

WESTERMANN Mathematik 10II/III, 52/6

- 6 – Berechne den Winkelmaß α mit dem Taschenrechner ($\alpha \in [0^\circ; 90^\circ]$). Runde auf zwei Stellen nach dem Komma.

$$\tan \alpha = 1,5$$

$$\alpha =$$

Tastenfolge: $\boxed{\text{TAN}^{-1}} \ 1.5 \ \boxed{=}$

Anzeige: 56.30993247
 $\alpha = 56,31^\circ$

a) $\tan \alpha = 2,2$; $\tan \alpha = 22$; $\tan \alpha = 220$

b) $\tan \alpha = 9,8$; $\tan \alpha = 0,98$; $\tan \alpha = 0,098$

c) $\tan \alpha = 0,5$; $\tan \alpha = 0,75$; $\tan \alpha = 1$

d) $\tan \alpha = \sqrt{3}$; $\tan \alpha = \frac{1}{3}\sqrt{3}$; $\tan \alpha = \sqrt{2}$

Lösungen: 26,57°; 44,42°; 89,74°; 5,60°; 36,87°;
 60°; 65,56°; 45°; 89,42°; 54,74°; 30°;
 87,40°; 84,17°

a) $\tan \alpha = 2,2$ | $\tan^{-1}$

$$\alpha = \tan^{-1}(2,2)$$

$$\alpha = \underline{\underline{65,56^\circ}}$$

$\tan \alpha = 22$ | $\tan^{-1}$

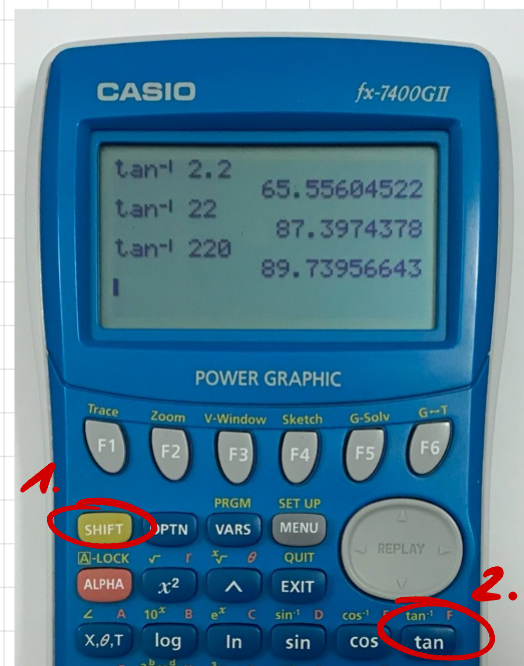
$$\alpha = \tan^{-1}(22)$$

$$\alpha = \underline{\underline{87,40^\circ}}$$

$\tan \alpha = 220$ | $\tan^{-1}$

$$\alpha = \tan^{-1}(220)$$

$$\alpha = \underline{\underline{89,74^\circ}}$$



b) $\tan \alpha = 9,8$ | $\tan^{-1}$

$$\alpha = \tan^{-1}(9,8)$$

$$\alpha = \underline{\underline{84,17^\circ}}$$

$\tan \alpha = 0,098$ | $\tan^{-1}$

$$\alpha = \tan^{-1}(0,098)$$

$$\alpha = \underline{\underline{5,60^\circ}}$$

$\tan \alpha = 0,98$ | $\tan^{-1}$

$$\alpha = \tan^{-1}(0,98)$$

$$\alpha = \underline{\underline{44,42^\circ}}$$

$$\begin{aligned} c) \quad \tan \alpha &= 0,5 & | \tan^{-1} \\ \alpha &= \tan^{-1}(0,5) \\ \alpha &= \underline{\underline{26,57^\circ}} \end{aligned}$$

$$\begin{aligned} \tan \alpha &= 0,75 & | \tan^{-1} \\ \alpha &= \tan^{-1}(0,75) \\ \alpha &= \underline{\underline{36,87^\circ}} \end{aligned}$$

$$\begin{aligned} \tan \alpha &= 1 & | \tan^{-1} \\ \alpha &= \tan^{-1}(1) \\ \alpha &= \underline{\underline{45^\circ}} \end{aligned}$$

$$\begin{aligned} d) \quad \tan \alpha &= \sqrt{3} & | \tan^{-1} \\ \alpha &= \tan^{-1}(\sqrt{3}) \\ \alpha &= \underline{\underline{60^\circ}} \end{aligned}$$

$$\begin{aligned} \tan \alpha &= \frac{1}{3}\sqrt{3} & | \tan^{-1} \\ \alpha &= \tan^{-1}\left(\frac{1}{3}\sqrt{3}\right) \\ \alpha &= \underline{\underline{30^\circ}} \end{aligned}$$

$$\begin{aligned} \tan \alpha &= \sqrt{2} & | \tan^{-1} \\ \alpha &= \tan^{-1}(\sqrt{2}) \\ \alpha &= \underline{\underline{54,74^\circ}} \end{aligned}$$