Zadatak 2. Izračunaj površinu trokuta $\triangle ABC$ ako je zadano:

1) $a = 11.5$ cm, $\beta = 43°$, $\gamma = 78°$;
2) $b = 4.8$ cm, $\alpha = 18°30'$, $\gamma = 115°22'$;
3) $c = 25.2$ cm, $\alpha = 77°30'$, $\beta = 53°$.

Rješenje. **1)**

$$a = 11.5\text{cm}$$
$$\beta = 43°$$
$$\gamma = 78°$$

$$P = ?$$

$$\alpha = 180° - \beta - \gamma = 59°$$
$$P = \frac{a^2 \cdot \sin\beta \cdot \sin\gamma}{2 \cdot \sin\alpha} = 51.46\text{cm}^2.$$

2)

$$b = 4.8\text{cm}$$
$$\alpha = 18°30'$$
$$\gamma = 115°22'$$

$$P = ?$$

$$\beta = 180° - \alpha - \gamma = 46°8'$$
$$P = \frac{b^2 \cdot \sin\alpha \cdot \sin\gamma}{2 \cdot \sin\beta} = 4.58\text{cm}^2.$$

3)

$$c = 25.2\text{cm}$$
$$\alpha = 77°30'$$
$$\beta = 53°$$

$$P = ?$$

$$\gamma = 180° - \alpha - \beta = 49°30'$$
$$P = \frac{c^2 \cdot \sin\alpha \cdot \sin\beta}{2 \cdot \sin\gamma} = 325.58\text{cm}^2.$$