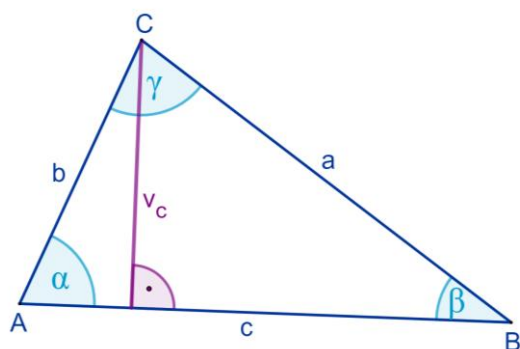


Vzťahy, ktoré vieme použiť

v každom trojuholníku:



Obvod $o = a + b + c$

Obsah

$$S = \frac{a \cdot v_a}{2} = \frac{b \cdot v_b}{2} = \frac{c \cdot v_c}{2}$$

$$S = \frac{1}{2} \cdot a \cdot b \cdot \sin \gamma$$

$$S = \sqrt{s \cdot (s - a) \cdot (s - b) \cdot (s - c)}$$

$$s = \frac{a+b+c}{2} = \frac{o}{2}$$

Kosínusová veta

$$c^2 = a^2 + b^2 - 2 \cdot a \cdot b \cdot \cos \gamma$$

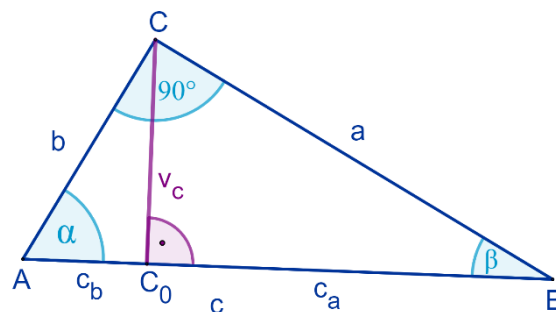
$$a^2 = b^2 + c^2 - 2 \cdot b \cdot c \cdot \cos \alpha$$

$$b^2 = a^2 + c^2 - 2 \cdot a \cdot c \cdot \cos \beta$$

Sínusová veta

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

v pravouhlom trojuholníku:



Pytagorova veta $c^2 = a^2 + b^2$

Euklidova veta o výške

$$v_c^2 = c_a \cdot c_b$$

Euklidova veta o odvesne

$$a^2 = c \cdot c_a$$

$$b^2 = c \cdot c_b$$

Goniometrické funkcie

$$\sin \alpha = \frac{a}{c} \quad \left(" \frac{\text{pro}}{\text{pre}} " \right)$$

$$\cos \alpha = \frac{b}{c} \quad \left(" \frac{\text{pri}}{\text{pre}} " \right)$$

$$\text{tg } \alpha = \frac{a}{b} \quad \left(" \frac{\text{pro}}{\text{pri}} " \right)$$