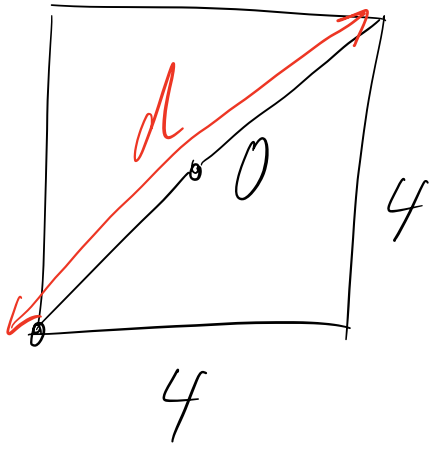


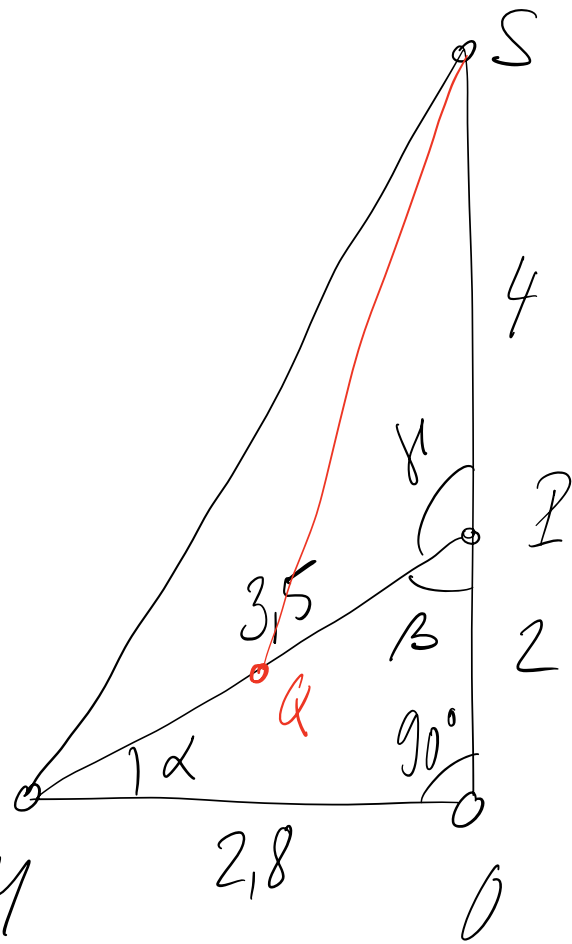
2)



$$d^2 = 4^2 + 4^2 = 16 + 16 = 32$$

$$\Rightarrow d = \sqrt{32} = 4\sqrt{2} \quad M$$

$$d \approx 5,6569 \quad \Rightarrow MO = 2\sqrt{2} \approx 2,8284$$



$$MP^2 = (2\sqrt{2})^2 + 2^2 = 8 + 4 = 12$$

$$MP = \sqrt{12} = 2\sqrt{3} \approx 3,4641$$

$$MS^2 = (2\sqrt{2})^2 + 6^2 = 8 + 36 = 44$$

$$MS = \sqrt{44} = 2\sqrt{11} \approx 6,6332$$

$$b) \boxed{\widehat{MOP} = 90^\circ}$$

$$\tan \alpha \approx \frac{2}{2,8284} \approx 0,707107 \Rightarrow \boxed{\alpha \approx 35,26^\circ}$$

$$\beta \approx 180^\circ - 90^\circ - 35,26^\circ \approx \boxed{54,74^\circ}$$

$$c) QP = \sqrt{3} \approx 1,7321$$

$$\gamma = 180^\circ - \beta \approx 125,26^\circ$$

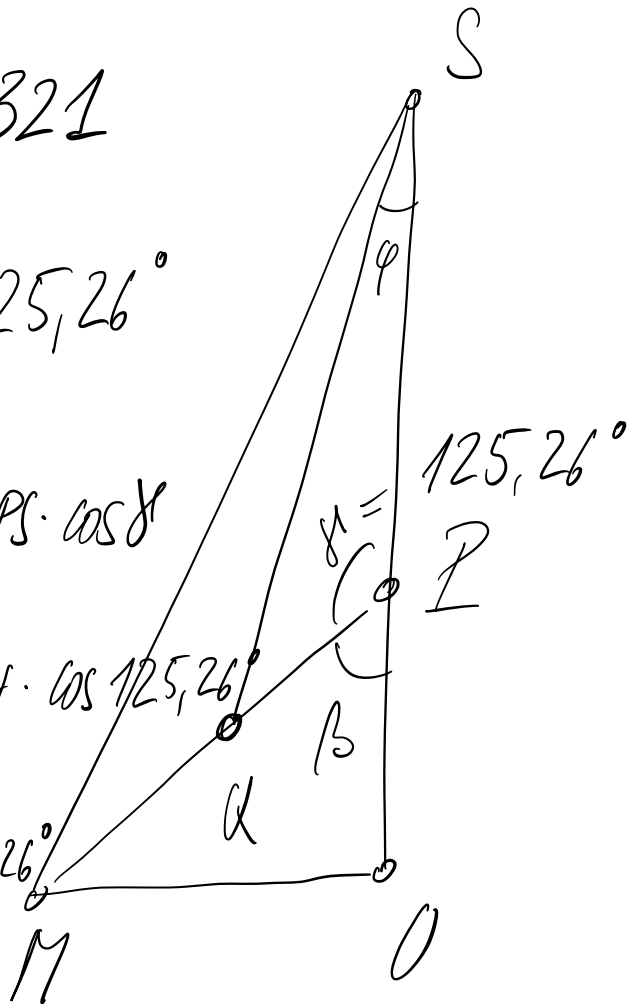
$$QS^2 = QP^2 + PS^2 - 2 \cdot QP \cdot PS \cdot \cos \gamma$$

$$QS^2 \approx (\sqrt{3})^2 + 4^2 - 2 \cdot \sqrt{3} \cdot 4 \cdot \cos 125,26^\circ$$

$$QS^2 \approx 19 - 13,8564 \cdot \cos 125,26^\circ$$

$$QS^2 \approx 26,90913$$

$$QS \approx 5,196069$$



$$\frac{\sin \varphi}{\sqrt{3}} \approx \frac{\sin 125,26^\circ}{5,196069}$$

$$\Rightarrow \sin \varphi \approx \frac{\sin 125,26^\circ \cdot \sqrt{3}}{5,196069} \approx 0,272185$$

$$\Rightarrow \boxed{\varphi \approx 15,79^\circ}$$