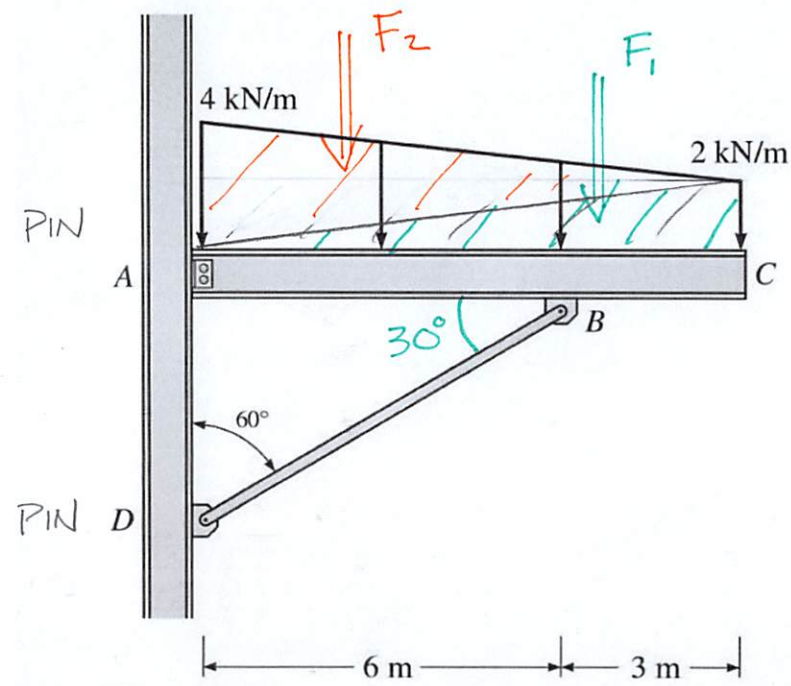
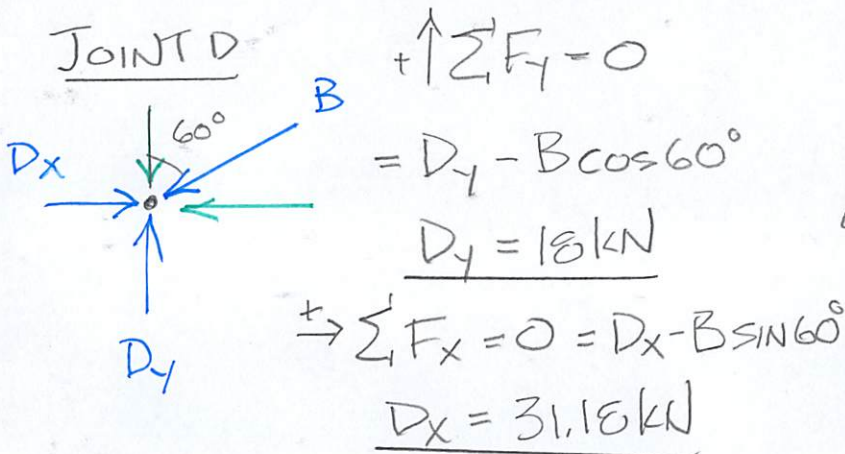


Example 2a-3: Find the reactions

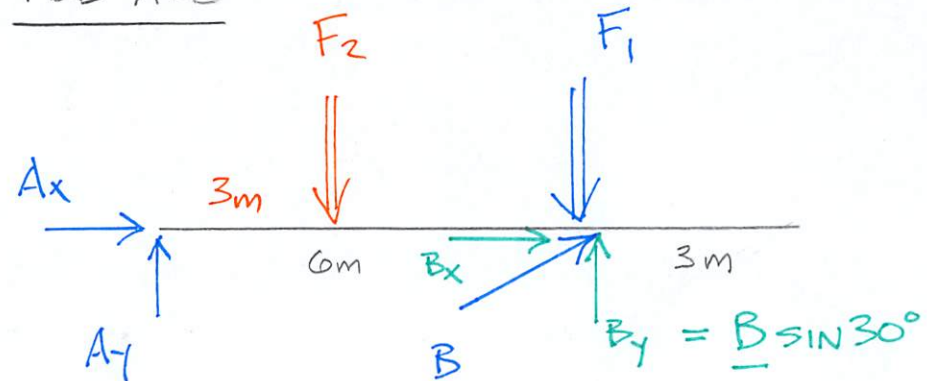


$$F_1 = \frac{1}{2}(9\text{m}) 2\text{kN/m} = 9\text{kN}$$

$$F_2 = \frac{1}{2}(9\text{m}) 4\text{kN/m} = 18\text{kN}$$



FBD ABC



$$+\circlearrowleft \Sigma M_A = 0 = -F_1(6\text{m}) - F_2(3\text{m}) + B \sin 30^\circ(6\text{m})$$

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

$$+\uparrow \Sigma F_y = 0 = A_y + B_y - F_1 - F_2$$

$$= A_y + 36\text{kN} \sin 30^\circ - 9\text{kN} - 18\text{kN}$$

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

$$+\rightarrow \Sigma F_x = 0 = A_x + B_x = A_x + 36\text{kN} \cos 30^\circ$$

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