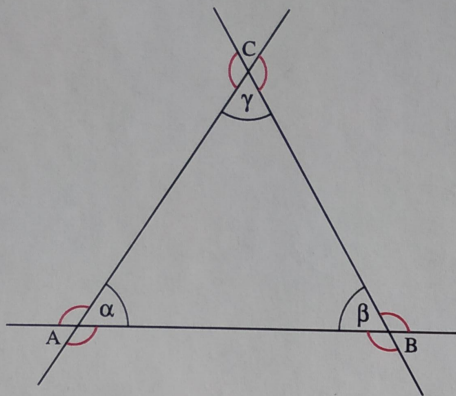
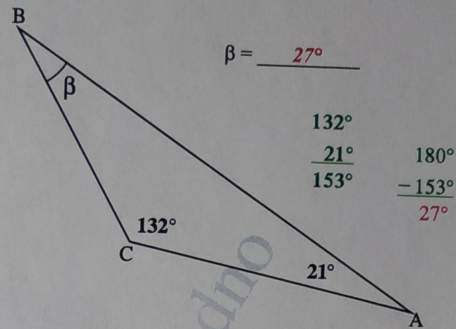


- A-1.** K vnitřním úhlům α , β , γ najděte oba **vnější** úhly a barevně je označte obloučkem.



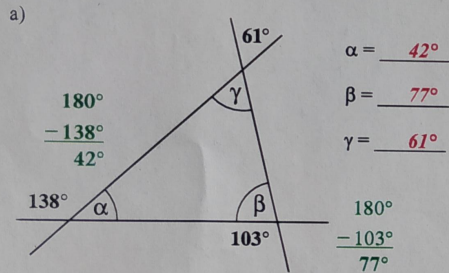
- A-2.** Vypočítejte velikost **třetího** úhlu v trojúhelníku ABC.



$$\beta = \underline{27^\circ}$$

$$\begin{array}{r} 132^\circ \\ + 21^\circ \\ \hline 153^\circ \\ 180^\circ \\ - 153^\circ \\ \hline 27^\circ \end{array}$$

- A-3.** Vypočítejte **velikosti** úhlů vyznačených na obrázku.

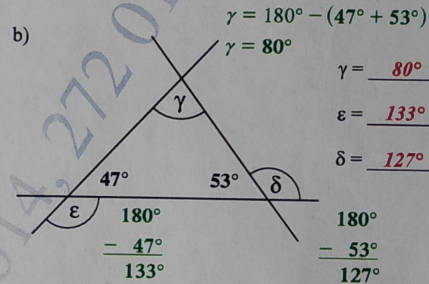


$$\alpha = \underline{42^\circ}$$

$$\beta = \underline{77^\circ}$$

$$\gamma = \underline{61^\circ}$$

$$\begin{array}{r} 180^\circ \\ - 103^\circ \\ \hline 77^\circ \end{array}$$



$$\gamma = 180^\circ - (47^\circ + 53^\circ)$$

$$\gamma = \underline{80^\circ}$$

$$\epsilon = \underline{80^\circ}$$

$$\delta = \underline{133^\circ}$$

$$\delta = \underline{127^\circ}$$

$$\begin{array}{r} 180^\circ \\ - 53^\circ \\ \hline 127^\circ \end{array}$$

- A-4.** V **pravouhlém** trojúhelníku je dána velikost jednoho vnitřního ostrého úhlu. Jakou velikost má **druhý ostrý úhel**?

a) $\alpha = 28^\circ 31'$, $\beta = ?$

$$\begin{array}{r} 89^\circ 60' \\ - 28^\circ 31' \\ \hline 61^\circ 29' \end{array}$$

$$\beta = \underline{61^\circ 29'}$$

b) $\beta = 81^\circ 12'$, $\alpha = ?$

$$\begin{array}{r} 89^\circ 60' \\ - 81^\circ 12' \\ \hline 8^\circ 48' \end{array}$$

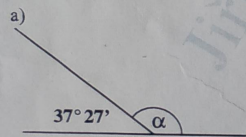
$$\alpha = \underline{8^\circ 48'}$$

c) $\alpha = 53^\circ 13'$, $\beta = ?$

$$\begin{array}{r} 89^\circ 60' \\ - 53^\circ 13' \\ \hline 36^\circ 47' \end{array}$$

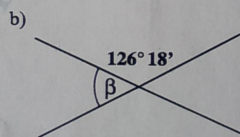
$$\beta = \underline{36^\circ 47'}$$

- A-5.** Podle obrázku vypočítejte velikost **vedlejšího** úhlu.



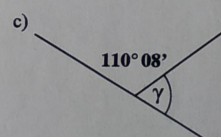
$$\alpha = \underline{142^\circ 33'}$$

$$\begin{array}{r} 179^\circ 60' \\ - 37^\circ 27' \\ \hline 142^\circ 33' \end{array}$$



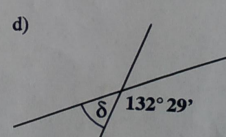
$$\beta = \underline{53^\circ 42'}$$

$$\begin{array}{r} 179^\circ 60' \\ - 126^\circ 18' \\ \hline 53^\circ 42' \end{array}$$



$$\gamma = \underline{69^\circ 52'}$$

$$\begin{array}{r} 179^\circ 60' \\ - 110^\circ 08' \\ \hline 69^\circ 52' \end{array}$$



$$\delta = \underline{47^\circ 31'}$$

$$\begin{array}{r} 179^\circ 60' \\ - 132^\circ 29' \\ \hline 47^\circ 31' \end{array}$$