

Zadatak 42. Izračunaj duljinu stranice b trokuta $\triangle ABC$ ako je $a = 70$ mm, $t_b = 82$ mm, $t_c = 58$ mm.

Rješenje.

$$a = 70 \text{ mm}$$

$$t_b = 82 \text{ mm}$$

$$t_c = 58 \text{ mm}$$

$$b = ?$$

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

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

$$2c^2 = 17096 + b^2$$

$$c^2 = \frac{17096 + b^2}{2}$$

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

$$13456 = 9800 + 2b^2 - \frac{17096 + b^2}{2}$$

$$12204 = \frac{3}{2}b^2$$

$$b^2 = 8136$$

$$b = 90.2 \text{ mm}$$