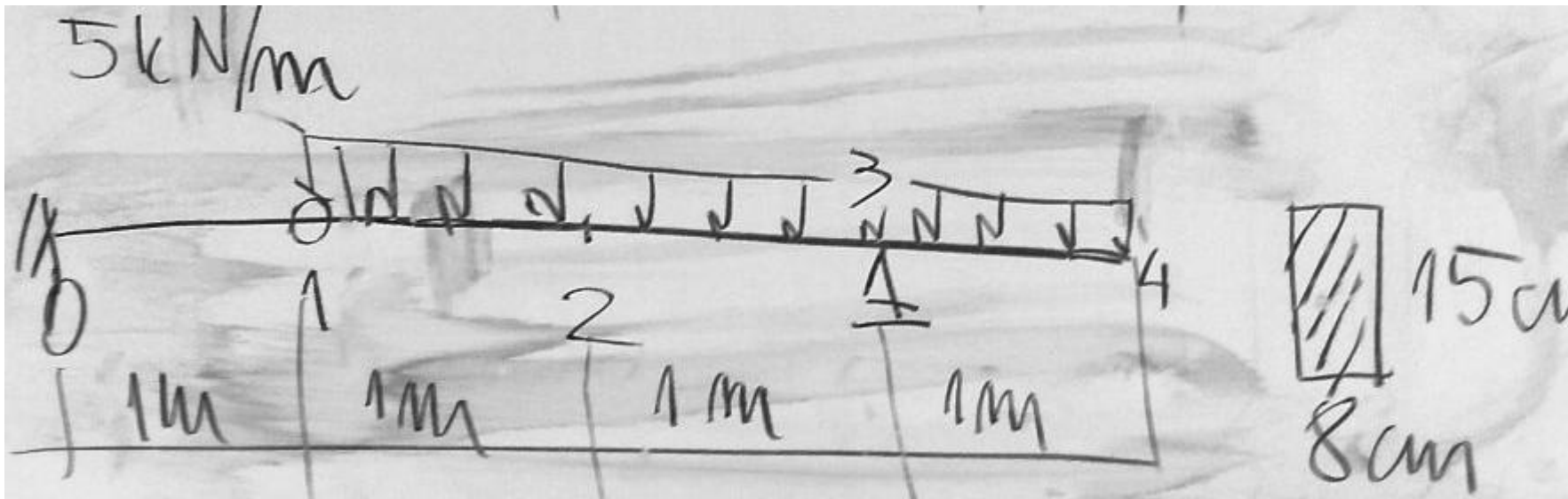


Grupa B1

ORIGIN := 0



$$P := 0 \text{ kN} \quad q := 5 \frac{\text{kN}}{\text{m}}$$

$$\underline{L} := 4 \text{ m} \quad b := 8 \text{ cm} \quad h := 15 \text{ cm} \quad \underline{J} := b \cdot \frac{h^3}{12} \quad E := 15 \text{ GPa}$$

$$T1 := \frac{q \cdot 3 \text{ m} \cdot 0.5 \text{ m}}{2 \text{ m}} = 3.75 \text{ kN} \quad R0 := T1 \quad R3 := q \cdot 3 \text{ m} - T1$$

$$M0 := T1 \cdot 1 \text{ m} \quad M0 = 3.75 \cdot \text{kN} \cdot \text{m} \quad R0 = 3.75 \cdot \text{kN}$$

$$n := 4 \quad \Delta := \frac{L}{n} = 1 \text{ m} \quad \alpha := \frac{\Delta^2}{E \cdot J} \quad \alpha = 2.963 \times 10^{-3} \cdot \frac{1}{\text{kN}}$$

$$M1(x) := R0 \cdot x - M0$$

$$M2(x) := M1(x) - q \cdot \frac{(x - 1\text{m})^2}{2}$$

$$M3(x) := M2(x) + R3 \cdot (x - 3\text{m})$$

$$i := 0 .. n$$

$$X_i := i \cdot \Delta$$

$$i := 0 .. 1 \qquad M_i := M1(X_i)$$

$$i := 1 .. 3 \qquad M_i := M2(X_i)$$

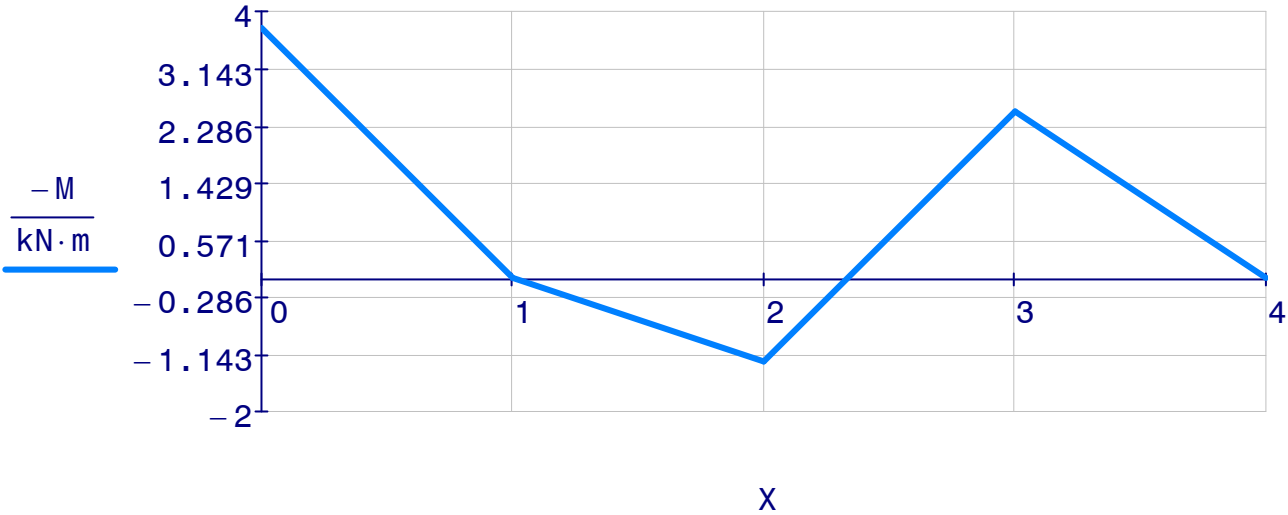
$$i := 3 .. n \qquad M_i := M3(X_i)$$

M =			0
	0	-3.75	
	1	0	
	2	1.25	
	3	-2.5	
	4	0	

· kN · m

X =			0
	0	0	
	1	1	
	2	2	
	3	3	
	4	4	

m



$$A := \begin{pmatrix} 0 & 2 & 0 & 0 & 0 \\ 1 & 0 & 0 & 0 & 0 \\ 0 & 1 & -2 & 1 & 0 \\ 0 & 0 & 1 & -2 & 1 \\ 0 & 0 & 0 & 1 & 0 \end{pmatrix}$$

$$y := \text{lsolve}(A, \alpha \cdot M)$$

$$y = \begin{pmatrix} 0 \\ -5.556 \\ -4.63 \\ 0 \\ -2.778 \end{pmatrix} \cdot \text{mm}$$

