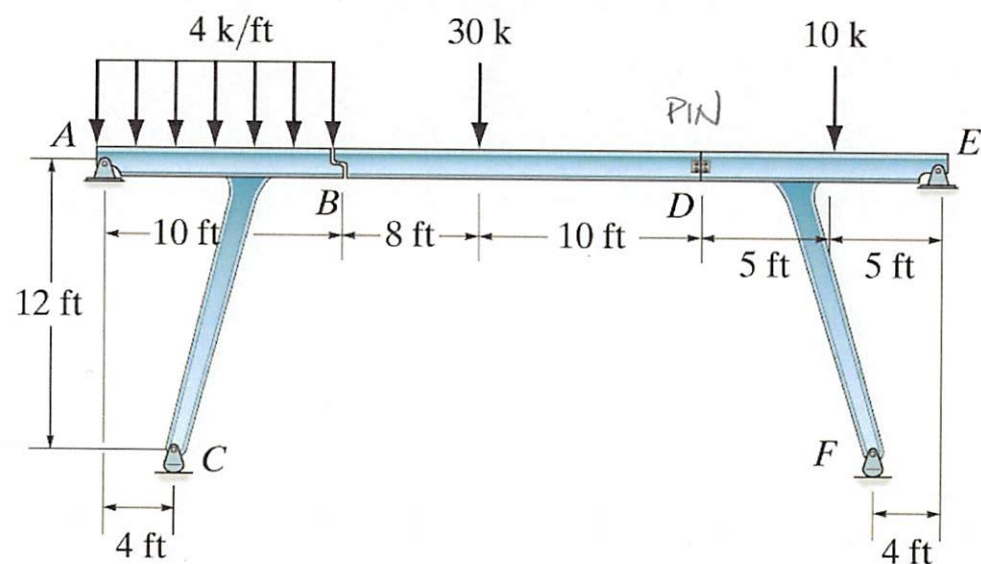
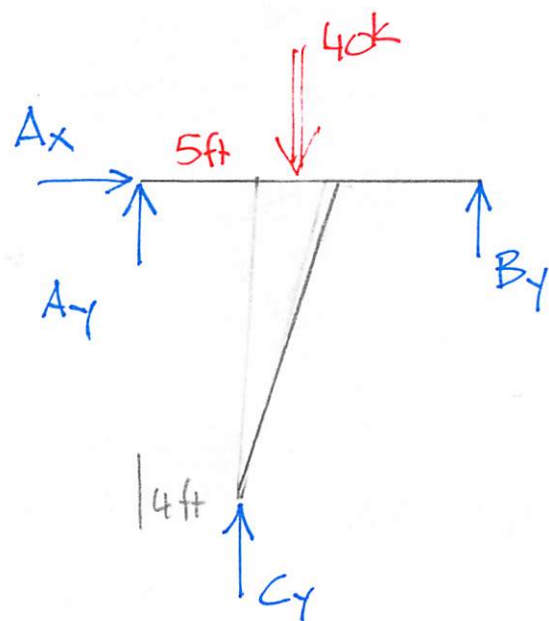


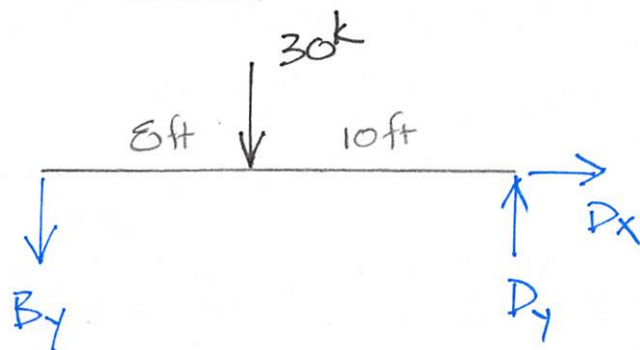
Problem 2a-7: Find the reactions at A and D.



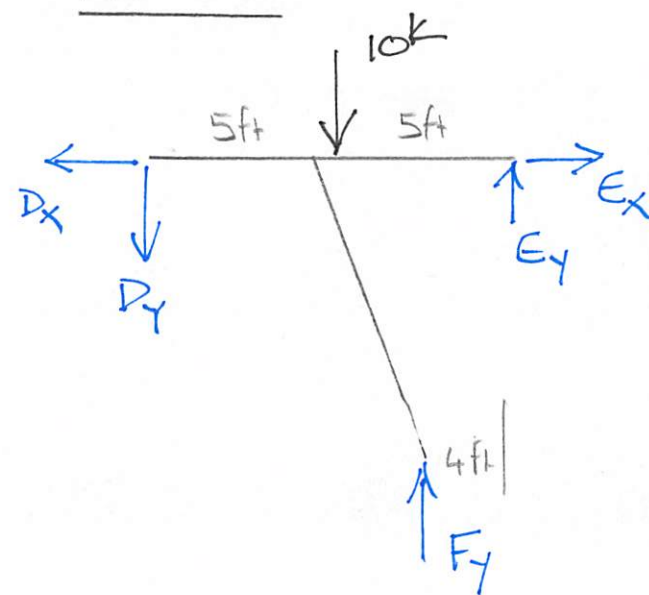
FBD ABC



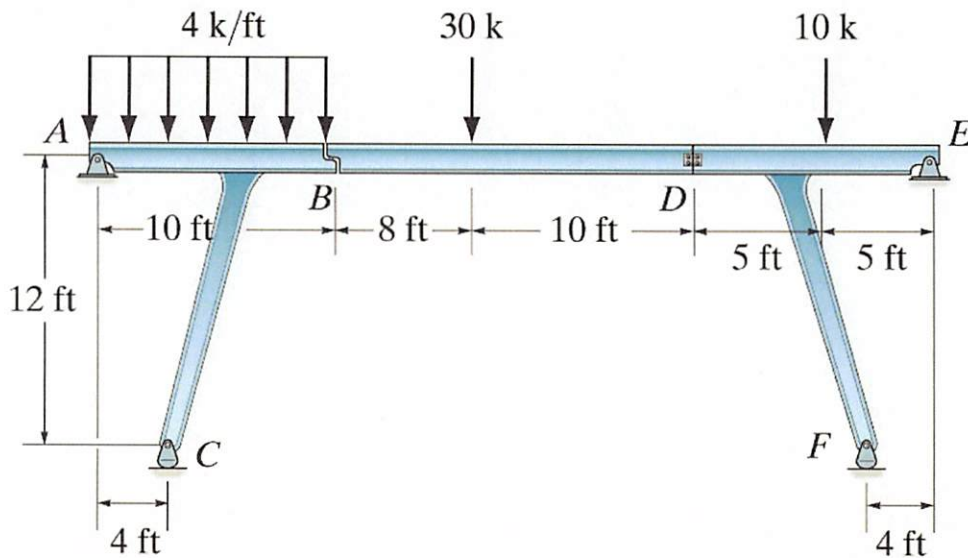
FBD BD



FBD DEF



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



FBD BD

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

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

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

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

$$\rightarrow \sum F_x = 0 = D_x$$

FBD ABC

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

$$\underline{C_y = 91.65k}$$

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

$$\underline{A_y = -34.98k}$$

$$\rightarrow \sum F_x = 0 = A_x$$