

Zadatak 41. Izračunaj duljine stranica a i c trokuta $\triangle ABC$ ako je $b = 7.2$ cm, $t_a = 8$ cm, $t_c = 5.8$ cm.

Rješenje.

$$b = 7.2 \text{ cm}$$

$$t_a = 8 \text{ cm}$$

$$t_c = 5.8 \text{ cm}$$

$$a, c = ?$$

$$b^2 = \frac{4}{9}(2t_a^2 + 2t_c^2 - t_b^2)$$

$$\frac{9}{4}b^2 = 2t_a^2 + 2t_c^2 - t_b^2$$

$$t_b^2 = 2t_a^2 + 2t_c^2 - \frac{9}{4}b^2$$

$$t_b = 8.87 \text{ cm}$$

$$a^2 = \frac{4}{9}(2t_b^2 + 2t_c^2 - t_a^2) \implies a = 8.45 \text{ cm}$$

$$c^2 = \frac{4}{9}(2t_a^2 + 2t_b^2 - t_c^2) \implies c = 10.58 \text{ cm}$$