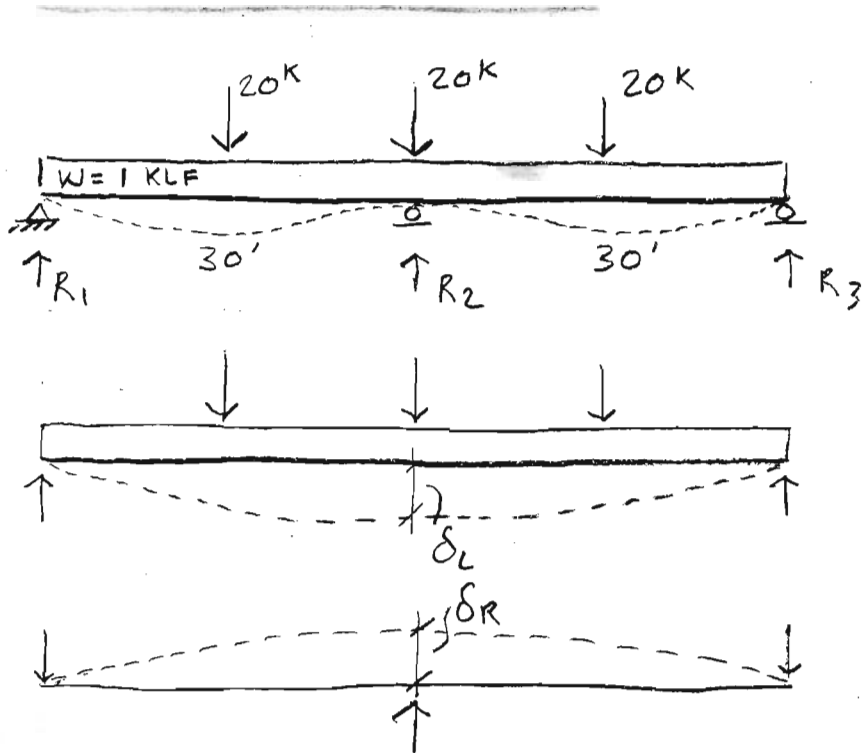


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$$\delta_L + \delta_R = 0 \quad \text{OR} \quad \delta_L = \delta_R$$

$$\delta_L = \frac{5wl^4}{384EI} + \frac{19Pl^3}{384EI} = \frac{5(1)(60)^4 + 19(20)(60)^3}{384EI}$$

$$\delta_L = 382500/EI = \delta_R = \frac{R_2 l^3}{48EI} = R_2 4500/EI$$

$$R_2 = 85 \text{ K}$$

$$\sum F_v = 0 = R_1 + R_3 + 85 - 60 - 60 = 0$$

$$R_1 = R_3 = 17.5 \text{ K}$$