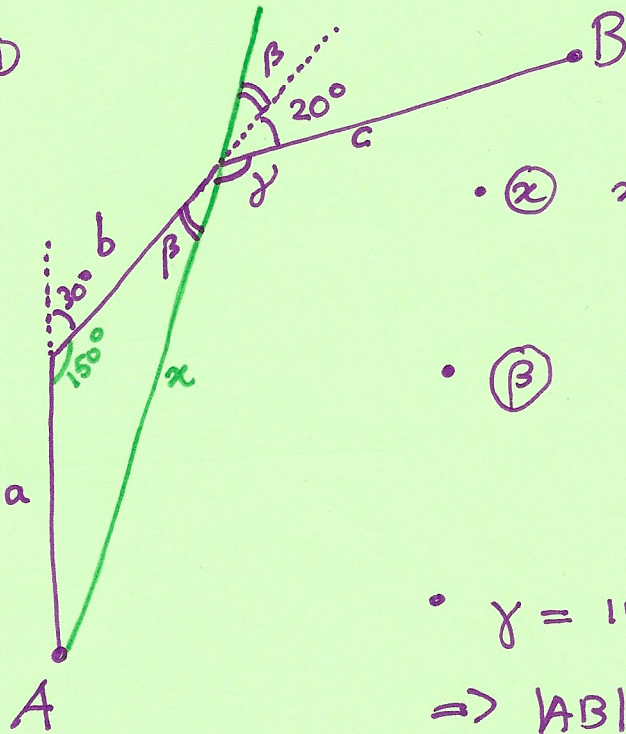


⑧

2 METHODEN

Grp A & Grp B

①



A: $a=1,5$ $b=2,5$ $c=3$
 B: $a=2$ $b=3$ $c=4$

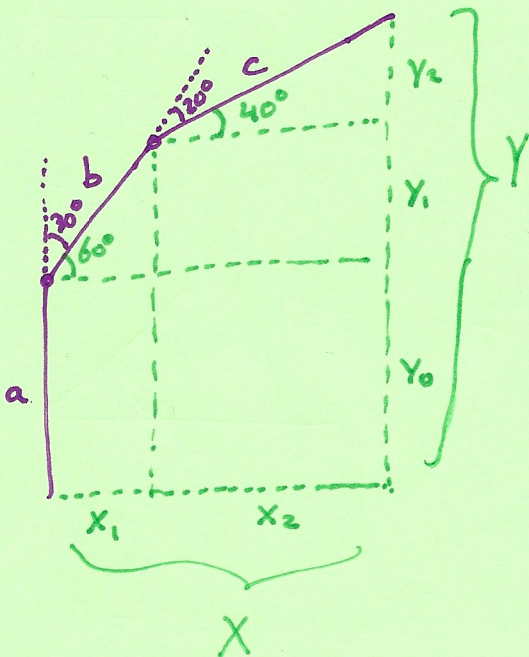
• (α) $x^2 = a^2 + b^2 - 2ab \cos 150^\circ$
 A: $x = 3,873$ km
 B: $x = 4,837$ km

• (β) $\frac{\sin \beta}{a} = \frac{\sin 150^\circ}{x}$
 $\sin \beta = \frac{a \cdot \sin 150^\circ}{x}$ $\left\{ \begin{array}{l} \text{A: } \beta = 11,17^\circ \\ \text{B: } \beta = 11,84^\circ \end{array} \right.$

• $\gamma = 180^\circ - \beta - 20^\circ$

$\Rightarrow |AB|^2 = x^2 + c^2 - 2 \cdot x \cdot c \cdot \cos \gamma$ $\left\{ \begin{array}{l} \text{A: } |AB| = 6,62 \text{ km} \\ \text{B: } |AB| = 8,50 \text{ km} \end{array} \right.$

②



$x_1 = b \cdot \cos 60^\circ$ $x_2 = c \cdot \cos 40^\circ$

$X = x_1 + x_2$ $\left\{ \begin{array}{l} \text{A: } 3,55 \text{ km} \\ \text{B: } 4,56 \text{ km} \end{array} \right.$

$Y = y_0 + y_1 + y_2 = \left\{ \begin{array}{l} \text{A: } 5,59 \text{ km} \\ \text{B: } 7,17 \text{ km} \end{array} \right.$

$y_0 = a$

$y_1 = b \cdot \sin 60^\circ$

$y_2 = c \cdot \sin 40^\circ$

Gefragt $\sqrt{X^2 + Y^2} = \left\{ \begin{array}{l} \text{A: } 6,62 \text{ km} \\ \text{B: } 8,50 \text{ km} \end{array} \right.$