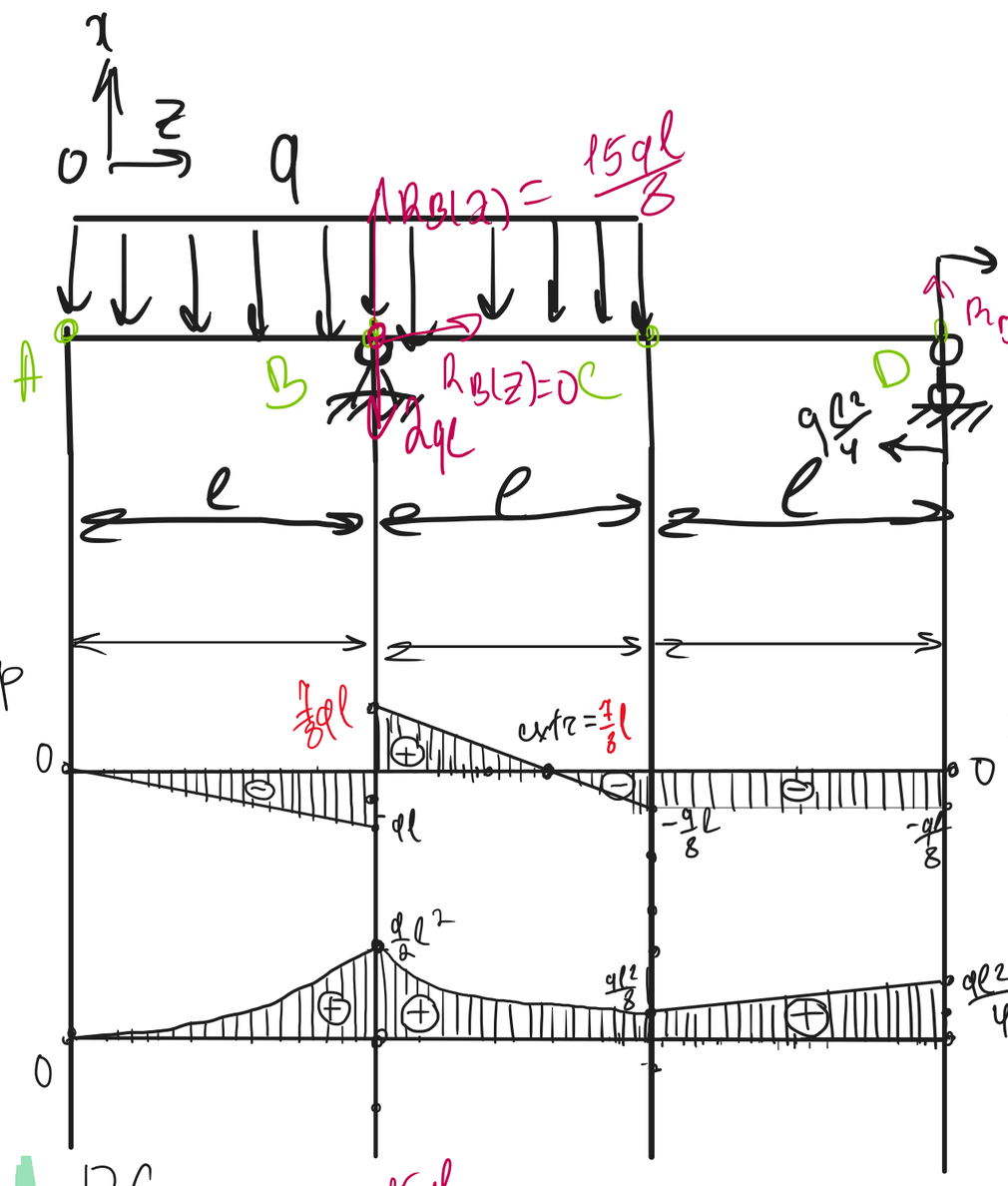


$$\sum x = 0:$$

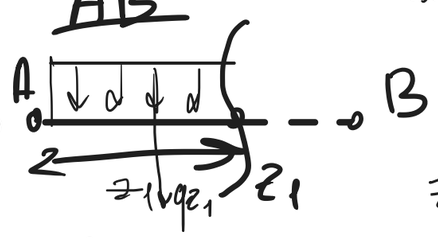
$$-2lq + R_{B(x)} + R_{D(x)} = 0$$

$$\sum M(B) = 0: \quad R_{B(x)} = 2ql - \frac{ql}{8} = \frac{15ql}{8}$$

$$-\frac{ql^2}{4} + R_{D(x)} \cdot 2l = 0$$

$$R_{D(x)} = \frac{ql}{8}$$

AB



$z_1 = (0; l)$

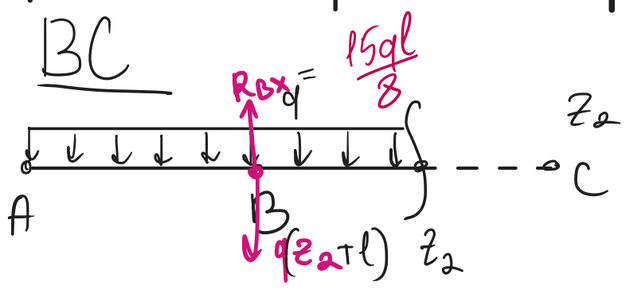
$$Q_x^{AB} = -q z_1 \qquad Q_x^{AB}(0) = 0$$

$$Q_x^{AB}(l) = -ql$$

$$M_x^{AB} = q z_1 \cdot \frac{z_1}{2} = q\frac{z_1^2}{2}$$

$$M_x^{AB}(0) = 0 \qquad M_x^{AB}(B) = \frac{ql^2}{2}$$

BC



$z_2 (0; l)$

$$Q_x^{BC} = -q(z_2 + l) + \frac{15ql}{8}$$

$$M_x^{BC} = -q(z_2 + l)\frac{(z_2 + l)}{2} + \frac{15ql}{8} z_2$$

$$Q_x^{BC}(0) = -ql + 1{,}5ql = \frac{7ql}{8}$$

$$Q_x^{BC}(l) = -2ql + 1{,}5ql = -\frac{ql}{8}$$

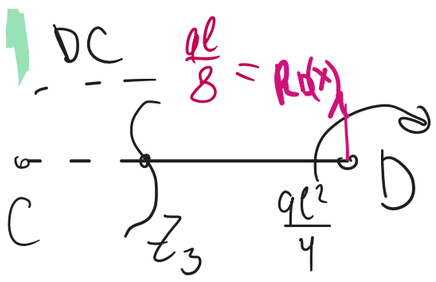
$$M_x^{BC}(0) = \frac{ql^2}{2} \qquad M_x^{BC}(l) = \frac{ql^2}{8}$$

extr:

$$-qz_2 - ql = -\frac{15ql}{8}$$

$$z_2 = \frac{7}{8}l$$

DC



$$R_{D(x)} = \frac{ql}{8}$$

$z_3 = (0; l)$

$$Q_x^{DC} = -R_{D(x)} = -\frac{ql}{8}$$

$$M_x^{DC} = +\frac{ql^2}{4} - R_{Dx} \cdot z_3 = +\frac{ql^2}{4} - \frac{ql}{8} \cdot z_3$$

$$M_x^{DC}(0) = \frac{ql^2}{4}$$

$$M_x^{DC}(l) = +\frac{ql^2}{4} - \frac{ql^2}{8} = \frac{ql^2}{8}$$