

**Zadatak 35.** U trokutu  $\triangle ABC$  je  $|AB| = 15$  cm,  $|BC| = 22$  cm, te  $\beta = 73^\circ 28'$ . Kolike su duljine odsječaka na koje simetrala kuta  $\beta$  dijeli stranicu  $\overline{AC}$ ?

**Rješenje.**

$$c = |AB| = 15 \text{ cm}$$

$$a = |BC| = 22 \text{ cm}$$

$$\beta = 73^\circ 28'$$

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$$c_1, a_1 = ?$$

$$b^2 = a^2 + c^2 - 2ac \cos \beta$$

$$b = 22.829 \text{ cm}$$

$$a_1 + c_1 = b$$

$$a_1 : c_1 = a : c$$

$$\frac{a_1}{c_1} = \frac{22}{15} \implies a_1 = \frac{22}{15}c_1$$

$$22.829 = a_1 + c_1 = \frac{22}{15}c_1 + c_1 = \frac{37}{15}c_1 \implies c_1 = 9.255 \text{ cm}$$

$$a_1 = \frac{22}{15} \cdot 9.255 = 13.574 \text{ cm.}$$

