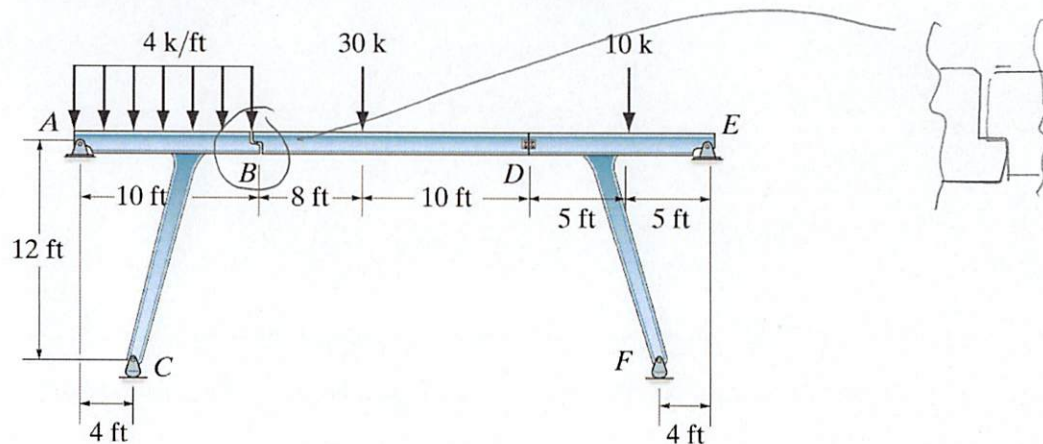
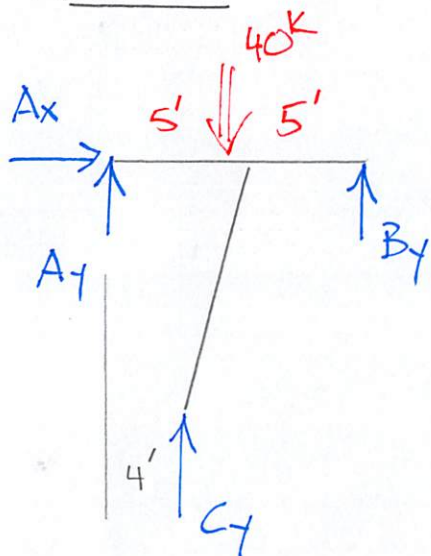


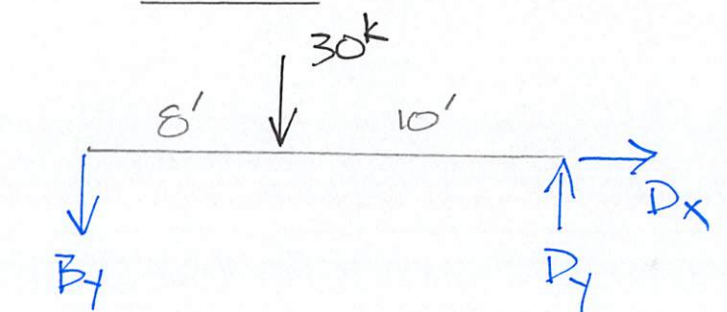
Problem 2a-7: Find the reactions at A and D. E



FBD ABC



FBD BD



$$\sum M_D = 0 = 30k(10') + B_y(18')$$

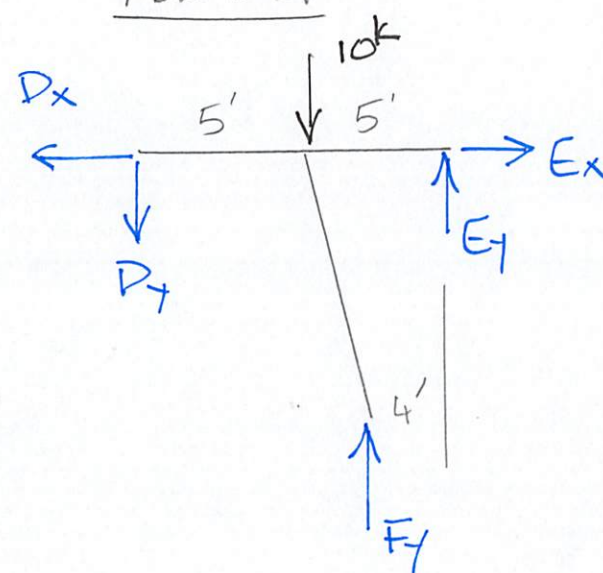
$$\underline{\underline{B_y = -16.67k}}$$

$$\sum F_y = 0 = -B_y + D_y - 30k$$

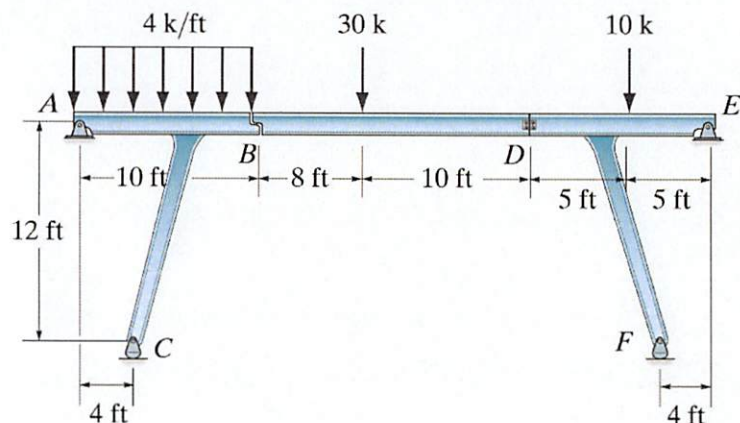
$$\underline{\underline{D_y = 13.33k}}$$

$$\sum F_x = 0 = D_x$$

FBD DEF



Problem 2a-7: Find the reactions at A and D.



FBD ABC

$$\sum M_A = 0 = C_y(4') + B_y(10') - 40k(5')$$

$$C_y = 91.67k$$

$$\sum F_y = 0 = C_y + B_y + A_y - 40k$$

$$A_y = -35k$$

$$\sum F_x = 0 = A_x$$

FBD DEF

$$\sum M_E = 0 = 10k(5') + 13.33k(10') - F_y(4')$$

$$F_y = 45.83k$$

$$\sum F_y = 0 = -D_y + F_y + E_y - 10k$$

$$E_y = -22.5k$$

$$\sum F_x = 0 = -D_x + E_x$$

$$E_x = 0$$