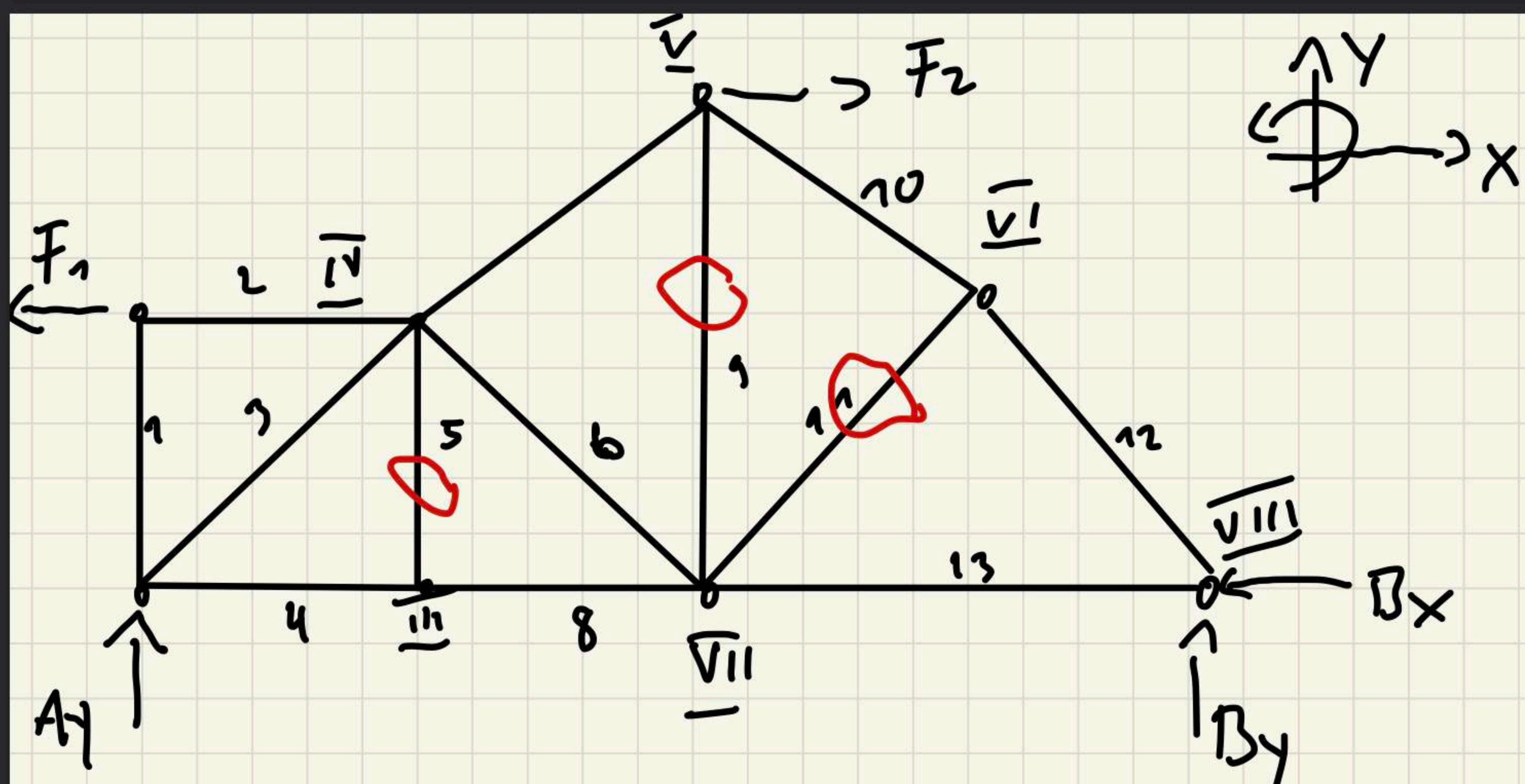




$$F_1 = 200 \text{ kN} \quad F_2 = 500 \text{ kN} \quad a = 1 \text{ m}$$

$$\sum F_x = 0 \quad -B_x - F_1 + F_2$$

$$\sum F_y = 0 \quad A_y + B_y = 0$$

$$\sum \overset{\curvearrowleft}{M}_{(B)} = 0 \quad -A_y \cdot 4a + F_1 \cdot 4a - F_2 \cdot 2a = 0$$



$$\textcircled{1} \quad -B_x = F_1 - F_2$$

$$B_x = -F_1 + F_2 = -200 \text{ kN} + 500 \text{ kN}$$

$$B_x = 300 \text{ kN}$$

$$\textcircled{3} \quad -A_y \cdot 4a + 200 \text{ kN} \cdot 4m - 500 \text{ kN} \cdot 2m$$

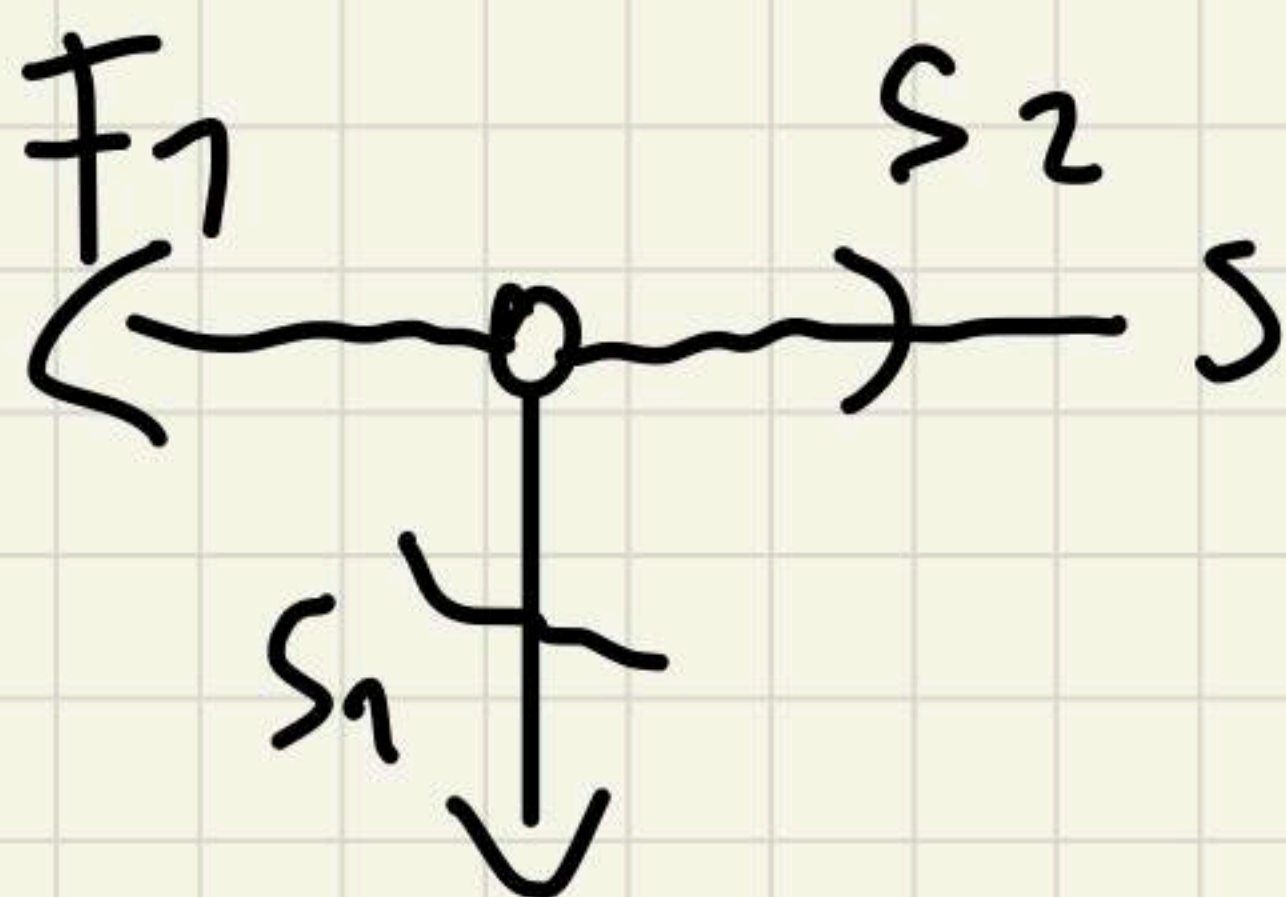
$$-A_y \cdot 4m = -200 \text{ kN} \cdot 4m + 500 \cdot 2$$

$$A_y = \frac{200 \text{ kN} \cdot 4m - 500 \text{ kN} \cdot 2m}{4m}$$

$$A_y = -50 \text{ kN}$$

$$B_y = -A_y = 50 \text{ kN}$$

$$B_r = \sqrt{B_x^2 + B_y^2} = 304,14$$



$$\sum F_x = 0$$

$$-F_1 + S_2 = 0$$

$$S_2 = \underline{\underline{200 \text{ kN}}}$$

$$\sum F_y = 0$$

$$-S_1 = 0$$

$$\underline{\underline{S_1 = 0}}$$

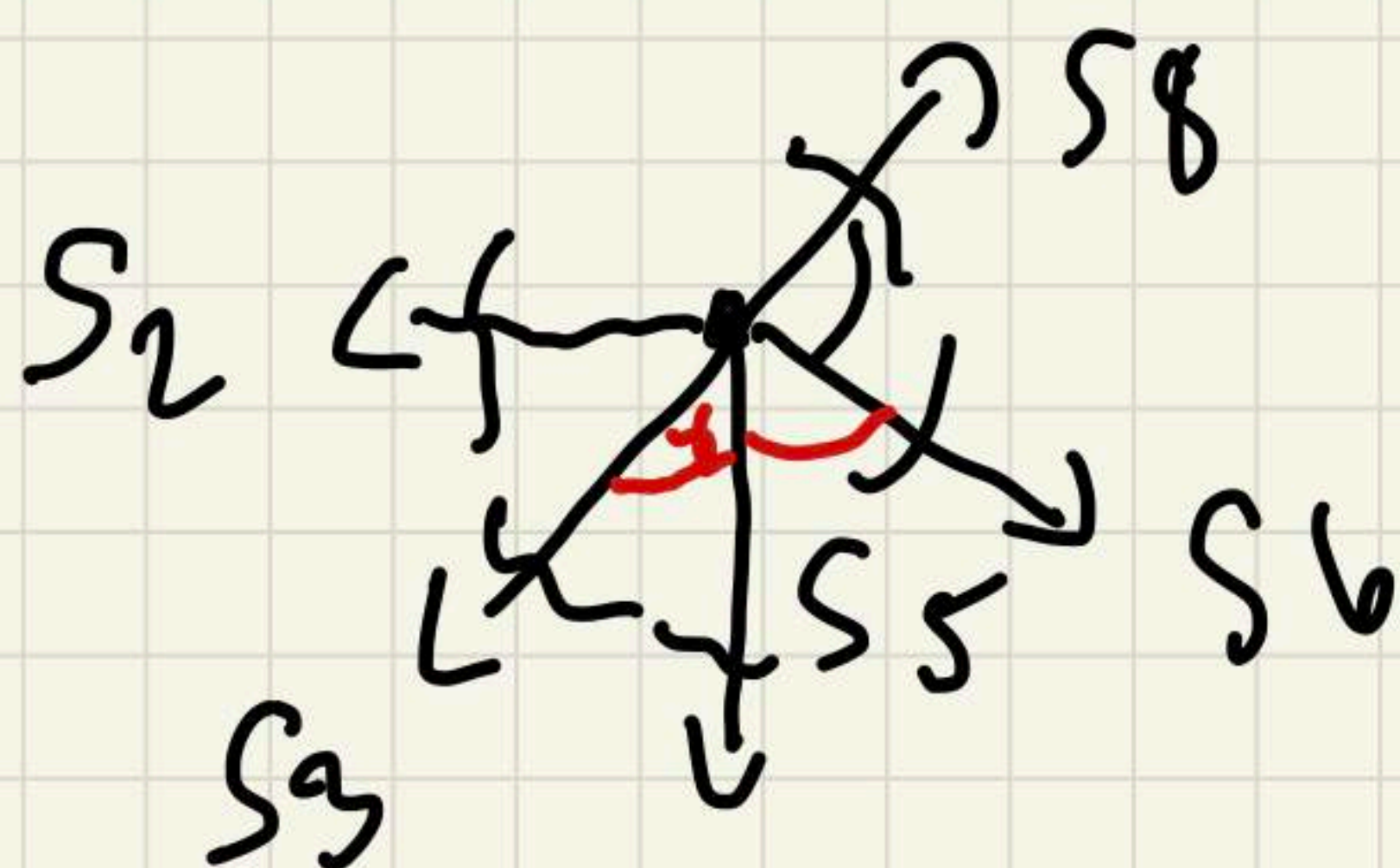
Trigo

$$\cos \alpha = \frac{S_1}{S_3}$$

$$\sin(\alpha) = \frac{S_2}{S_3}$$

$$\frac{S_2}{\sin 45} = 282,8 \text{ kN}$$

$$S_3 = 282,8 \text{ kN}$$



$$S_5 = 0$$

$$\begin{aligned} \sum F_x = 0 & -S_1 - S_3 \cdot \sin 45^\circ \\ & + S_6 \cdot \sin(45^\circ) + S_8 \cdot \cos 45^\circ \\ & = 0 \end{aligned}$$

$$\begin{aligned} \sum F_y = 0 & -S_3 \cdot \cos(45) \\ & - S_6 \cdot \cos(45^\circ) + S_8 \cdot \sin(45^\circ) \end{aligned}$$

$$S_8 = \frac{S_1 + S_3 \cdot \sin 45 - S_6 \cdot \sin 45}{\cos(45)}$$



Untitled



x

Untitled

x

Unbenanntes Notizbuch



$$\textcircled{2} S_3 = 282,8 \text{ kN} \quad S_2 = 200 \text{ kN}$$

$$- S_3 \cdot \cos 45 - S_6 \cdot \cos 45 + \tan 45 \cdot$$

$$(S_2 + S_3 \cdot \sin 45 - S_6 \cdot \sin 45) = 0$$

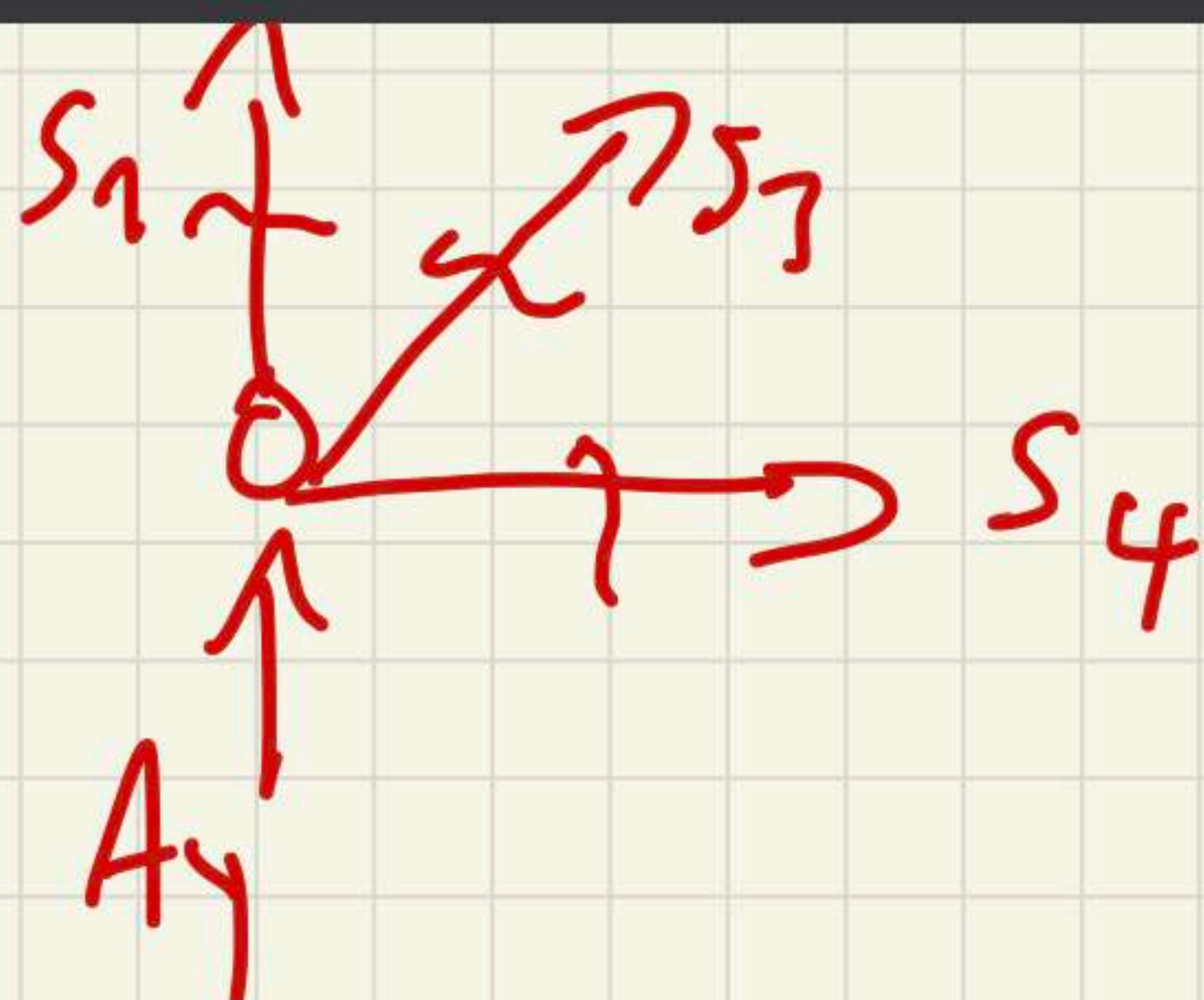
$$- 199,97 \text{ kN} - S_6 \cdot \cos 45 + \tan 45 \cdot (200 \text{ kN}$$

$$+ 199,96 \text{ kN} - S_6 \cdot \sin 45)$$

$$- S_6 \cdot (\cos 45 + \sin 45 \cdot \tan 45)$$

$$+ 200 \text{ kN} + 199,96 \text{ kN} = 0$$

$$S_6 = \frac{200 + 199,96}{\cos(45) + \sin 45 \cdot \tan(45)}$$

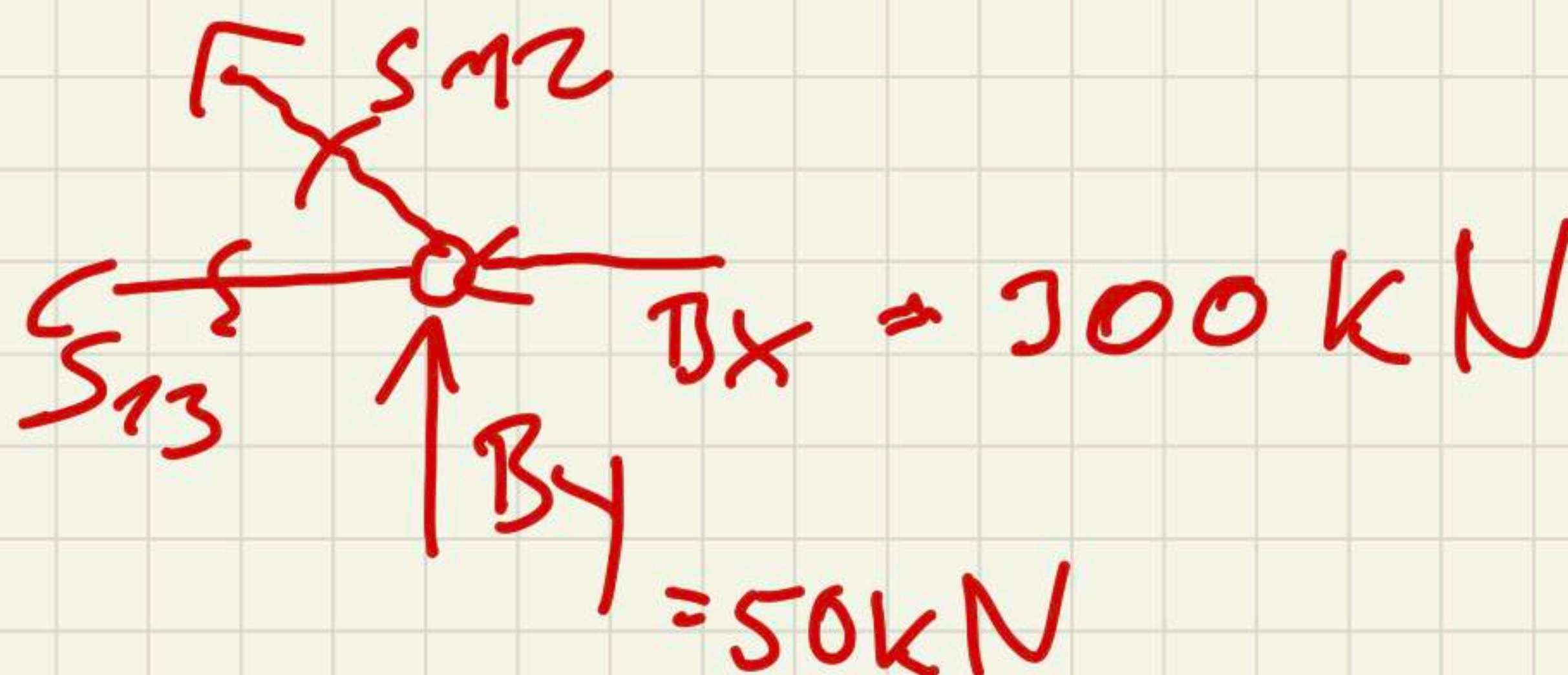


$$S_1 = 0 \quad S_3 = 282,8 \text{ kN}$$

$$\sum F_x = 0 \quad S_4 + S_3 \cdot \cos 45$$

$$S_4 = -200 \quad S_8 = -200$$

Druckst



$$\sum F_x = 0 \quad -B_x - S_{13} - S_{12} \cdot \cos(45)$$

$$\sum F_y = 0 \quad B_y + S_{12} \cdot \sin 45$$

$$S_{12} = -70,7 \text{ kN}$$