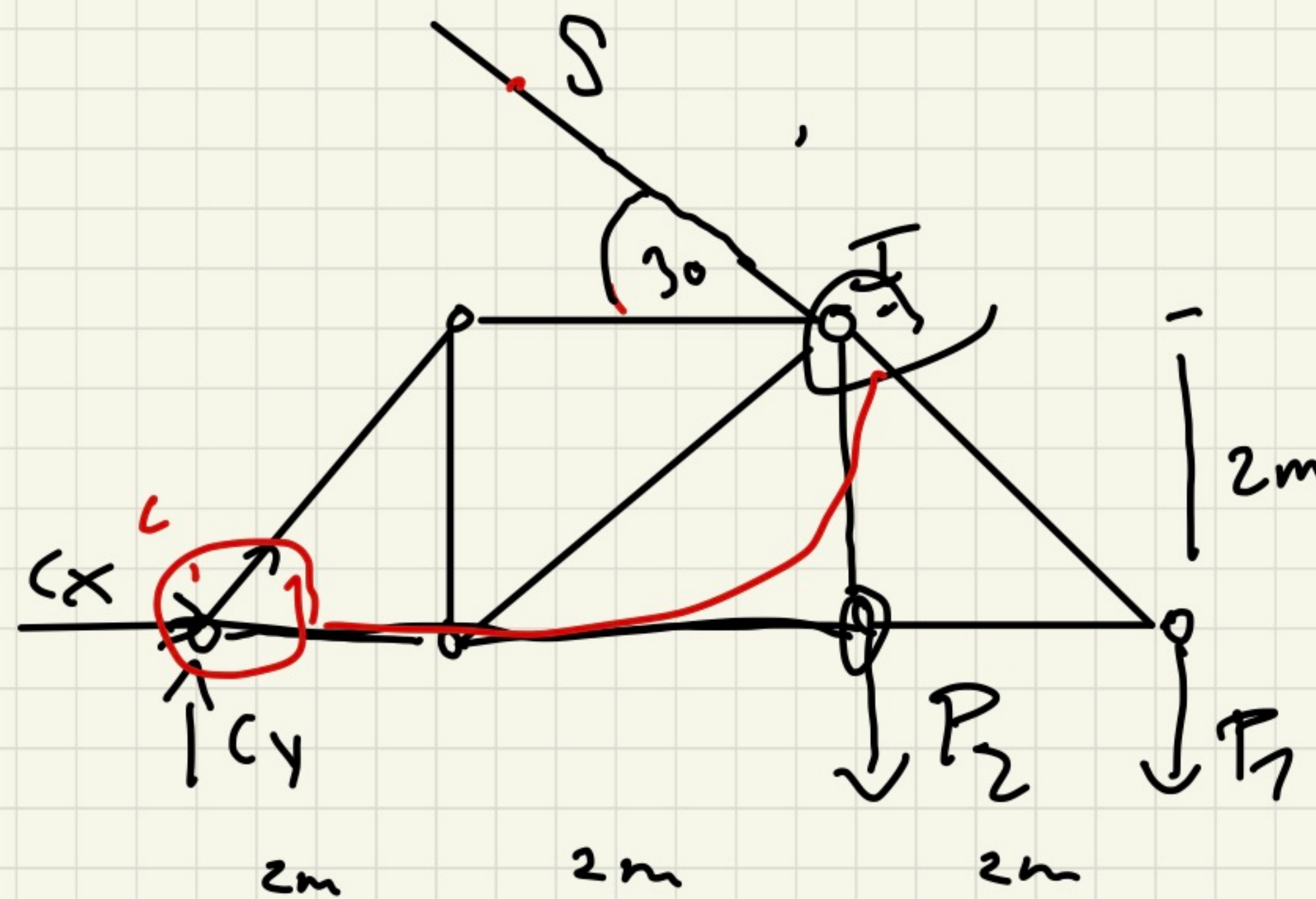


$$P_1 = 2000 \text{ N}$$

$$P_2 = 3000 \text{ N}$$



$$\sum \overset{C}{M}_{(I)} = 0 - \underline{C_y} \cdot 4 \text{ m}$$

$$- P_2 \cdot 2 \text{ m} + \underline{C_x} \cdot 2 \text{ m}$$

$$-C_y \cdot 4m - P_1 \cdot 2m + 2 \cdot S \cdot \cos 30$$

$$-C_y \cdot 4m = P_1 \cdot 2m - 2S \cdot \cos 30$$

$$C_y \cdot 4m = -P_1 \cdot 2m + 2S \cos 30$$

$$C_y = \frac{-4000 \text{ Nm} + 2 \cdot S \cos 30}{4 \text{ m}}$$

$$\sum F_y = 0$$

$$C_y - P_2 - P_1 + S \cdot \sin(30) = 0$$

$$\sum F_x = 0$$

$$C_x - \underline{\underline{S \cdot \cos 30}} = 0$$

$$C_x = S \cdot \cos 30$$

$$C_y = P_2 + P_1 + S \cdot \sin 30$$

$$C_y = 5000 \text{ N} + S \cdot \sin 30$$

$$C_y = 5000 \text{ N} + \frac{1}{2} S$$

Momentengleichung:

$$\textcircled{3} - C_y \cdot 4 \text{ m} - P_1 \cdot 2 \text{ m} \\ + C_x \cdot 2 \text{ m}$$

$$- \left(5000 \text{ N} + \frac{1}{2} S \right) \cdot 4 \text{ m} - 4000 \text{ Nm}$$

$$+ S \cdot \cos 30 \cdot 2 \text{ m}$$

$$= -20 \text{ kNm} - 2 S \cdot \text{m}$$

$$- 4000 \text{ Nm} + S \cdot \cos 30 \cdot 2 \text{ m}$$

$$= -24 \text{ kNm} + S \cdot (-2 \text{ m} + \cos 30 \cdot 2 \text{ m})$$

$$= 0$$

$$S = \frac{24 \text{ kNm}}{-2 \text{ m} + \cos 30 \cdot 2 \text{ m}}$$



$$S = -89,56$$

$$C_x = -89,56 \text{ kN} \cdot \cos 30$$

$$C_x = 77,56 \text{ kN}$$

$$C_y = 5000 \text{ N} + \frac{1}{2} S$$

$$C_y = 5000 \text{ N} + \frac{-89,56 \text{ kN}}{2}$$

$$C_y = -39,78 \text{ kN}$$