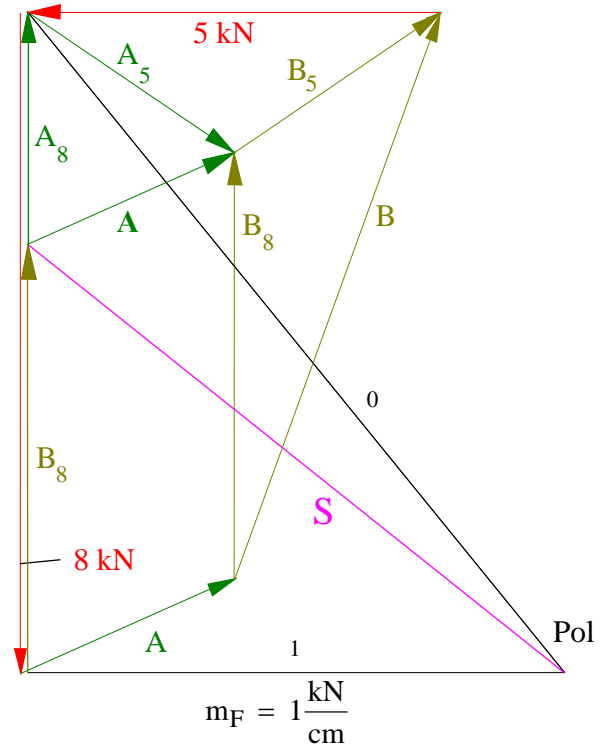
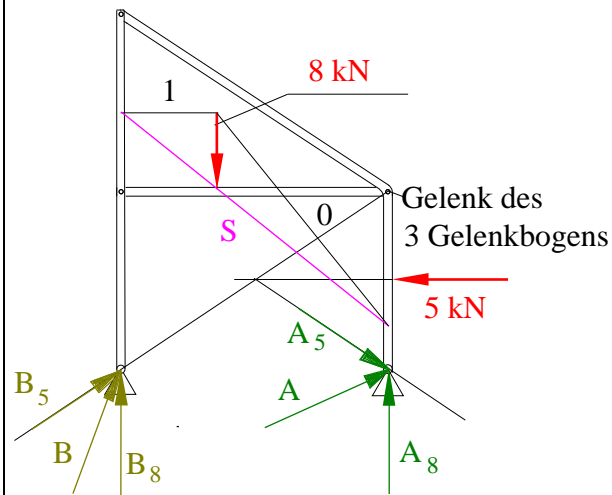
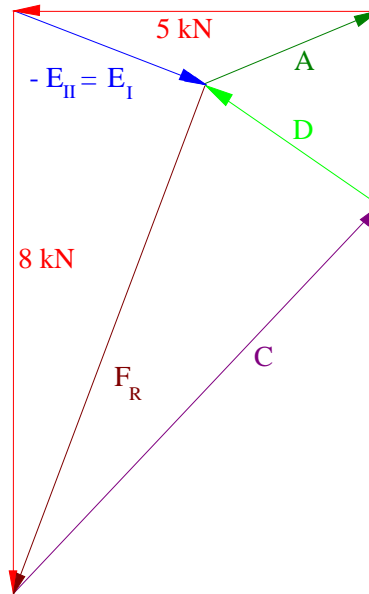
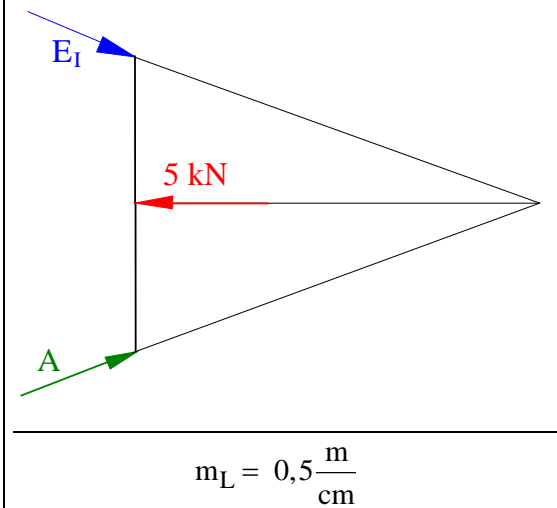


Zeichnerische Lösung:

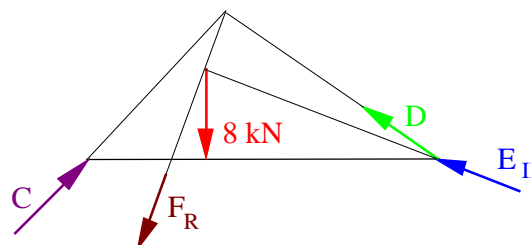


Balken I:



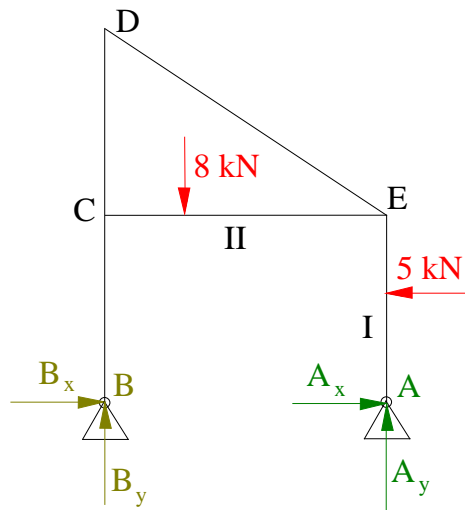
$A = 2,7 \text{ kN}$   
 $B = 7,43 \text{ kN}$   
 $E = 2,7 \text{ kN}$   
 $D = 3 \text{ kN}$   
 $C = 7,3 \text{ kN}$

Balken II:



zu Aufgabe 1, Aufgabenblatt 2:

Rechnerische Lösung:



Gesamtsystem:

$$\sum M_{i, B} = 0: A_y \cdot 3 = 8 \text{ kN} - 5 \text{ kN} \\ \rightarrow A_y = 1 \text{ kN}$$

$$\sum M_{i, A} = 0: B_y \cdot 3 = 8 \cdot 2 \text{ kN} + 5 \text{ kN} \\ \rightarrow B_y = 7 \text{ kN}$$

Balken I:

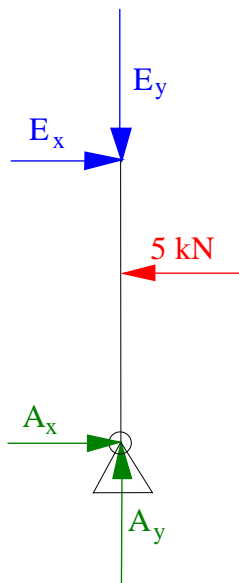
$$\sum F_{i, Y} = 0: E_y = A_y = 1 \text{ kN}$$

$$\sum M_{i, E} = 0: A_x \cdot 2 = 5 \text{ kN} \rightarrow A_x = 2,5 \text{ kN}$$

$$\sum F_{i, x} = 0: E_x = 5 \text{ kN} - A_x = 2,5 \text{ kN}$$

$$E = \sqrt{E_x^2 + E_y^2} = 2,69 \text{ kN}$$

$$A = \sqrt{A_x^2 + A_y^2} = 2,69 \text{ kN}$$



Balken II:

$$\tan \alpha = -\frac{2}{3} \rightarrow \alpha = 33,69^\circ$$

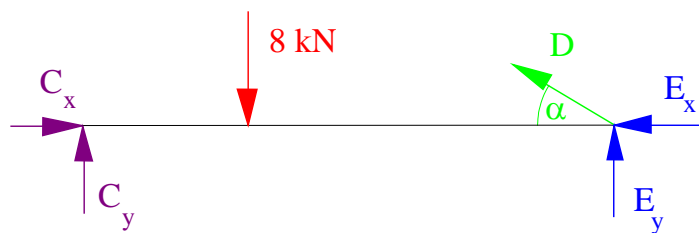
$$\sum M_{i, C} = 0: 8 \text{ kN} = D \cdot \sin \alpha \cdot 3 + E_y \cdot 3$$

$$\sum F_{i, x} = 0: C_x = E_x + D \cdot \cos \alpha = 5 \text{ kN}$$

$$\sum F_{i, x} = 0: C_x = E_x + D \cdot \cos \alpha = 5 \text{ kN}$$

$$\sum F_{i, Y} = 0: C_y = 8 \text{ kN} - D \cdot \sin \alpha - E_y \\ C_y = 5,34 \text{ kN}$$

$$C = \sqrt{C_x^2 + C_y^2} = 7,31 \text{ kN}$$



Gesamtsystem:

$$\sum F_{i, x} = 0: \\ B_x = 5 \text{ kN} - A_x \\ B_x = 2,5 \text{ kN}$$

$$\text{mit } B_y = 7 \text{ kN} \rightarrow$$

$$B = \sqrt{B_x^2 + B_y^2}$$

$$B = 7,43 \text{ kN}$$