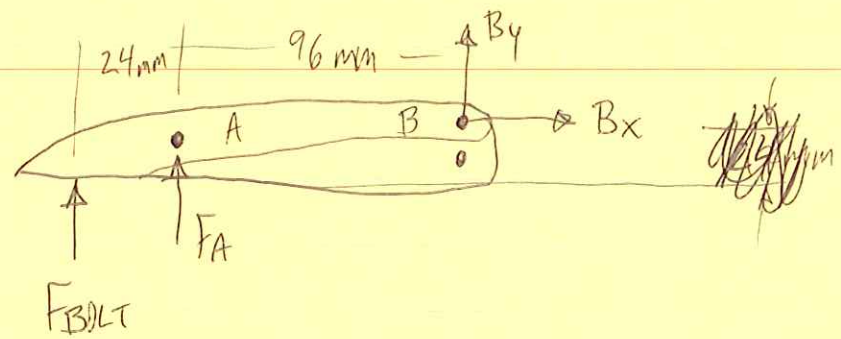


PROB. 6.145

FIND FORCE ON BOLT.

FBD OF JAW:



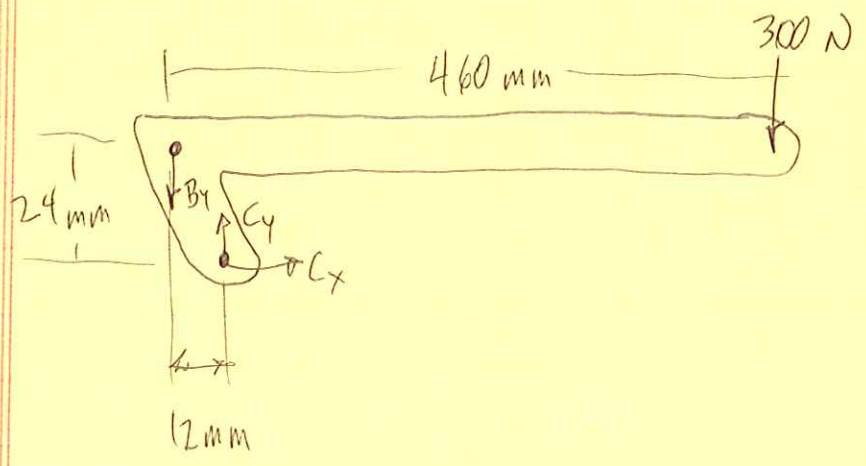
$$\sum F_x = 0: \quad B_x = 0$$

$$\sum M_A = 0 \quad +\uparrow$$

$$(24) F_{BOLT} = (96) B_y$$

$$F_{BOLT} = 4 B_y$$

FBD OF HANDLE:



PROB. 6.145

(11)

$$\sum M_c = 0 \quad +\uparrow$$

$$\cancel{12} \quad 12 B_y = (460 - 12)(300 \text{ N})$$

$$B_y = 11,200 \text{ N}$$

$$F_{\text{BOLT}} = 4(11,200) = 44,800 \text{ N}$$

$$F_{\text{BOLT}} = 150 \cdot F_{\text{INPUT}}$$