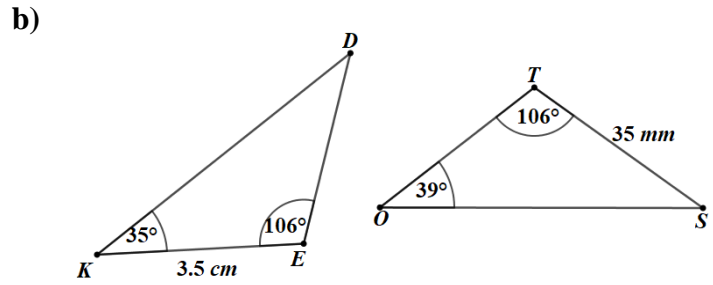
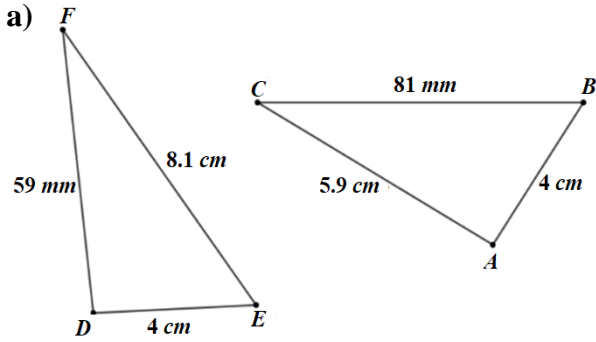


Priprema za 2. kratku pisanu provjeru

1) Jesu li trokuti sukladni? Objasni.

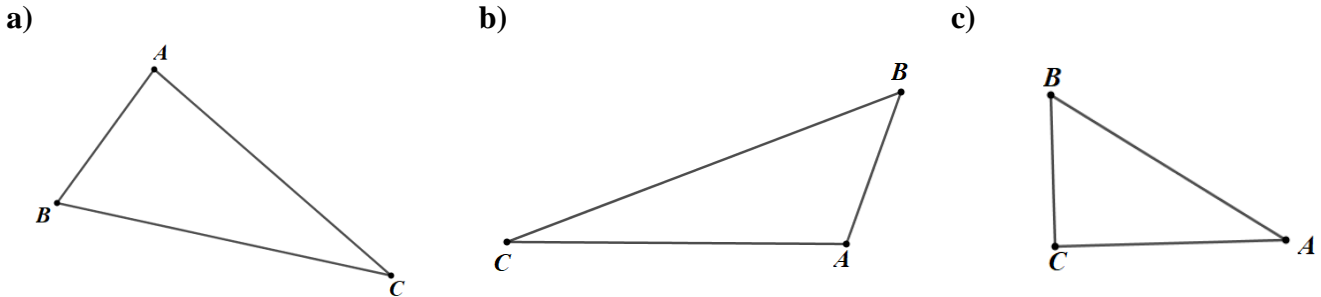


2) Konstruiraj $\triangle ABC$ kojemu su zadane duljine stranica $a = 6\text{ cm}$, $b = 4\text{ cm}$, $c = 36\text{ mm}$. (Skica!)

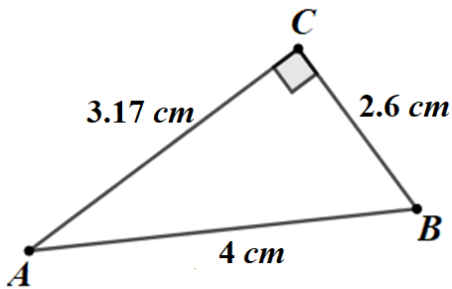
3) Konstruiraj $\triangle ABC$ ako je zadano $a = 6\text{ cm}$, $b = 4\text{ cm}$ i $\gamma = 30^\circ$. (Skica!)

4) Konstruiraj $\triangle ABC$ ako je $a = 5.5\text{ cm}$, $\beta = 60^\circ$, $\gamma = 45^\circ$. (Skica!)

5) Nacrtaj visinu v_b trokutu:



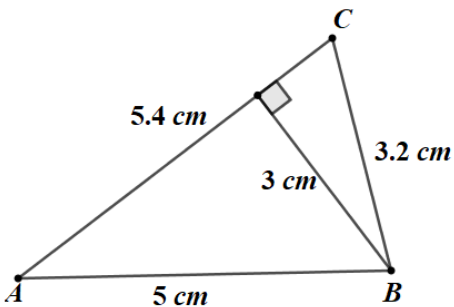
6) Izračunaj površinu pravokutnog trokuta sa slike:



7) Izračunaj duljinu druge katete pravokutnoga trokuta ako je:

$$\begin{array}{l} P = 14\text{ cm}^2 \\ a = 8\text{ cm} \\ \hline b = ? \end{array}$$

8) Izračunaj površinu trokuta sa slike:



9) Izračunaj nepoznati element trokuta ako je zadano:

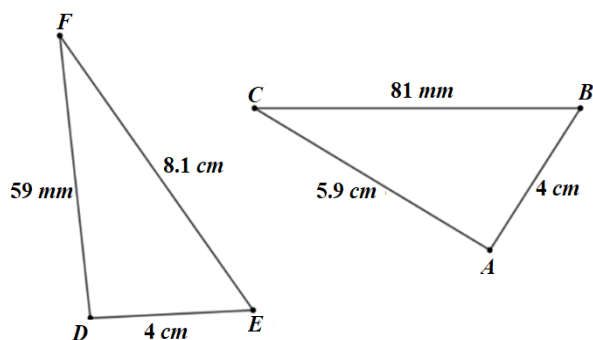
a) $P = 2.88\text{ cm}^2$
 $a = 3.2\text{ cm}$
 $v_a = ?$

b) $c = 6\text{ cm}$
 $v_c = 4.2\text{ cm}$
 $v_a = 6.3\text{ cm}$
 $a = ?$

RJEŠENJA

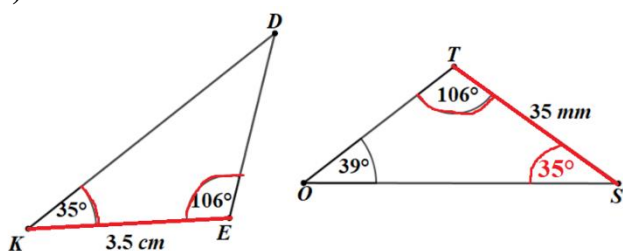
1) Jesu li trokuti sukladni? Objasni.

a)



$$\left. \begin{array}{l} |DE| = |AB| = 4 \text{ cm} \\ |DF| = |AC| = 59 \text{ mm} \\ |EF| = |BC| = 81 \text{ mm} \end{array} \right\} \Rightarrow \Delta DEF \cong \Delta ABC \text{ (SSS)}$$

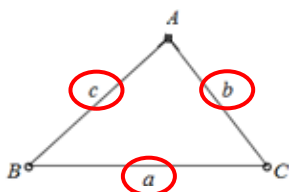
b)



$$\left. \begin{array}{l} \sphericalangle K = \sphericalangle S = 35^\circ \\ |KE| = |ST| = 35 \text{ mm} \\ \sphericalangle E = \sphericalangle T = 106^\circ \end{array} \right\} \Rightarrow \Delta KED \cong \Delta STO \text{ (KSK)}$$

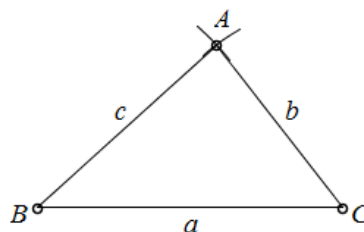
2) Konstruiraj ΔABC kojemu su zadane duljine stranica $a = 6 \text{ cm}$, $b = 4 \text{ cm}$, $c = 36 \text{ mm}$. (Skica!)

skica: Vidimo da su zadane duljine stranica odnosno da imamo **SSS poučak** o sukladnosti.



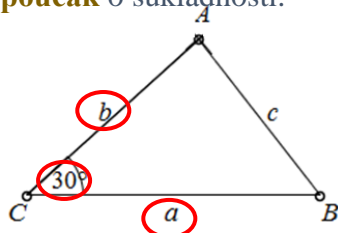
Koraci konstrukcije:

- 1° dužina \overline{BC} duljine 6 cm
- 2° iz točke B nacrtamo kružni luk (otvor šestara $c = 36 \text{ mm}$)
- 3° iz točke C nacrtamo kružni luk (otvor šestara $b = 4 \text{ cm}$)
- 4° sjecište lukova je vrh A traženog trokuta



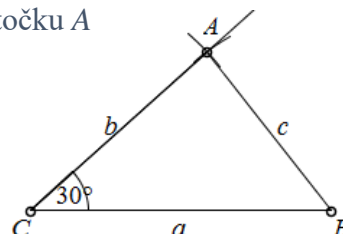
3) Konstruiraj ΔABC ako je zadano $a = 6 \text{ cm}$, $b = 4 \text{ cm}$ i $\gamma = 30^\circ$. (Skica!)

skica: Vidimo da su zadane duljine dviju stranica te kut između njih odnosno da imamo **SKS poučak** o sukladnosti.



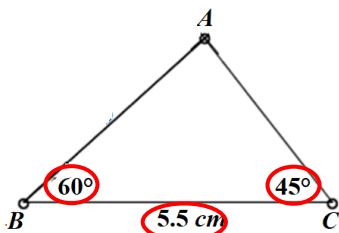
Koraci konstrukcije:

- 1° dužina \overline{CB} duljine 6 cm (stranica duljine a)
- 2° Konstruirati kut od 30° nad \overline{BC} s vrhom u točki C
- 3° Na drugi krak kuta nanijeti 4 cm (duljina b) i dobijemo točku A



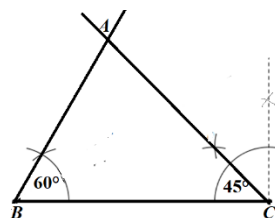
4) Konstruiraj $\triangle ABC$ ako je $a = 5.5 \text{ cm}$, $\beta = 60^\circ$, $\gamma = 45^\circ$. (Skica!)

skica: Zadani su duljina stranice i dva kuta uz tu stranicu, odnosno imamo **KSK poučak** o sukkladnosti.



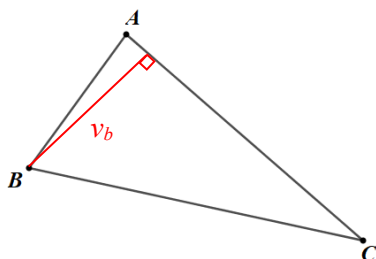
Koraci konstrukcije:

- 1° $|BC| = 5.5 \text{ cm}$
- 2° Kut $\beta = 60^\circ$ s vrhom u točki B td. je BC jedan krak kuta
- 3° Kut $\gamma = 45^\circ$ s vrhom u točki C td. je BC jedan krak kuta
- 4° Sjecište krakova kutova je točka A

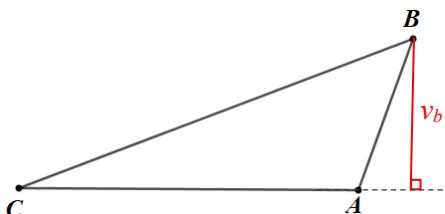


5) Nacrtaj visinu v_b trokutu:

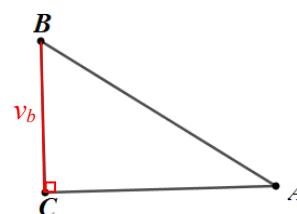
a)



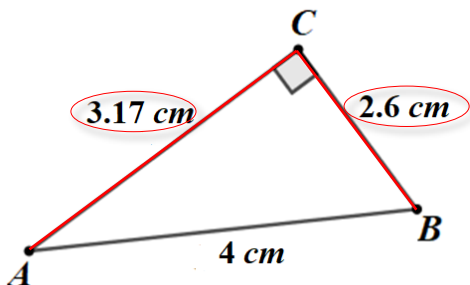
b)



c)



6) Izračunaj površinu pravokutnog trokuta sa slike:



$$P = \frac{\text{kateta} \cdot \text{kateta}}{2}$$

$$P = \frac{3.17 \cdot 2.6}{2}$$

$$P = 3.17 \cdot 1.3$$

$$P = 4.121 \text{ cm}^2$$

7) Izračunaj duljinu druge katete pravokutnoga trokuta ako je:

$$P = 14 \text{ cm}^2$$

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

$$b = ?$$

$$P = 14$$

► P mijenjamo za formulu

$$\frac{a \cdot b}{2} = 14$$

► mijenjamo a za broj 8

$$\frac{8 \cdot b}{2} = 14$$

► kratimo

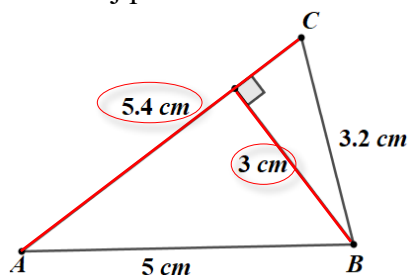
$$4b = 14$$

► koji broj pomnožen s 4 daje 14?

$$b = 14 : 4$$

$$b = 3.5 \text{ cm}$$

8) Izračunaj površinu trokuta sa slike:



$$P = \frac{\text{stranica} \cdot \text{visina na tu stranicu}}{2}$$

$$P = \frac{5 \cdot 3}{2}$$

$$P = 2.7 \cdot 3$$

$$P = 8.1 \text{ cm}^2$$

9) Izračunaj nepoznati element trokuta ako je zadano:

a) $P = 2.88 \text{ cm}^2$
 $a = 3.2 \text{ cm}$
 $v_a = ?$

b) $c = 6 \text{ cm}$
 $v_c = 4.2 \text{ cm}$
 $v_a = 6.3 \text{ cm}$
 $a = ?$

$$\text{visina} = \frac{2P}{\text{stranica}}$$

$$\text{stranica} = \frac{2P}{\text{visina}}$$

$$v_b = \frac{2P}{b}$$

$$v_b = \frac{2 \cdot 2.88}{3.2}$$

$$v_b = 2.88 : 1.6$$

$$v_b = 1.8 \text{ cm}$$

$$a = \frac{2P}{v_a}$$

$$a = \frac{2 \cdot 12.6}{6.3}$$

$$a = 2 \cdot 2$$

$$a = 4 \text{ cm}$$

$$P = \frac{c \cdot v_c}{2}$$

$$P = \frac{6 \cdot 4.2}{2}$$

$$P = 4.2 \cdot 3$$

$$P = 12.6 \text{ cm}^2$$