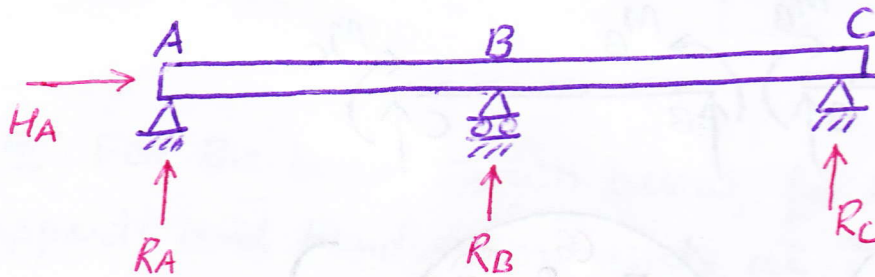


Analysis of Continuous beam by Three Moment Theorem ①

- It is used to analyse indeterminate beams
- Three moment equation is derived using continuity condition at the continuous support
→ Slope at the left of the section = Slope at the right of the section

Continuous Beam :

- Beam having more than two supports



No of Reactions, $R = 4$

No of Equilibrium Equations available, $E = 3$ ($\sum V = 0$, $\sum H = 0$
& $\sum M = 0$)

∴ Degree of Indeterminacy, I_s

$$\begin{aligned} &= R - E \\ &= 4 - 3 \\ &= 1 \end{aligned}$$

- This can be solved using continuity condition at the intermediate support B, i.e.

$$\theta_B = \theta_{BA} = \theta_{BC} \quad [\text{Slope towards BA} = \text{Slope towards BC}]$$