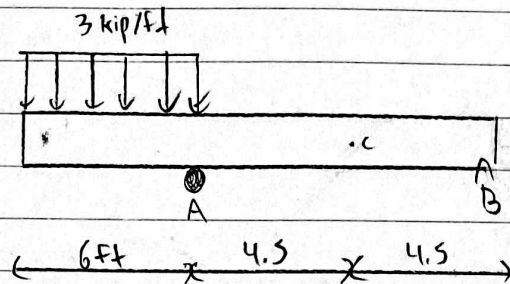


Solutions: 21-5-7.2-MK-02



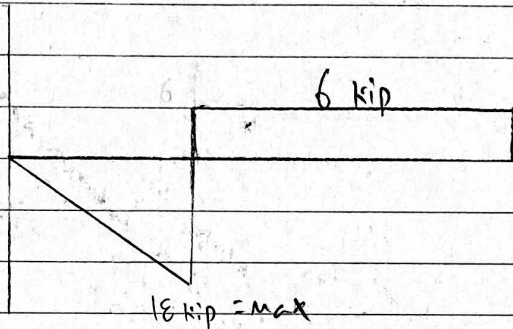
$$\sum M_B = (3 \text{ kip/ft})(6 \text{ ft})(12 \text{ ft}) - A_y(9 \text{ ft})$$

$$A_y = \frac{(3 \text{ kip/ft})(6 \text{ ft})(12 \text{ ft})}{9 \text{ ft}} = 24 \text{ kip}$$

$$\sum M_A = (3 \text{ kip/ft})(6 \text{ ft})(3 \text{ ft}) - B_y(9 \text{ ft})$$

$$B_y = \frac{(3 \text{ kip/ft})(6 \text{ ft})(3 \text{ ft})}{9 \text{ ft}} = 6 \text{ kip}$$

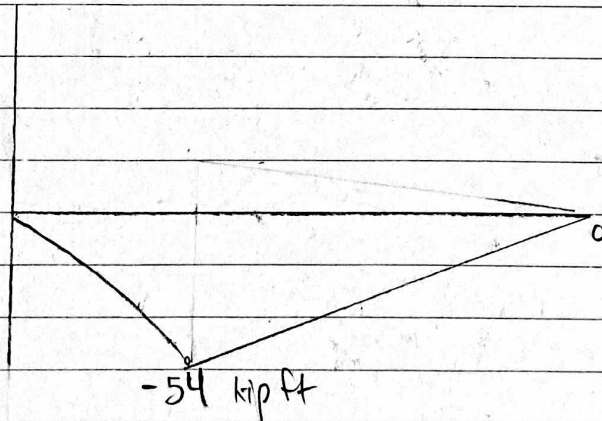
$$\frac{3x}{2}$$



$$V_A = (3 \text{ kip/ft})(6 \text{ ft}) = -18 \text{ kip} = V_{\max}$$

$$V_B = -18 \text{ kip} + 24 \text{ kip} = 6 \text{ kip}$$

$$V_C = 6 \text{ kip} - 6 \text{ kip} = 0$$



$$M_A = (3 \text{ kip/ft}) \left(\frac{6^2}{2} \right) = 54 \text{ kip-ft}$$

$$M_B = (3 \text{ kip/ft})(6 \text{ ft})(3 \text{ ft}) = 54 \text{ kip-ft}$$

$$M_A = 0$$

$$M_B = 0 - \frac{3x^2}{2} = -\frac{3(6)^2}{2} = -54 \text{ kip-ft} = M_{\max}$$

$$M_C = -54 + (6)(9) = -54 + 54 = 0$$