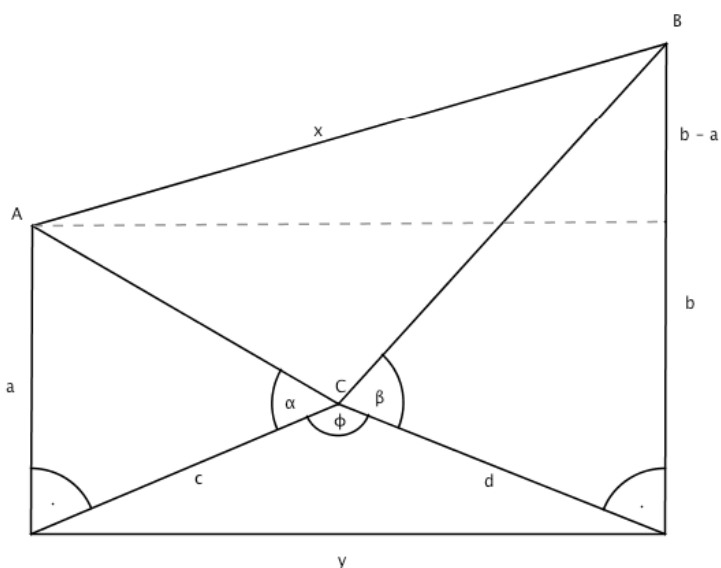


LÖSUNG ZU 805:



$$a = 130 \text{ m} \quad b = 135 \text{ m} \quad \alpha = 47^\circ \quad \phi = 74^\circ \quad \beta = 42^\circ$$

$$\tan(\alpha) = \frac{a}{c} \quad \rightarrow \quad c = \frac{a}{\tan(\alpha)} = \frac{130}{\tan(47^\circ)} \approx 121,23 \text{ m}$$

$$\tan(\beta) = \frac{b}{d} \quad \rightarrow \quad d = \frac{b}{\tan(\beta)} = \frac{135}{\tan(42^\circ)} \approx 149,93 \text{ m}$$

$$y = \sqrt{c^2 + d^2 - 2cd \cdot \cos(\phi)} \quad \rightarrow \quad y \approx 164,79 \text{ m}$$

$$b - a = 5 \text{ m}$$

$$x = \sqrt{y^2 + (b - a)^2} \quad \rightarrow \quad x \approx 164,87 \text{ m} \dots \text{ Länge der Brücke}$$

Steigung in Prozent:

$$\frac{b - a}{y} \cdot 100 \quad \rightarrow \quad 3,03\%$$

