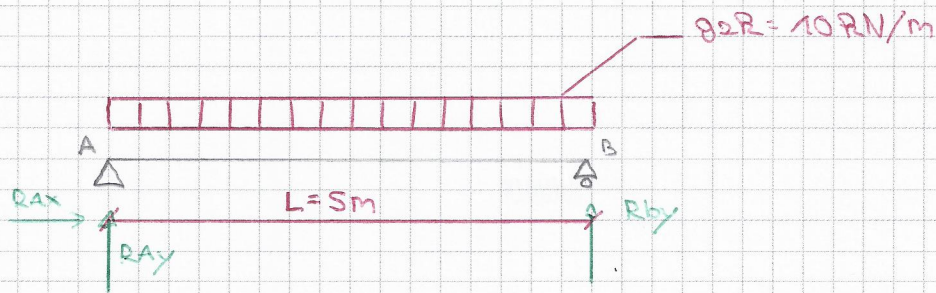
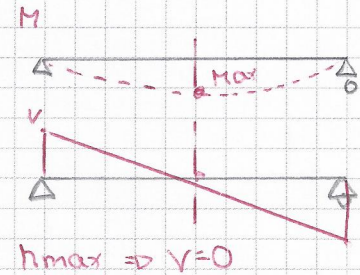
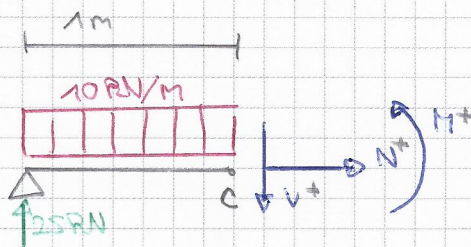


Exemple 1

$$\sum F_x = 0 = R_{Ax}$$

$$\sum M_A = R_{By} \cdot 5 - (10 \cdot 5 \cdot 5/2) = 0 \Rightarrow \underline{R_{By} = 25 \text{ kN}}$$

$$\sum F_y = 0 = R_{Ay} + R_{By} - 5 \cdot 10 = 0 \Rightarrow \underline{R_{Ay} = 25 \text{ kN}}$$

coupe 1 : à 1m

$$\sum F_y = 0 = (-25) + V + (10 \cdot 1) \Rightarrow V = 15 \text{ kN}$$

$$\sum M_C = -25 \cdot 1 + 10 \cdot 1 \cdot 1/2 + M = 0 \Rightarrow M = 20 \text{ kNm}$$

$$\sum F_x = N = 0$$

coupe à 2,5m

$$\sum F_y = 0 = (-25) + V + 10 \cdot 2,5 \Rightarrow V = 0$$

$$\sum M_C = (-25 \cdot 2,5) + 10 \cdot 2,5 \cdot 2,5/2 + M = 0 \Rightarrow M = 31,25 \text{ kNm}$$

$$\sum F_x = 0 = N$$

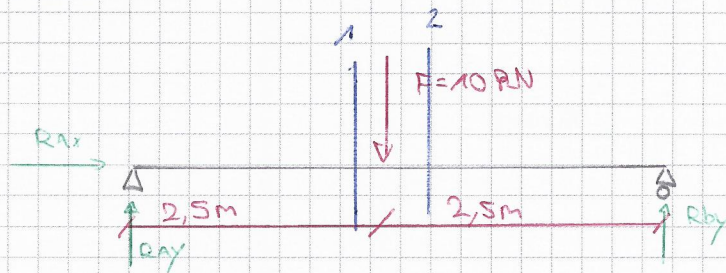
$V=0 \Rightarrow M_{\text{maximal}}$
ou M_{minimal}

coupe à 3m

$$\sum F_y = 0 \Rightarrow V = -5 \text{ kN}$$

$$\sum M_C = 0 \Rightarrow M = 30 \text{ kNm}$$

$$\sum F_x = 0 = N$$

Example 2

$$\sum M_C = 0 \Rightarrow (-2,5 \cdot 10) + 5 \cdot R_{By} = 0 \Rightarrow R_{By} = 5 \text{ kN}$$

$$\sum F_y = 0 \Rightarrow R_{Ay} = 5 \text{ kN}$$

coupe 1

$$\sum F_x = N = 0$$

$$\sum F_y = -R_{Ax} + V = 0 \Rightarrow V = 5 \text{ kN}$$

$$\sum M_C = -5 \cdot 2,5 + M = 0 \Rightarrow M = 12,5 \text{ kNm}$$

coupe 2

$$\sum F_x = N = 0$$

$$\sum F_y = -5 + V + 10 = 0$$

$$\Rightarrow V = -5$$

$$\sum M_C = -5 \cdot 2,5 + M = 0 \Rightarrow M = 12,5 \text{ kNm}$$

