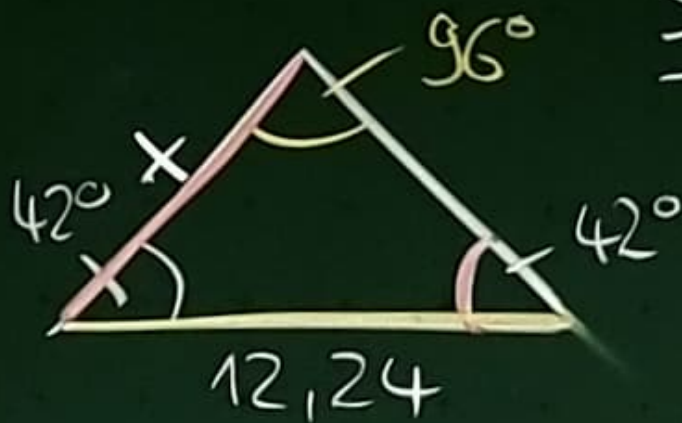


S. 120; Nr. 1



$$\frac{\sin(96^\circ)}{12,24} = \frac{\sin(42^\circ)}{x}$$

$$\frac{x}{\sin(42^\circ)} = \frac{12,24}{\sin(96^\circ)} \quad | \cdot \sin(42^\circ)$$

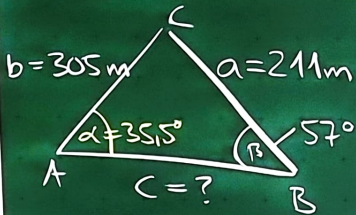
$$x = \frac{12,24}{\sin(96^\circ)} \cdot \sin(42^\circ)$$

$$= 8,24 \text{ m}$$

$$\downarrow +0,4 \text{ m}$$

$$\underline{\underline{8,64 \text{ m}}}$$

S. 123, Nr. 7



$$c^2 = a^2 + b^2 - 2ab \cos(\gamma)$$

$$= 211^2 + 305^2 - 2 \cdot 211 \cdot 305 \cdot \cos(87,5^\circ)$$

$$= 131931,74 \dots \quad \sqrt{\quad}$$

$$c = 363,22 \text{ m}$$

$$\frac{\sin(\alpha)}{a} = \frac{\sin(\beta)}{b} \quad | \cdot a$$

$$\sin(\alpha) = \frac{\sin(\beta)}{b} \cdot a$$

$$\sin(\alpha) = \frac{\sin(57^\circ)}{305} \cdot 211$$

$$\sin(\alpha) = 0,58 \dots \quad | \sin^{-1}$$

$$\alpha = 35,5^\circ$$

$$\Rightarrow \gamma = 180^\circ - \alpha - \beta = 87,5^\circ$$

Keine oder zwei Lösungen beim Sinussatz
gibt es nur, wenn der gegebene Winkel der
kürzeren Seite gegenüberliegt.

S. 123, Nr. 6

$$\gamma = 180^\circ - \alpha - \beta = 54^\circ$$

$$\frac{|AP|}{\sin(\beta)} = \frac{|AB|}{\sin(\gamma)} \quad | \cdot \sin(\beta)$$

$$\begin{aligned} |AP| &= \frac{|AB|}{\sin(\gamma)} \cdot \sin(\beta) \\ &= \frac{936,50 \text{ m}}{\sin(54^\circ)} \cdot \sin(86^\circ) \\ &= 1154,76 \text{ m} \end{aligned}$$

$$\frac{|BP|}{\sin(\alpha)} = \frac{|AB|}{\sin(\gamma)}$$

$$\begin{aligned} |BP| &= \frac{|AB|}{\sin(\gamma)} \cdot \sin(\alpha) = \frac{936,50}{\sin(54^\circ)} \cdot \sin(40^\circ) \\ &= 744,08 \text{ m} \end{aligned}$$