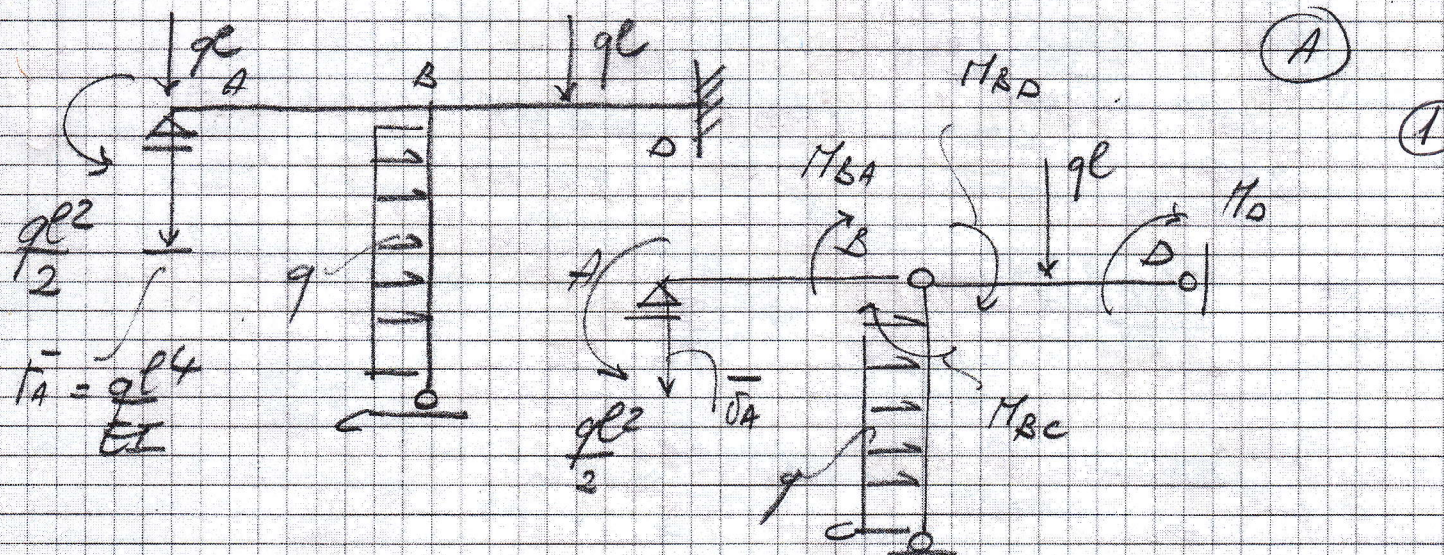




$$1) P_{BA} = P_{BD} \quad \sum M_B = 0 \quad 4)$$

$$2) P_{BA} = P_{BC} \quad q_D = 0 \quad 5)$$

$$1) -\frac{M_{BA} l}{3EI} - \frac{ql^3}{12EI} + \frac{ql^3}{EI} = -\frac{M_{BD} l}{3EI} + \frac{M_{CD} l}{6EI} - \frac{ql^3}{16EI}$$

$$-\frac{M_{BA} l}{3EI} + \frac{M_{BD} l}{3EI} - \frac{M_{CD} l}{6EI} + \frac{47}{48} \frac{ql^3}{EI} = 0$$

$$2) -\frac{M_{BA} l}{3EI} + \frac{1}{12} \frac{ql^3}{EI} = -\frac{M_{BC} l}{3EI} + \frac{ql^3}{24EI}$$

$$-\frac{M_{BA} l}{3EI} + \frac{M_{BC} l}{3EI} + \frac{21}{24} \frac{ql^3}{EI} = 0$$

$$3) \frac{M_{BD} l}{6EI} - \frac{M_{CD} l}{3EI} + \frac{ql^3}{16EI} = 0$$

$$\sum M_B = M_{BA} + M_{BC} + M_{BD} = 0$$

Chosen 3)

$$M_D = \frac{M_{BD} l}{6EI} \cdot \frac{3EI}{l} + \frac{ql^3}{16EI} \cdot \frac{3EI}{l} =$$

$$= \frac{3}{2} M_{BD} + \frac{3}{16} ql^2$$