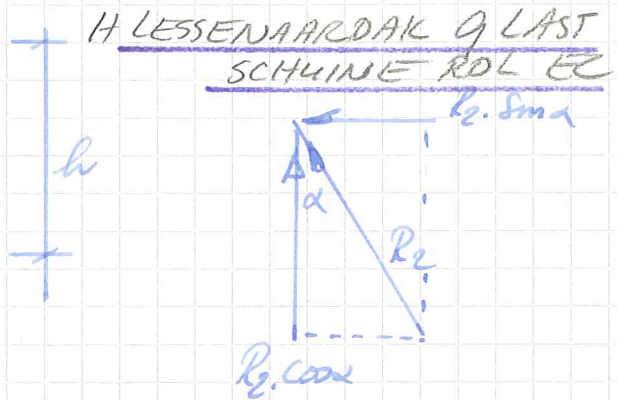
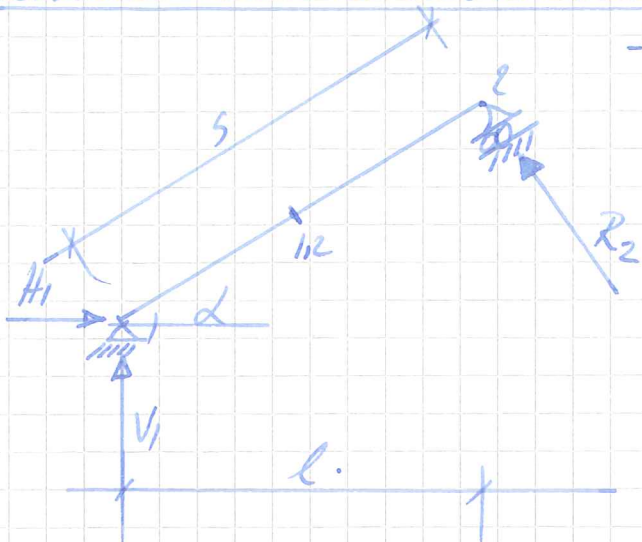


Lesenaardak zonder knieschot met schuine rol
 by steunpunt 2.



formules voor eigen gewicht en sneeuw:

$$M_{1,2} = \frac{1}{8} \cdot q \cdot l^2 \quad \sum M_1 = 0 \quad \frac{1}{2} \cdot q \cdot l^2 - R_2 \cdot s = 0 \Rightarrow R_2 = \frac{\frac{1}{2} q l^2}{s}$$

$$V_1 = q \cdot l - R_2 \cdot \cos \alpha$$

$$H_1 = R_2 \cdot \sin \alpha$$

$$N'_{1,2} = \frac{1}{2} \cdot q \cdot l \cdot \sin \alpha$$

$$M_{\text{veld}} = \frac{5 \cdot q \cdot \cos^2 \alpha \cdot s^4}{384 \text{ EJ}}$$

formules voor wind:

$$M_{1,2} = \frac{1}{8} \cdot q_1 \cdot s^2 \quad \sum M_1 = 0 \quad \frac{1}{2} \cdot q_1 \cdot s^2 - R_2 \cdot s = 0 \Rightarrow R_2 = \frac{1}{2} \cdot q_1 \cdot s$$

$$V_1 = \left(\frac{q_1 \cdot s}{2} - R_2 \right) \cdot \cos \alpha$$

$$H_1 = R_2 \cdot \sin \alpha - \frac{q_1 \cdot s}{2} \cdot \sin \alpha = \left(R_2 - \frac{q_1 \cdot s}{2} \right) \cdot \sin \alpha$$

$$N'_{1,2} = 0$$

$$M_{\text{veld}} = \frac{5 \cdot q_1 \cdot s^4}{384 \text{ EJ}}$$

formules voor puntlast:

$$M_{1,2} = \frac{1}{4} \cdot F \cdot l \quad \sum M_1 = 0 \quad F \cdot \frac{1}{2} l - R_2 \cdot s = 0 \quad R_2 = \frac{\frac{1}{2} \cdot F \cdot l}{s}$$

$$V_1 = \frac{1}{2} \cdot F \cdot \cos^2 \alpha \quad \text{of} \quad V_1 = F - R_2 \cdot \cos \alpha \quad (\text{kontroleer})$$

$$H_1 = R_2 \cdot \sin \alpha$$

$$N'_{1,2} = F \cdot \sin \alpha$$

