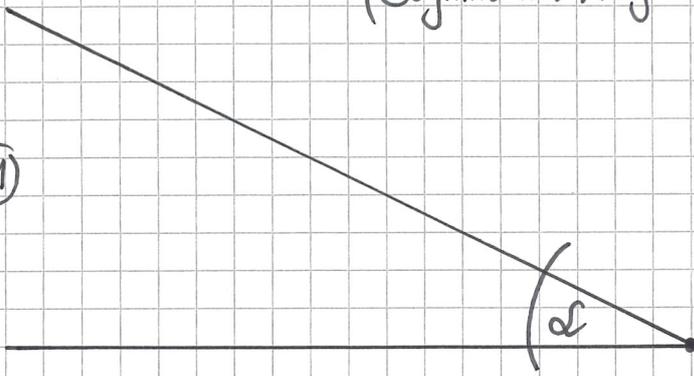


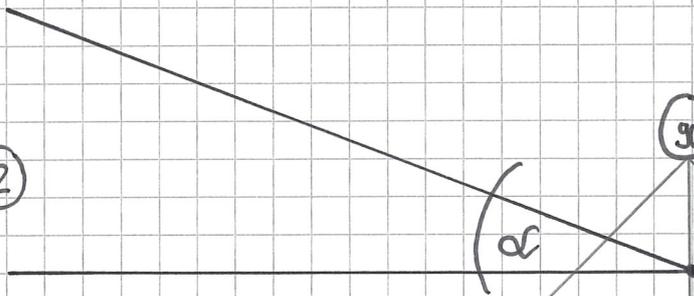
Messe die Winkel  
(Beginne mit Aufgabe 3)

①



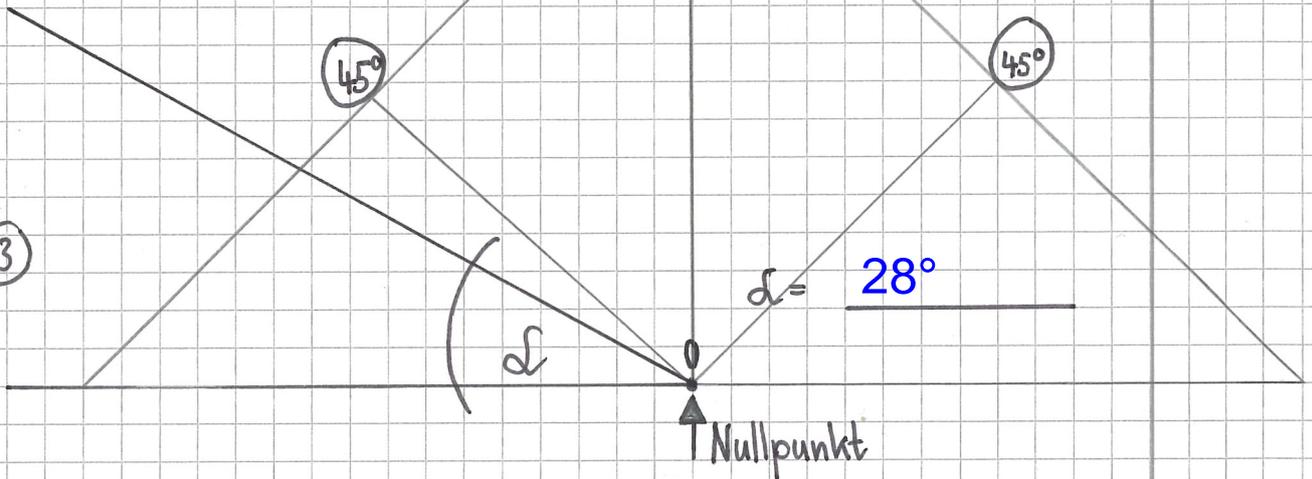
$\alpha = 25^\circ$

②



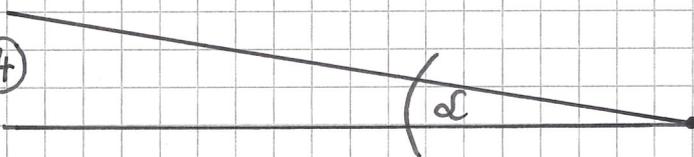
$\alpha = 20^\circ$

③



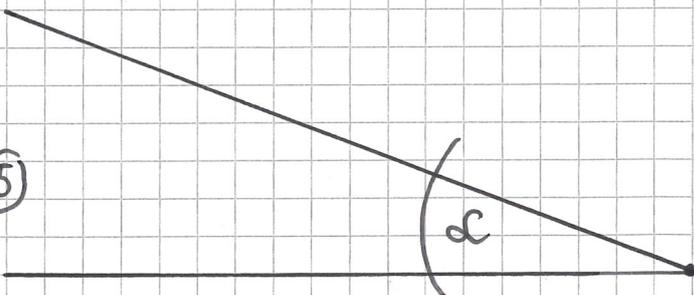
$\alpha = 28^\circ$

④



$\alpha = 8^\circ$

⑤



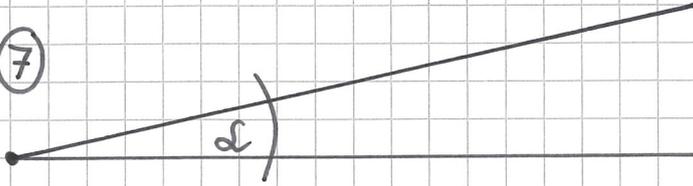
$\alpha = 20^\circ$

⑥



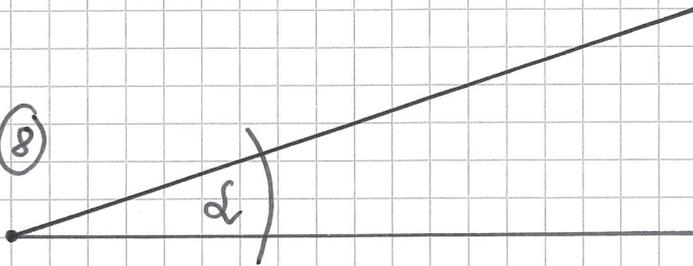
$\alpha = 14^\circ$

⑦



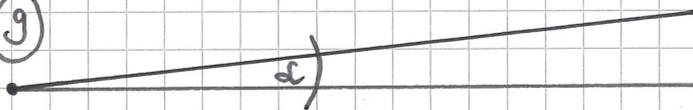
$\alpha = 11^\circ$

⑧



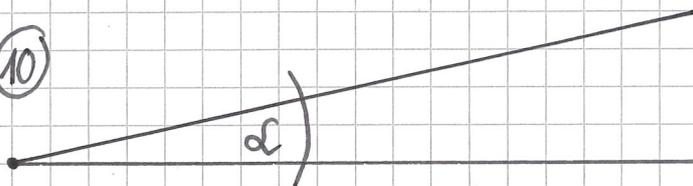
$\alpha = 17^\circ$

⑨



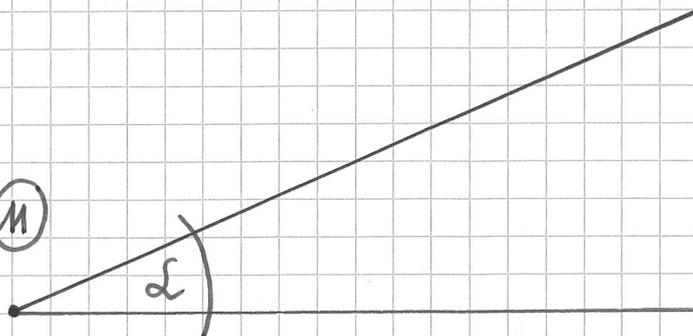
$\alpha = 5^\circ$

⑩



$\alpha = 11^\circ$

⑪

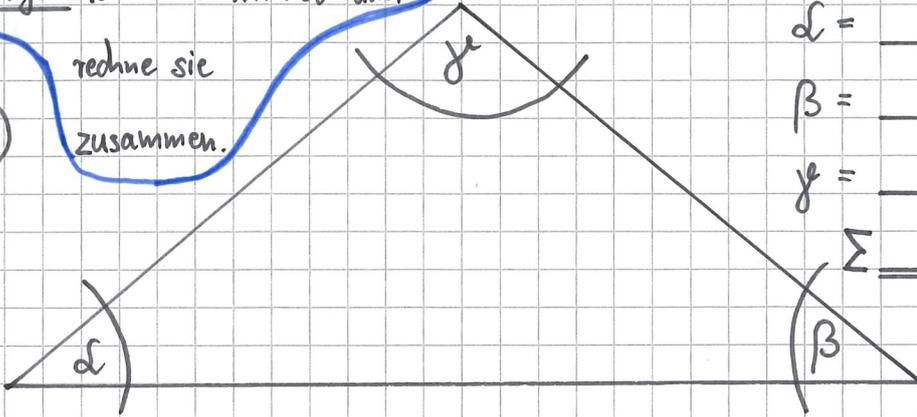


$\alpha = 17^\circ$

Aufg.: Messe alle Winkel und

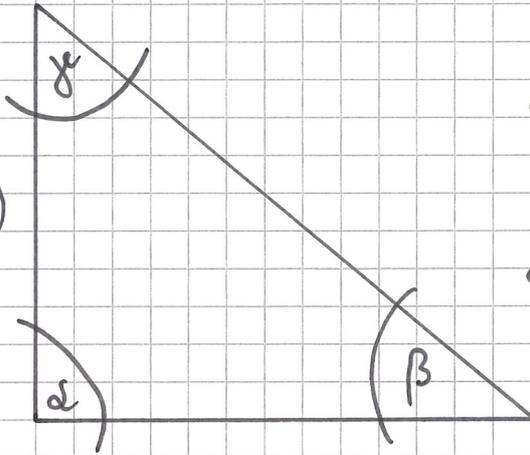
rechne sie zusammen.

①



$$\begin{aligned} \alpha &= 39^\circ \\ \beta &= 40^\circ \\ \gamma &= 101^\circ \\ \Sigma &= \underline{\underline{180^\circ}} \end{aligned}$$

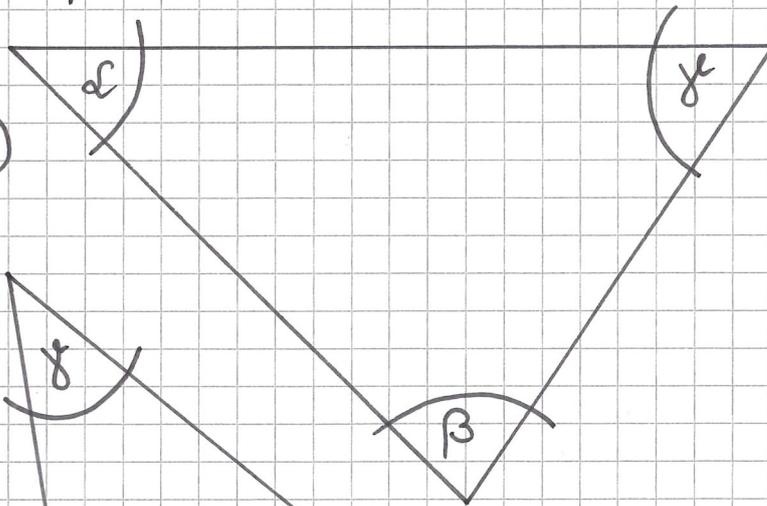
②



$$\begin{aligned} \alpha &= 90^\circ \\ \beta &= 39^\circ \\ \gamma &= 51^\circ \\ \Sigma &= \underline{\underline{180^\circ}} \end{aligned}$$

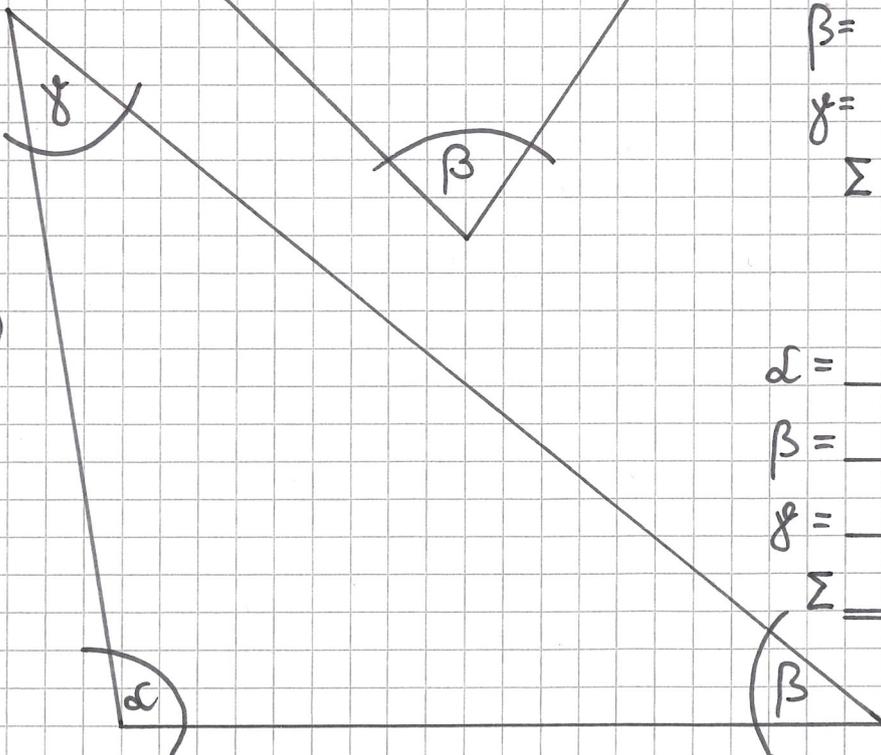
„Σ“: Das ist ein Summenzeichen.

③



$$\begin{aligned} \alpha &= 44^\circ \\ \beta &= 79^\circ \\ \gamma &= 56^\circ \\ \Sigma &= \underline{\underline{180^\circ}} \end{aligned}$$

④

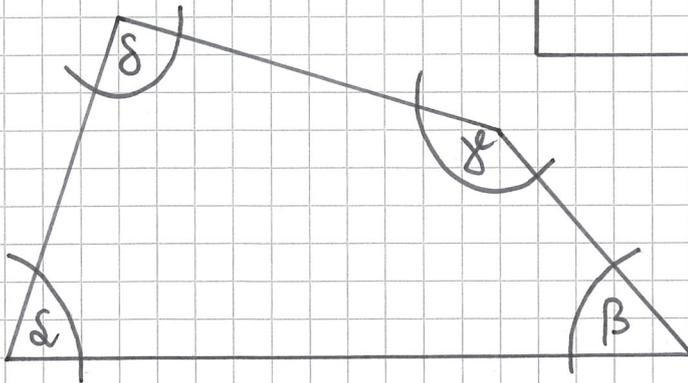


$$\begin{aligned} \alpha &= 100^\circ \\ \beta &= 40^\circ \\ \gamma &= 40^\circ \\ \Sigma &= \underline{\underline{180^\circ}} \end{aligned}$$

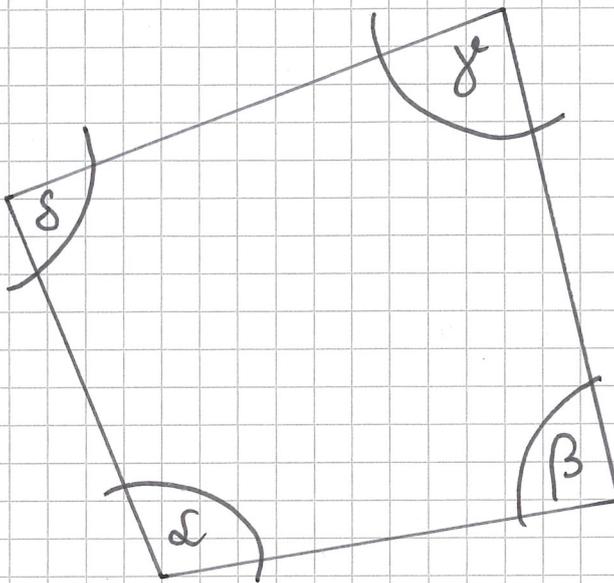
Die Winkelsumme eines Dreiecks beträgt immer  $180^\circ$ .

## Winkel im Viereck

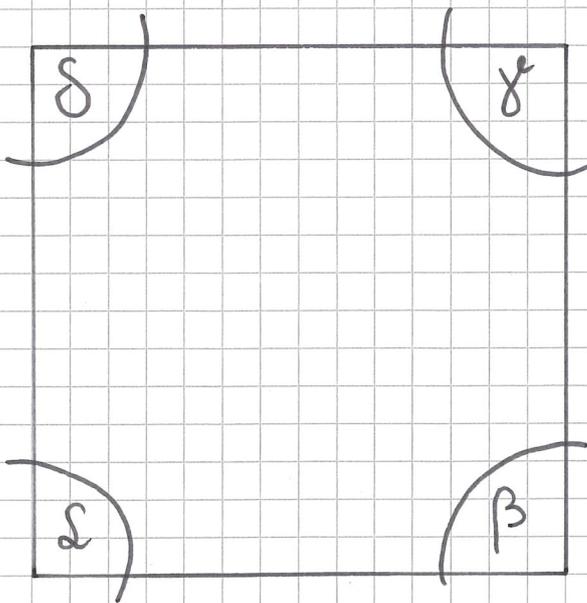
Aufg.: Messe alle Winkel und rechne sie zusammen.



$$\begin{aligned}\alpha &= 72^\circ \\ \beta &= 49^\circ \\ \gamma &= 148^\circ \\ \delta &= 91^\circ \\ \Sigma &= 360^\circ\end{aligned}$$



$$\begin{aligned}\alpha &= 104^\circ \\ \beta &= 86^\circ \\ \gamma &= 82^\circ \\ \delta &= 88^\circ \\ \Sigma &= 360^\circ\end{aligned}$$



$$\begin{aligned}\alpha &= 90^\circ \\ \beta &= 90^\circ \\ \gamma &= 90^\circ \\ \delta &= 90^\circ \\ \Sigma &= 360^\circ\end{aligned}$$

Die Winkelsumme eines Vierecks beträgt immer  $360^\circ$ .