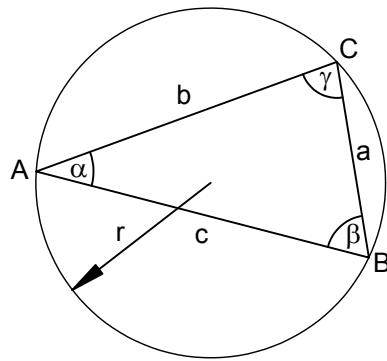


Zusammenfassung:

Sinus-, Kosinussatz



Sinussatz:

$$\frac{a}{\sin(\alpha)} = \frac{b}{\sin(\beta)} = \frac{c}{\sin(\gamma)} = 2r$$

$$a : b : c = \sin(\alpha) : \sin(\beta) : \sin(\gamma)$$

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

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

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

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

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

$$\sin(\gamma) = \frac{c}{a} = \frac{c}{b}$$

Kosinussatz:

$$a = \sqrt{b^2 + c^2 - (2bc \cdot \cos(\alpha))}$$

$$\cos(\alpha) = \frac{b^2 + c^2 - a^2}{2bc}$$

$$b = \sqrt{a^2 + c^2 - (2ac \cdot \cos(\beta))}$$

$$\cos(\beta) = \frac{a^2 + c^2 - b^2}{2ac}$$

$$c = \sqrt{a^2 + b^2 - (2ab \cdot \cos(\gamma))}$$

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