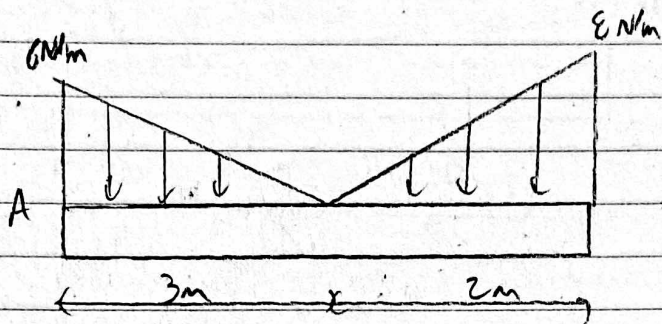


Solution: 21-5-4.9-MK-01



$$F = (6 \text{ N/m})(3\text{m})(\frac{1}{2}) + (8 \text{ N/m})(2\text{m})(\frac{1}{2}) = 67 \text{ kN}$$

$$d = \frac{1}{3} \left(\frac{6 \text{ N/m}}{2} (3\text{m}) (3\text{m}) \left(\frac{1}{3} \right) \right) + \frac{1}{2} \left(\frac{8 \text{ N/m}}{2} (2\text{m}) \left(2\text{m} \left(\frac{2}{3} \right) + 3 \right) \right) = 2.56 \text{ m}$$