

Zadatak 43. Koliki je kut γ u trokutu $\triangle ABC$ ako je $a = 8$ mm, $t_b = 9$ mm, $t_c = 6.6$ mm.

Rješenje.

$$a = 8 \text{ mm}$$

$$t_b = 9 \text{ mm}$$

$$t_c = 6.6 \text{ mm}$$

$$\gamma = ?$$

$$4t_b^2 = 2a^2 + 2c^2 - b^2$$

$$c^2 = \frac{4t_b^2 - 2a^2 + b^2}{2}$$

$$c^2 = \frac{196 + b^2}{2} = 98 + \frac{b^2}{2}$$

$$4t_c^2 = 2a^2 + 2b^2 - c^2$$

$$174.24 = 128 + 2b^2 - 98 - \frac{b^2}{2}$$

$$144.24 = \frac{3}{2}b^2$$

$$b^2 = 96.16$$

$$b = 9.81 \text{ mm}$$

$$\cos \gamma = \frac{\left(\frac{b}{2}\right)^2 + a^2 - t_b^2}{2 \cdot \frac{b}{2} \cdot a} = 0.08995$$

$$\gamma = 84^\circ 50' 22''$$

