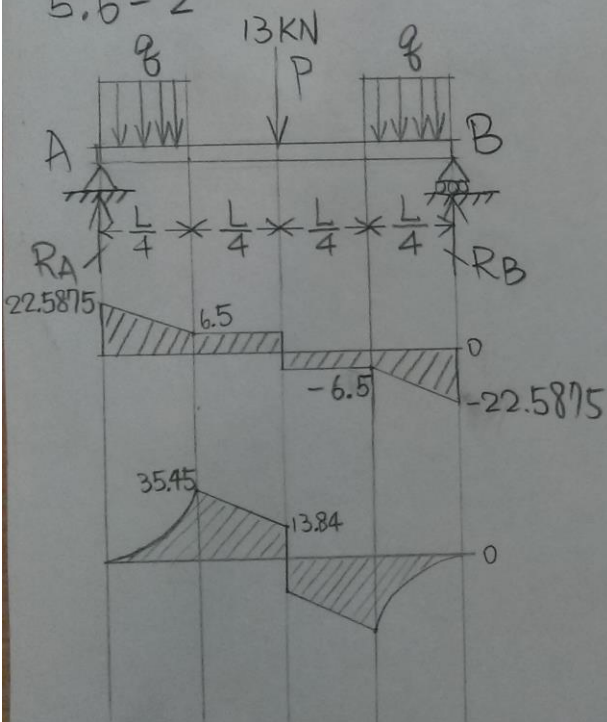


材料力學作業

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5.6-2



$$\sigma_{allow} = 124 \text{ MPa}$$

$$L = 9.75 \text{ m}$$

$$P = 13 \text{ kN}$$

$$q = 6.6 \text{ kN/m}$$

$$R_A = R_B = \frac{9.75}{4} \times 6.6 + \frac{13}{2}$$

$$= 22.5875 \text{ (kN)}$$

$$x_1 = \frac{R_A}{q} = \frac{22.5875}{6.6}$$

$$= 3.42 \text{ (m)}$$

$$M_{max} = 22.5875 \times \frac{9.75}{2} - 6.6 \times \frac{9.75}{4} \left(\frac{9.75}{4} + \frac{9.75}{8} \right)$$

$$= 51.294$$

$$S_{reqd} = \frac{M_{max}}{\sigma_{allow}} = \frac{51.294}{124} = 0.413.662$$