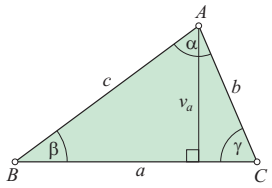
Zadatak 15. U trokutu $\triangle ABC$ je $\alpha = 96°45'$, $c = 7$ cm, $v_a = 5.5$ cm. Kolike su duljine stranica a i b tog trokuta?

Rješenje.

$\alpha = 96°45'$

$c = 7\text{cm}$

$v_a = 5.5\text{cm}$



$a,\ b = ?$

$$\frac{v_a}{\sin\beta} = \frac{c}{\sin 90°} \implies$$

$$\sin\beta = \frac{v_a}{c} = \frac{5.5}{7} = 0.78571 \implies \beta = 51°47'$$

$$\gamma = 180° - \alpha - \beta = 31°28'$$

$$b = \frac{c \cdot \sin\beta}{\sin\gamma} = \frac{7 \cdot \sin 51°47'}{\sin 31°28'} = 10.54\text{cm}$$

$$a = \frac{b \cdot \sin\alpha}{\sin\beta} = \frac{10.54 \cdot \sin 96°45'}{\sin 51°47'} = 13.32\text{cm}.$$