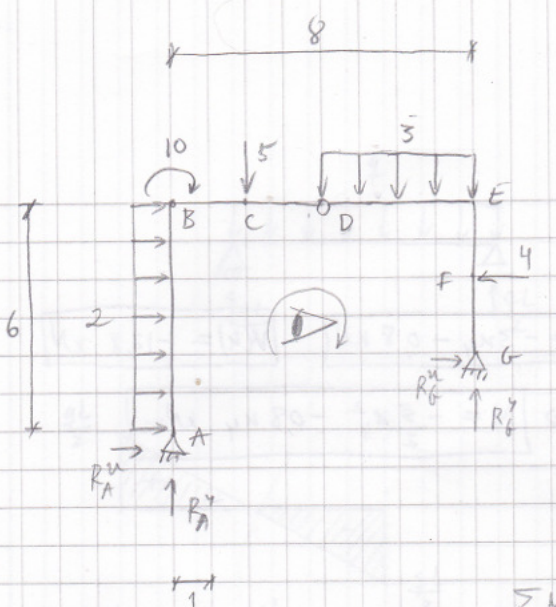


$R_A^x = x$     $R_A^y = y$   
 $R_G^x = y$     $R_G^y = z$



$\sum F_x = 0 \Rightarrow R_A^x + R_G^x + 2 \cdot 6 - 4 = 0$   
 $\sum F_y = 0 \Rightarrow R_A^y + R_G^y - 5 - 3 \cdot 4 = 0$  *Princial*  
 $\sum M_A = 0 \Rightarrow -R_G^y \cdot 8 - R_G^x \cdot 2 - 2 \cdot 6 \cdot 3 - 10 - 5 \cdot 2 - 3 \cdot 4 \cdot 6 + 4 \cdot 4 = 0$   
 $\sum M_D = 0 \Rightarrow R_G^y \cdot 4 + R_G^x \cdot 4 - 3 \cdot 4 \cdot 2 - 4 \cdot 2 = 0$

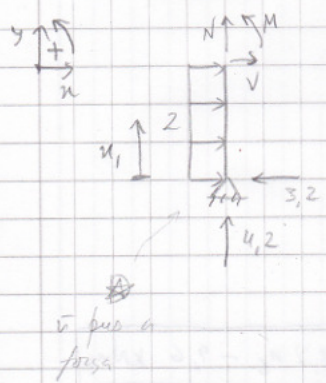
$\sum M_D = 0 \Rightarrow R_A^x \cdot 6 - R_A^y \cdot 4 - 10 + 5 \cdot 2 + 2 \cdot 6 \cdot 3 = 0$

$R_A^x = -3,2$     $R_G^x = -4,8$   
 $R_A^y = 4,2$     $R_G^y = 12,8$

[kN]

$\vec{v}$  ni  
 wta no

A-B



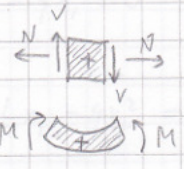
$\sum F_x = 0 \Rightarrow V - 3,2 + 2x_1 = 0 \Rightarrow V = -2x_1 + 3,2$  [kN]

$\sum F_y = 0 \Rightarrow N + 4,2 = 0 \Rightarrow N = -4,2$  [kN]

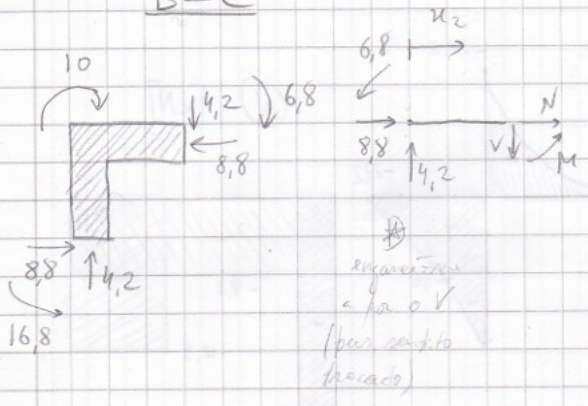
$\sum M_{x_1} = 0 \Rightarrow M - 3,2x_1 + 2x_1 \cdot \frac{x_1}{2} = 0 \Rightarrow M = -x_1^2 + 3,2x_1$  [kNm]

$M(6) = -16,8$  [kNm]

$V(6) = -8,8$  [kN]



B-C



$N = -8,8$  [kN]

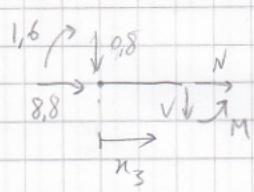
$V = 4,2$  [kN]

$M + 6,8 - 4,2x_2 = 0 \Rightarrow M = 4,2x_2 - 6,8$  [kNm]

$M(2) = 1,6$  [kNm]

exigência  
 a pa o V  
 (para sentido  
 horário)

C-D



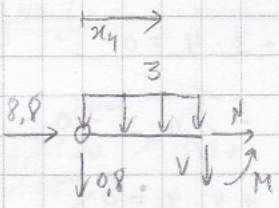
$N = -8,8$  [kN]

$V = -0,8$  [kN]

$M - 1,6 + 0,8x_3 = 0 \Rightarrow M = -0,8x_3 + 1,6$  [kNm]

$M(2) = 0$  ✓

D - E



$$N = -8,8 \text{ kN}$$

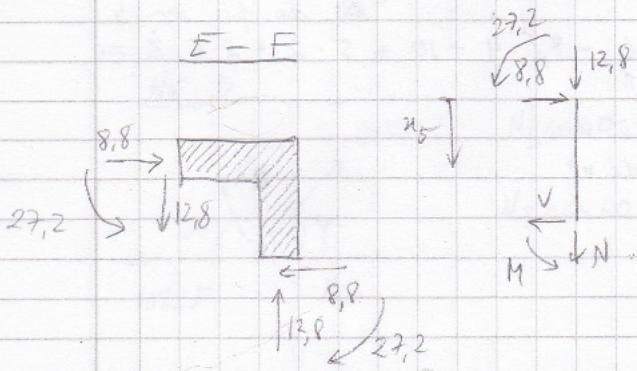
$$V + 0,8 + 3 \cdot x_4 = 0 \Rightarrow V = -3x_4 - 0,8 \text{ kN}$$

$$V(x_4) = -12,8 \text{ kN}$$

$$M + 0,8x_4 + 3x_4 \cdot \frac{x_4}{2} = 0 \Rightarrow M = -\frac{3}{2}x_4^2 - 0,8x_4 \text{ kNm}$$

$$M(x_4) = -27,2 \text{ kNm}$$

E - F



$$V = 8,8 \text{ kN}$$

$$M + 27,2 - 8,8x_5 = 0 \Rightarrow$$

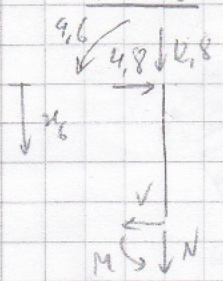
$$N = -12,8 \text{ kN}$$

$$M = 8,8x_5 - 27,2 \text{ kNm}$$

$$M(x_5) = -9,6 \text{ kNm}$$

capela  
a h° (para  
12,8)

F - G

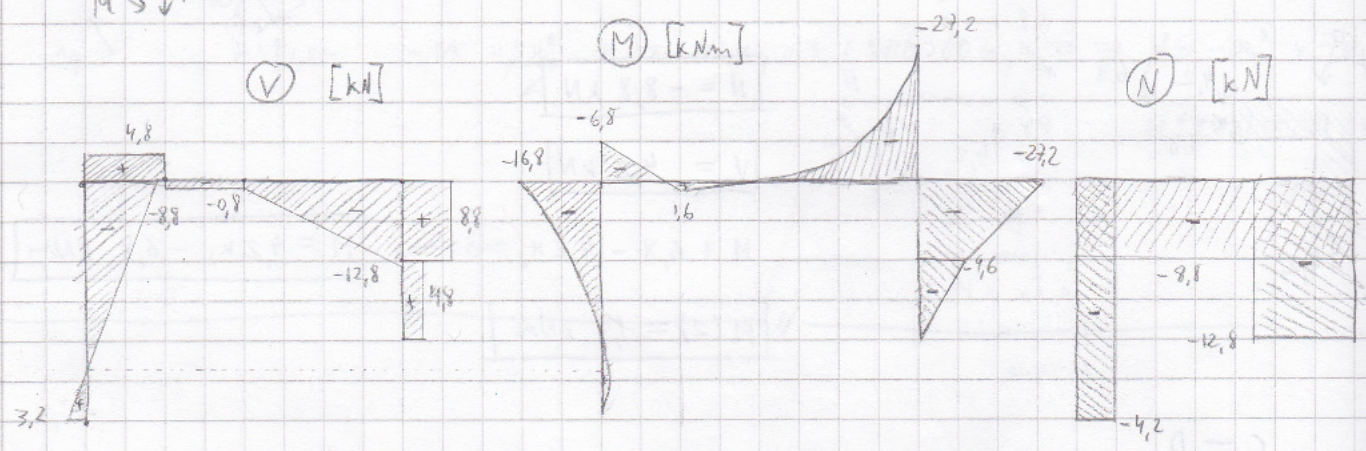


$$V = 4,8 \text{ kN}$$

$$M + 9,6 - 4,8x_6 = 0 \Rightarrow M = 4,8x_6 - 9,6 \text{ kNm}$$

$$N = -12,8 \text{ kN}$$

$$M(x_6) = 0 \quad \checkmark$$



Nota: (M)

