



$$\sum M_A = 0$$

$$4 \cdot 1 - 2 \cdot 2 \cdot 2 + V_B \cdot 2 = 0$$

$$4 - 2 - 8 + V_B \cdot 2 = 0$$

$$-6 + V_B \cdot 2 = 0$$

$$V_B = \frac{6}{2} = 3 \text{ kN}$$

$$\sum M_B = 0$$

$$4 \cdot 3 - V_A \cdot 2 - M = 0$$

$$12 - V_A \cdot 2 - 2 = 0$$

$$10 - V_A \cdot 2 = 0$$

$$V_A = \frac{10}{2} = 5 \text{ kN}$$

1) Obliczam siły i momenty

$$\text{I} \quad 0 \leq x_1 \leq 1$$

$$T(x_1) = -P \cdot x_1$$

$$N(x_1) = -P \cdot x_1$$

$$T(x_1=0) = 0$$

$$M(x_1=0) = 0$$

$$T(x_1=1) = -4 \text{ kN}$$

$$M(x_1=1) = -4 \text{ kNm}$$

$$\text{II} \quad 1 \leq x_2 \leq 2$$

$$T(x_2) = -P \cdot x_2 + V_A$$

$$N(x_2) = -P \cdot x_2 + V_A \cdot x_2$$

$$T(x_2=1) = -4 + 5 = 1 \text{ kN}$$

$$M(x_2=1) = -4 + 5 = 1 \text{ kNm}$$

$$T(x_2=2) = -8 + 5 = -3 \text{ kN}$$

$$M(x_2=2) = -8 + 10 = 2 \text{ kNm}$$