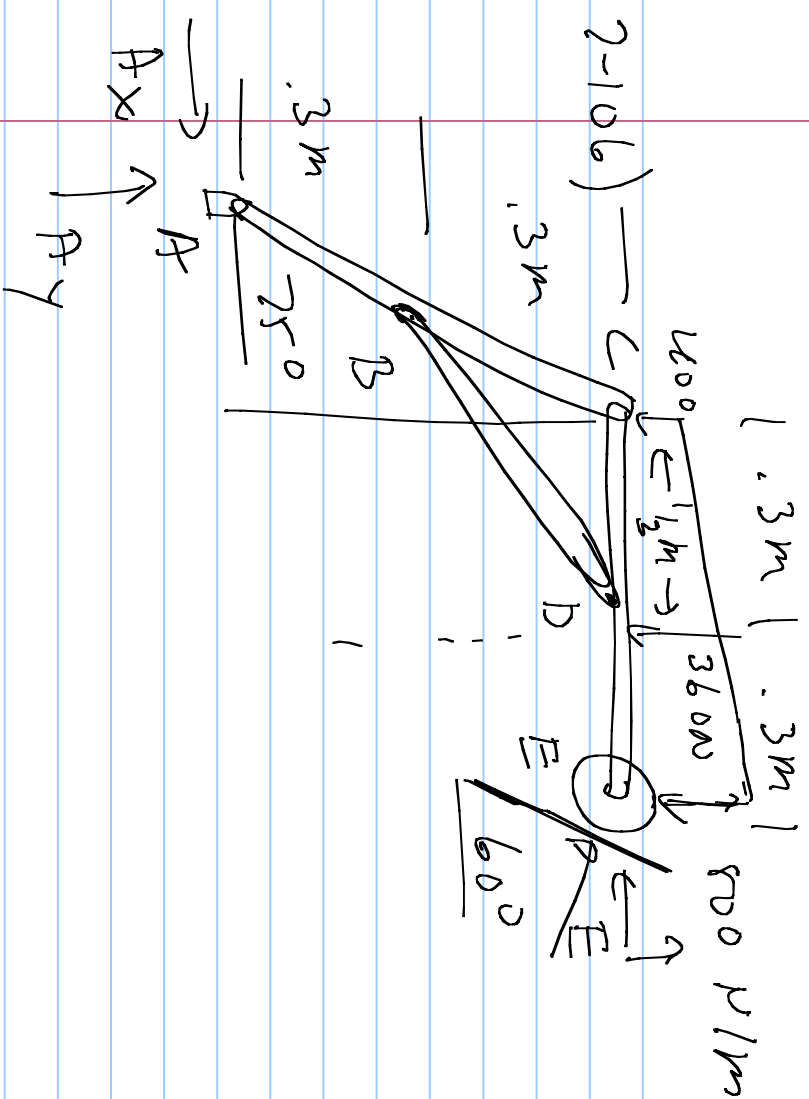
$$9300 = \left( 28 \left( \frac{3}{\sqrt{34}} \right) - 5 \frac{5}{\sqrt{34}} \right) F_{BE} = \frac{59}{\sqrt{34}} F_{BE}$$

$$F_{BE} = \frac{9300 \sqrt{34}}{59} = 919 \text{ N}$$

$$\sum M_C = (105)(100) + 90 \left( \frac{9300 \sqrt{34}}{59} \cdot \frac{3}{\sqrt{34}} \right) - CD \cdot D = 0$$

$$D \cdot CD = 32,059 \text{ N} \cdot \text{m} \quad D = 842 \text{ N}$$

$$CD = \sqrt{35^2 + 15^2} =$$



$$F = \frac{1}{2} (0.6) (400 + 800)$$

$$= 360 \text{ N}$$

$$\int_0^{0.6} \left( \frac{400}{0.6} \right) x + 400 \Big] x dx$$

$$= \frac{400}{1.8} x^3 + 200 x^2 \Big|_0^{0.6}$$

$$= \frac{400}{1.8} (0.6)^3 + 200 (0.6)^2$$

$$= 1200$$

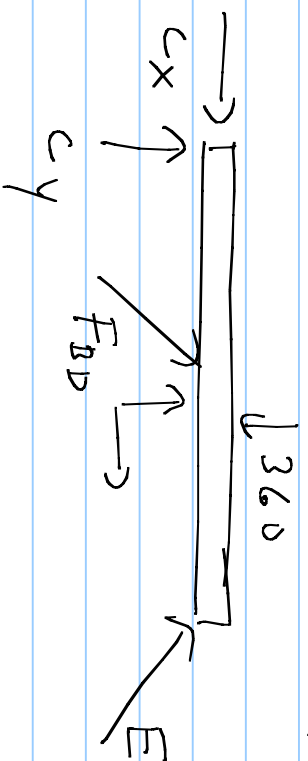
$$\sum M_A = -360 \left[ 0.6 \cos 30 + \left( \frac{1}{3} \right) + 0.6 \right] (E \sin 30) + \left[ 0.6 \cos 30 + \left( \frac{1}{3} \right) + 0.6 \right] E \sin 30 = \frac{1200}{360} = 1/3 \text{ m}$$

$$E [-36t + 3 \omega t (75) + 3] = 360 \left[ \frac{1}{3} t + 6 \omega t (75) \right]$$

$$E = 197.6 \text{ N}$$

$$\sum F_x = A_x - 197.6 \cos(30) = 0 \Rightarrow A_x = 171.2 \text{ N}$$

$$\sum F_y = A_y - 360 + 197.6 \sin(30) = 0 \Rightarrow A_y = 261.2 \text{ N}$$



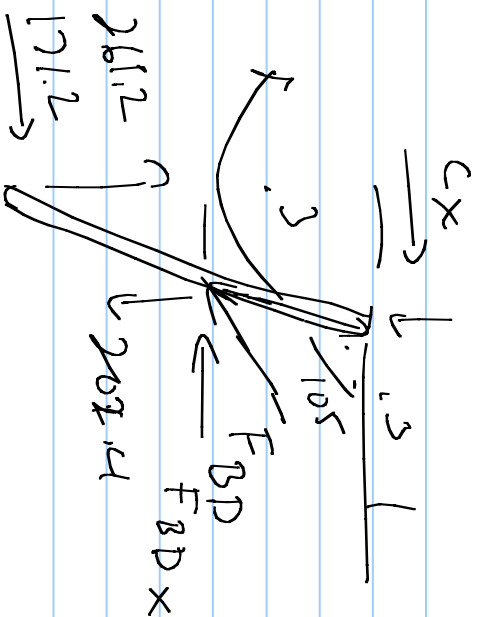
$$\sum M_D = -.3c_y + .3E_y = \left(\frac{1}{3} - .3\right) 360 = 0$$

$$c_y = E_y + 360 - \frac{120}{.3} = 197.6 \sin(30) - 40 = 58.8 \text{ N}$$

$$\sum F_y = 58.8 - 360 + F_{By} + 197.6 \sin(30) = 0$$

$$F_{By} = 202.4 \text{ N}$$

$$\begin{aligned} \sum M_B = & (.3)(171.2) - .3c_x \\ & - (261.2)(.3) \cos(25) \\ & - 58.8(.3) \cos(75) = 0 \end{aligned}$$



$$C_X = 85.5$$

$$\sum F_X = 85.5 + 171.2 - F_{BDX} = 0$$

$$F_{BDX} = 256.7 \text{ N}$$