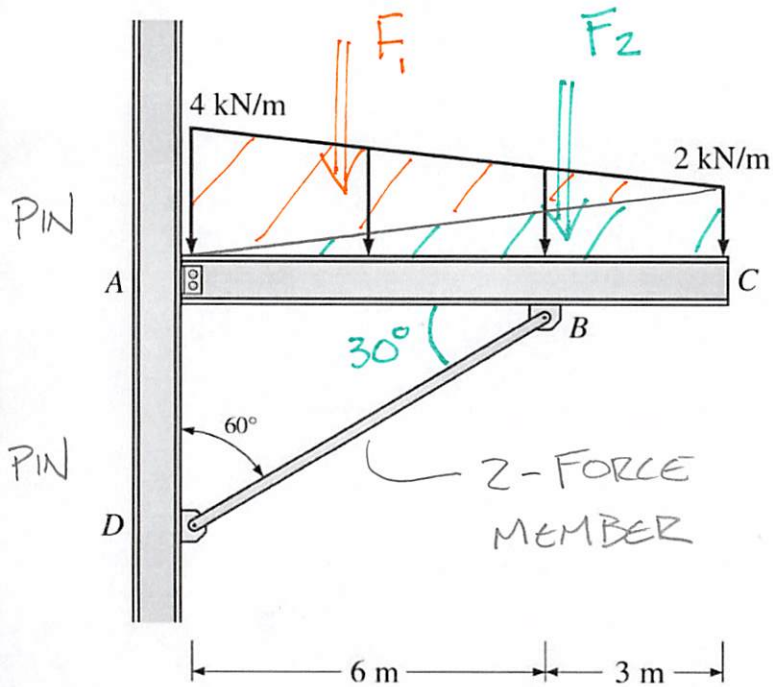
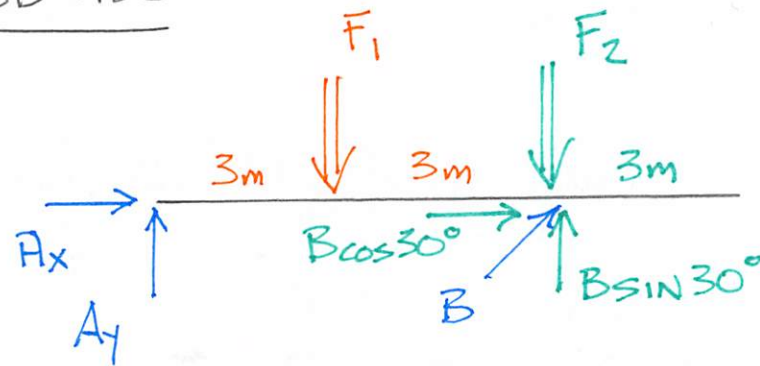


Example 2a-3: Find the reactions



FBD ABC



$$\sum M_A = 0 = -F_1(3m) - F_2(6m) + B\sin 30^\circ(6m)$$

$$\underline{\underline{B = 36 \text{ kN}}}$$

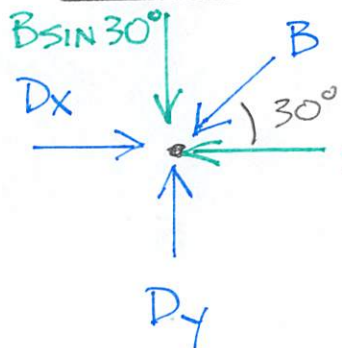
$$\sum F_y = 0 = A_y + B\sin 30^\circ - F_1 - F_2$$

$$\underline{\underline{A_y = 9 \text{ kN}}}$$

$$\sum F_x = 0 = A_x + B\cos 30^\circ$$

$$\underline{\underline{A_x = -31.18 \text{ kN}}}$$

JOINT D



$$\sum F_y = 0 = D_y - B\sin 30^\circ$$

$$\underline{\underline{D_y = 18 \text{ kN}}}$$

$$\sum F_x = 0 = D_x - B\cos 30^\circ \quad \underline{\underline{D_x = 31.18 \text{ kN}}}$$