

Построить эпюру
внутренних
изгибающих мо-
ментов M_x .

Реакции в опорах:

$$\sum F_z = 0 = -Z_G - q \cdot 2l$$

$$\underline{Z_G = -2ql}$$

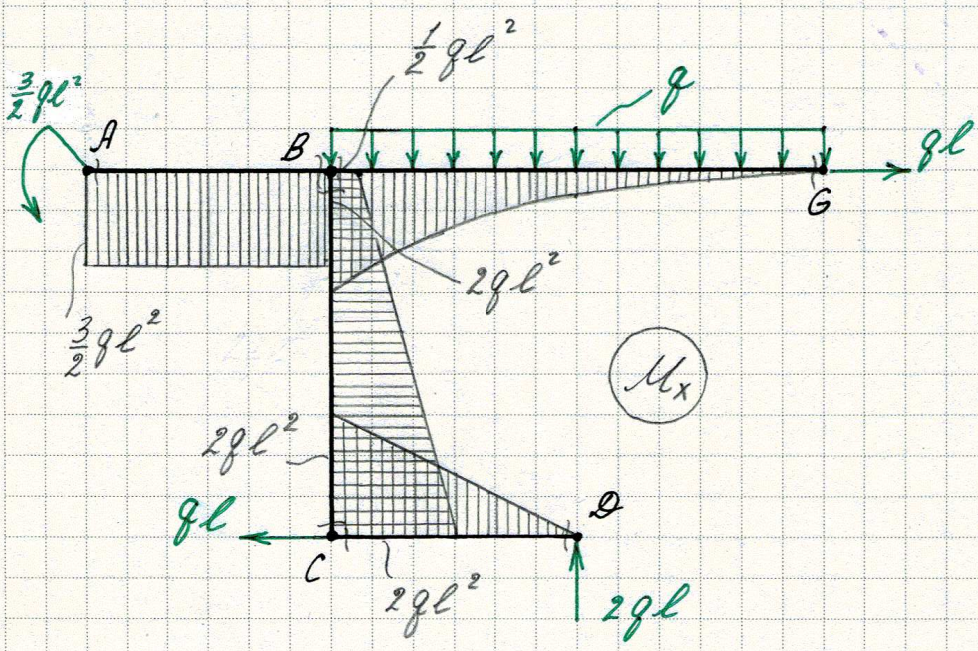
$$\sum F_y = 0 = Y_A - 2ql + 2ql$$

$$\underline{Y_A = 0}$$

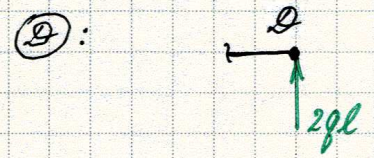
т. Д. равнов.

$$\sum M_A = 0 = M_{RA} + 2ql \cdot 2l - 2ql \cdot 2l - ql \cdot \frac{3}{2}l \Rightarrow \underline{M_{RA} = + \frac{3}{2}ql^2}$$

Силовая схема:



$$\sum M_G = 0$$



$$\sum M_D = 0$$

Равновесие узлов:

(A):

$$\sum M_A = \frac{3}{2}ql^2 - \frac{3}{2}ql^2 = 0$$

(B):

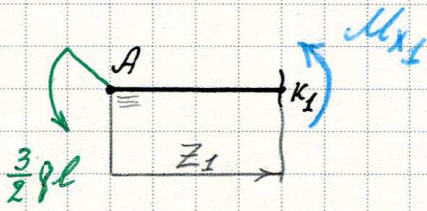
$$\sum M_B = \frac{3}{2}ql^2 + \frac{1}{2}ql^2 - 2ql^2 = 0$$

(C):

$$\sum M_C = -2ql^2 + 2ql^2 = 0$$

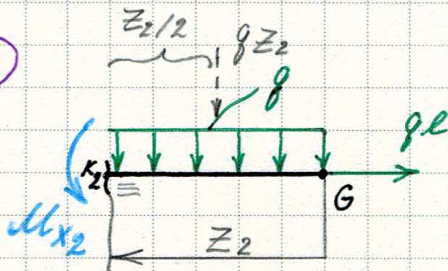
P 034:

①



$$\sum M_{K_1} = 0 = \frac{3}{2} ql + M_{x_1} \Rightarrow M_{x_1} = -\frac{3}{2} ql$$

②

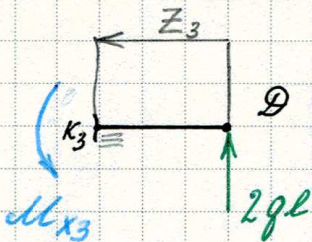


$$\sum M_{K_2} = 0 = M_{x_2} - q z_2 \cdot \frac{z_2}{2} \Rightarrow M_{x_2} = \frac{q z_2^2}{2}$$

(T.G) $z_2 = 0: M_{x_2} = 0$

(T.B) $z_2 = 2l: M_{x_2} = 2ql^2$

③

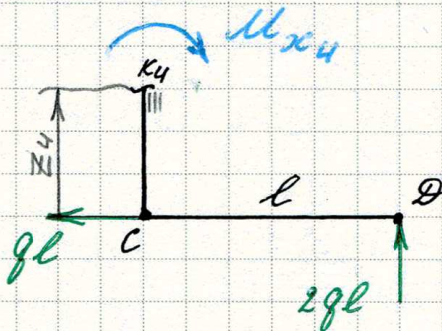


$$\sum M_{K_3} = 0 = M_{x_3} + 2ql \cdot z_3 \Rightarrow M_{x_3} = -2ql z_3$$

(T.D) $z_3 = 0: M_{x_3} = 0$

(T.C) $z_3 = l: M_{x_3} = -2ql^2$

④



$$\sum M_{K_4} = 0 = -M_{x_4} + 2ql \cdot l - ql \cdot z_4$$

$$M_{x_4} = ql(2l - z_4)$$

(T.C) $z_4 = 0: M_{x_4} = 2ql^2$

(T.B) $z_4 = \frac{3}{2}l: M_{x_4} = \frac{1}{2}ql^2$