

Příprava na přijímací zkoušky

Úhly

jméno:

třída:

Řešení : sedovamatika.cz



„Některé z příkladů použité v tomto pdf jsou převzaty z materiálů Cermatu (www.cermat.cz), které slouží jako příklady pro přijímací zkoušky a testy.“

aktualizováno: 11. 9. 2025

Opakování úhlů

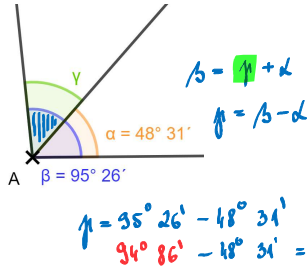
$$1^{\circ} = 60'$$

1) $3\text{h } 23\text{min} - 1\text{h } 42\text{min} = 1\text{h } 41\text{min}$
 $2\text{h } 83\text{min} - 1\text{h } 42\text{min}$

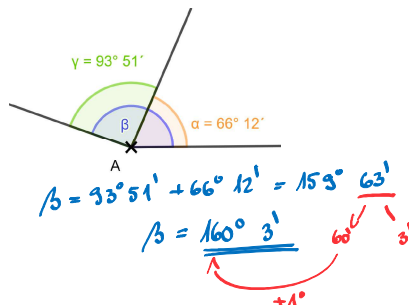
2) $3^{\circ} 23' - 1^{\circ} 42' = 1^{\circ} 41'$
 $2^{\circ} 83' - 1^{\circ} 42'$

3) $180^{\circ} - 72^{\circ} 15' = 107^{\circ} 45'$
 $175^{\circ} 60'$

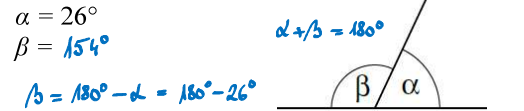
4) Doplčítej chybějící úhel.



5) Doplčítej chybějící úhel.



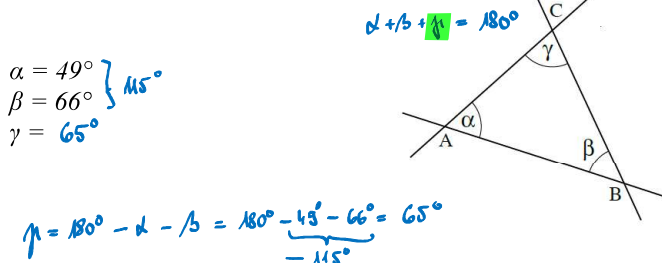
6) Doplčítej vedlejší úhel.



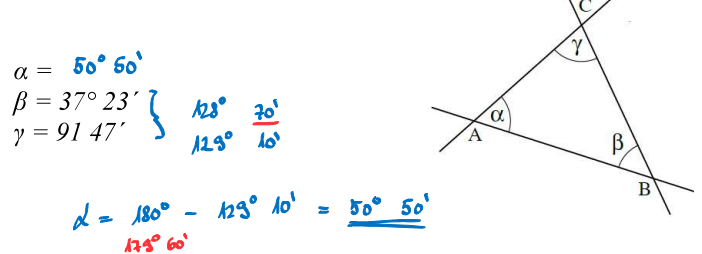
7) Doplčítej vedlejší úhel.

$\alpha = 66^{\circ}$
 $\beta = 114^{\circ}$
 $\alpha = 180^{\circ} - 114^{\circ} = 66^{\circ}$

8) Doplčítej úhly v trojúhelníku.

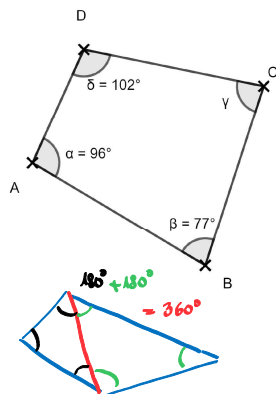


9) Doplčítej úhly v trojúhelníku.

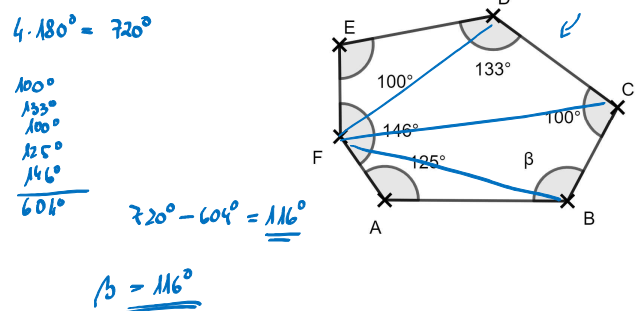


10) Doplčítej chybějící úhel gamma.

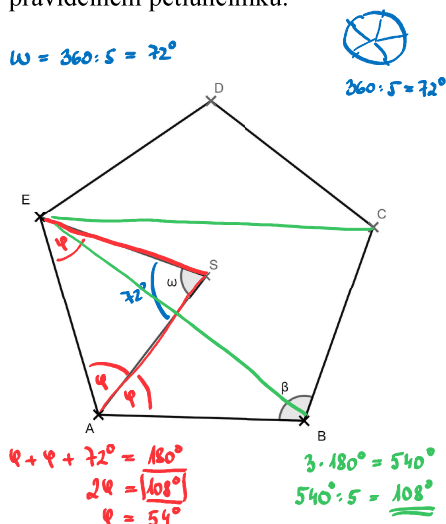
$\alpha + \beta + \gamma + \delta = 360^{\circ}$
 $\gamma = 360^{\circ} - 96^{\circ} - 77^{\circ} - 102^{\circ}$
 $\gamma = 360^{\circ} - 275^{\circ} = 85^{\circ}$



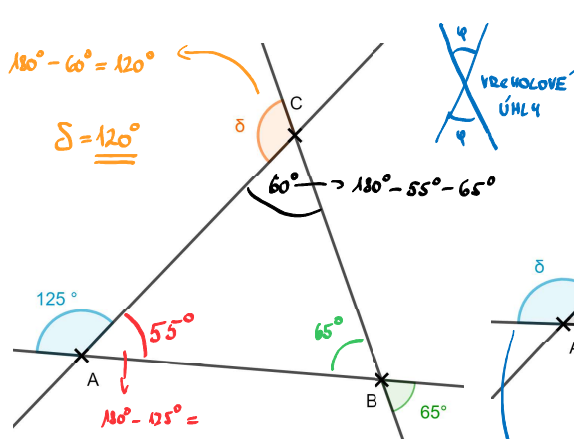
11) Doplčítej chybějící úhel beta.



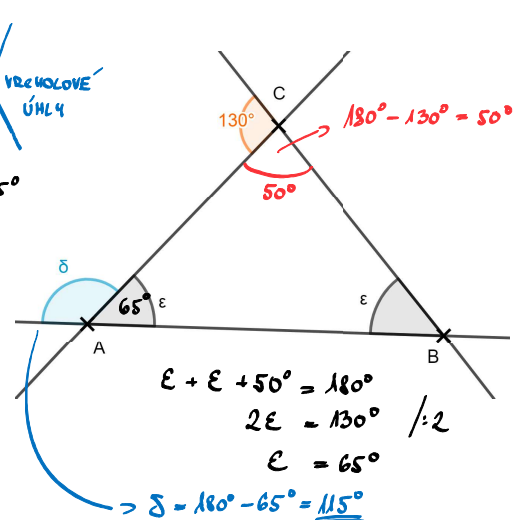
12) Vypočítejte úhel beta a omega v pravidelném pětiúhelníku.



13) Doplčítej chybějící úhel



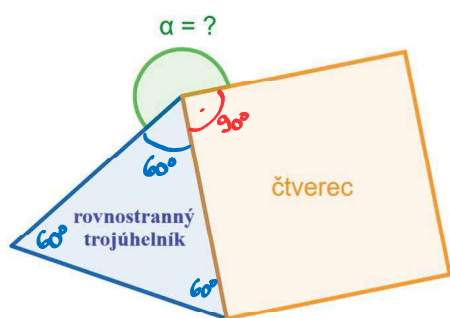
14) Doplčítej chybějící úhel



Mnohoúhelníky 1

Dopočítej chybějící úhly.

1)



$$\alpha = 360^\circ - 60^\circ - 90^\circ = 210^\circ$$

$$\alpha = 210^\circ$$

2)

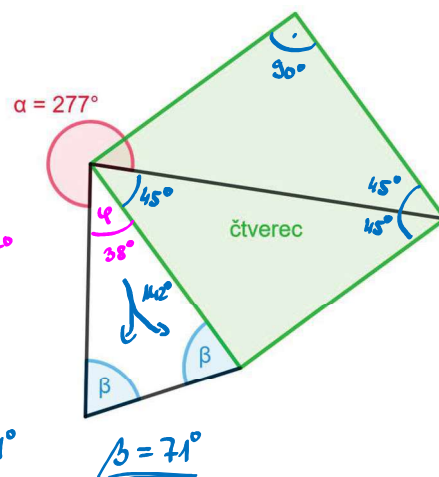
$$\varphi = 360^\circ - 277^\circ - 45^\circ$$

$$\varphi = 360^\circ - 322^\circ$$

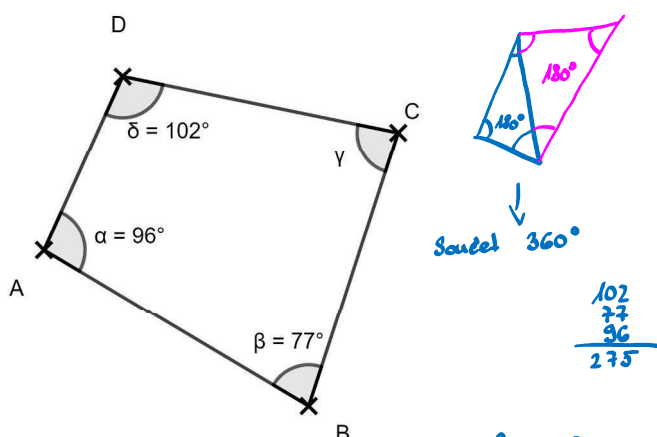
$$\varphi = 38^\circ$$

$$180^\circ - 38^\circ = 142^\circ$$

$$142 : 2 = 71^\circ$$



3)

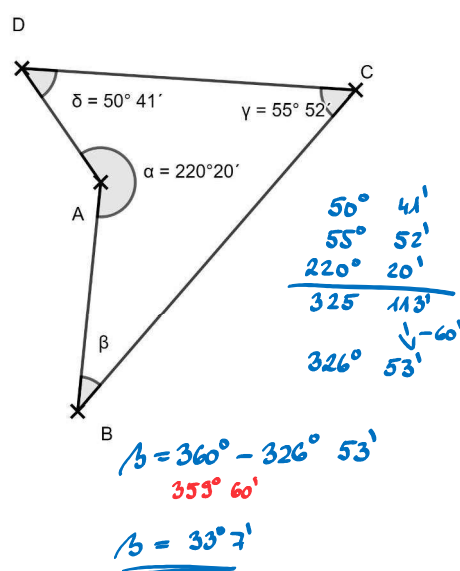


$$\gamma = 360^\circ - \alpha - \beta - \delta = 360^\circ - 96^\circ - 77^\circ - 102^\circ$$

$$\gamma = 360^\circ - 275^\circ = 85^\circ$$

$$\gamma = 85^\circ$$

4)

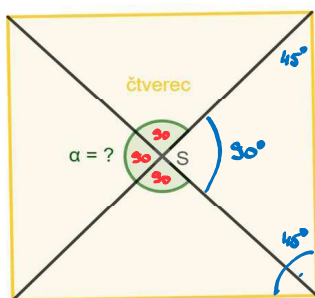


$$\beta = 360^\circ - 326^\circ 53' = 33^\circ 7'$$

5) Vypočítejte úhel alfa v pravidelném čtyř-úhelníku (čtverec).

6) Vypočítejte úhel alfa v pravidelném šesti-úhelníku.

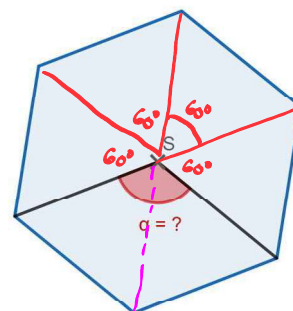
$$360 : 4 = 90^\circ$$



$$\alpha = 270^\circ$$

$$360 : 6 = 60^\circ$$

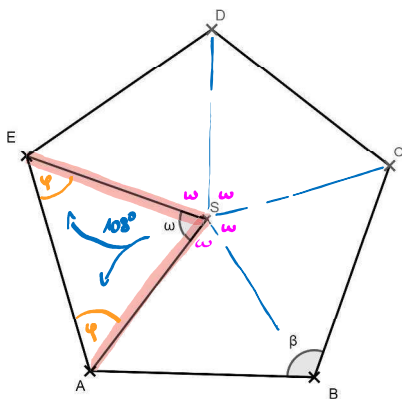
$$\alpha = 120^\circ$$



Mnohoúhelníky 2

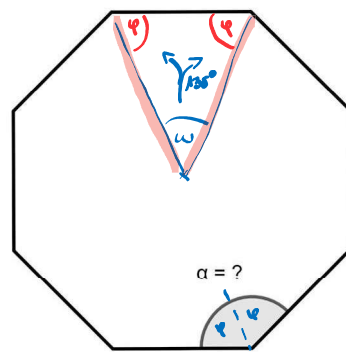
1) Vypočítejte úhel beta a omega v pravidelném pěti-úhelníku.

$$\begin{aligned}\omega &= 360 : 5 = 72^\circ \\ \omega &= 72^\circ \\ 180^\circ - 72^\circ &= 108^\circ \\ \varphi &= 54^\circ \\ \beta &= 108^\circ\end{aligned}$$



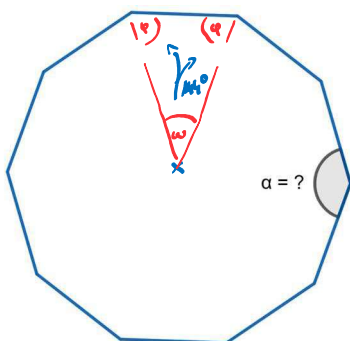
2) Vypočítejte úhel alfa v pravidelném osmi-úhelníku.

$$\begin{aligned}\omega &= 360 : 8 = 45^\circ \\ 180^\circ - 45^\circ &= 135^\circ \\ \varphi &= 135 : 2 = 67,5^\circ \\ \alpha &= 2 \cdot \varphi = 135^\circ\end{aligned}$$



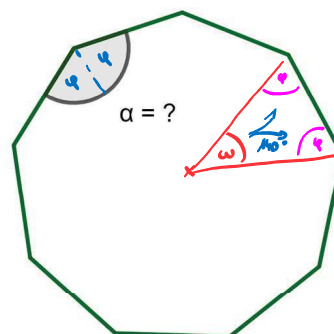
3) Vypočítejte úhel alfa v pravidelném deseti-úhelníku.

$$\begin{aligned}\omega &= 360 : 10 = 36^\circ \\ 180^\circ - 36^\circ &= 144^\circ \\ \alpha &= 2 \cdot \varphi = 144^\circ\end{aligned}$$



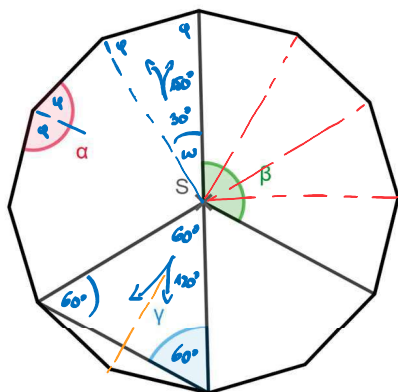
4) Vypočítejte úhel alfa v pravidelném devíti-úhelníku.

$$\begin{aligned}\omega &= 360 : 9 = 40^\circ \\ \alpha &= 2 \cdot \varphi = 140^\circ\end{aligned}$$



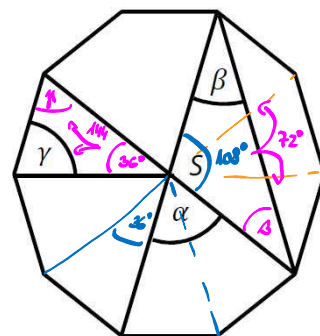
5) Vypočítejte úhly alpha, beta, gamma v pravidelném dvanácti-úhelníku.

$$\begin{aligned}\omega &= 360 : 12 = 30^\circ \\ \beta &= 4 \cdot 30^\circ = 120^\circ \\ \beta &= 120^\circ \\ \gamma &= 60^\circ \\ \alpha &= 2 \cdot \varphi = 150^\circ \\ \alpha &= 150^\circ\end{aligned}$$



6) Vypočítejte úhly alpha, beta, gamma v pravidelném deseti-úhelníku. (cermat 2018)

$$\begin{aligned}360 : 10 &= 36^\circ \\ \alpha &= 2 \cdot 36^\circ = 72^\circ \\ \alpha &= 72^\circ \\ \beta &= 144 : 2 = 72^\circ \\ \beta &= 72^\circ \\ \beta &= 72 : 2 = 36^\circ \\ \beta &= 36^\circ\end{aligned}$$

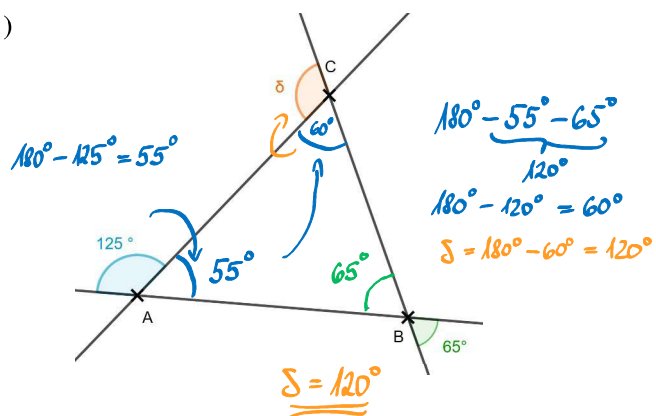


$$3 \cdot 36^\circ = 108^\circ$$

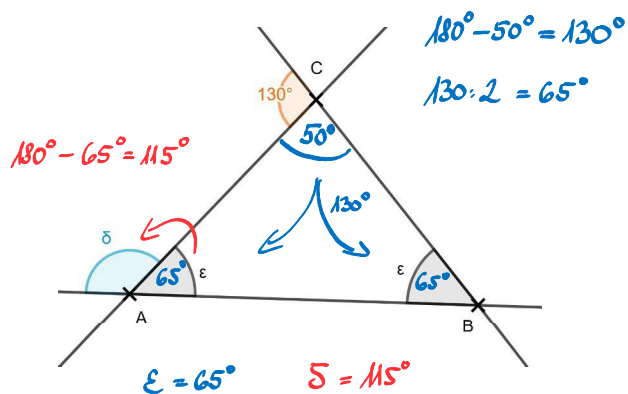
Procvičování 1

Vypočítej označené úhly.

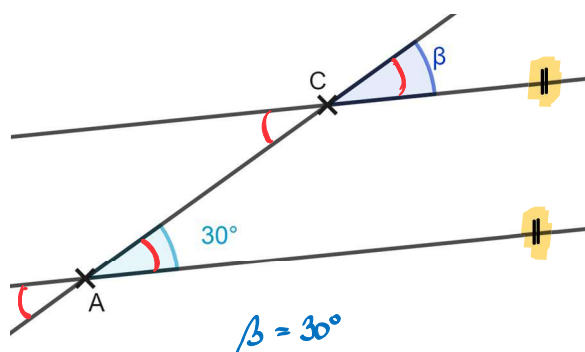
1)



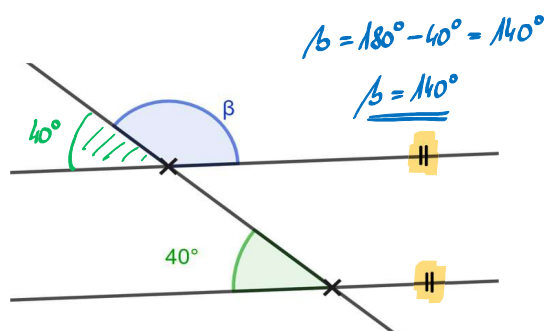
2)



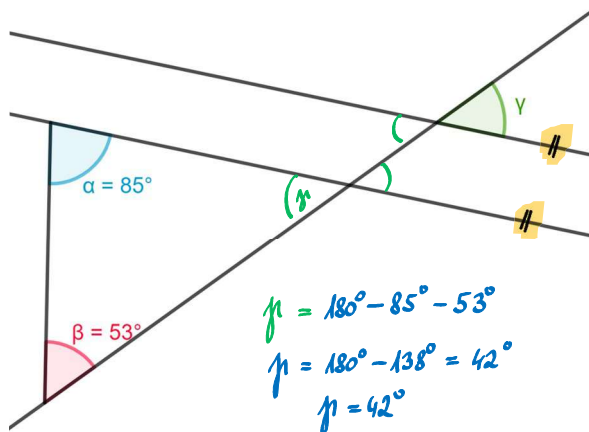
3)



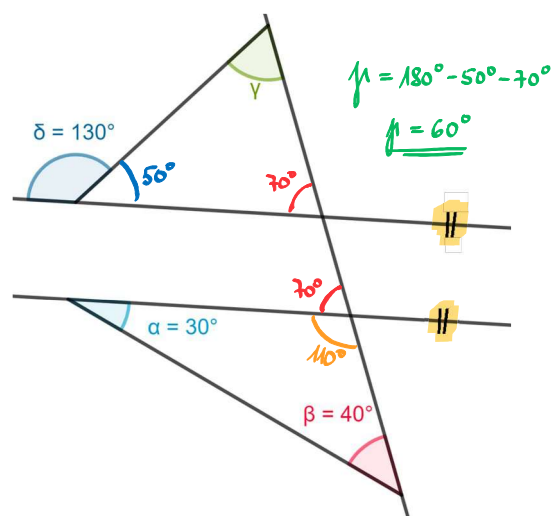
4)



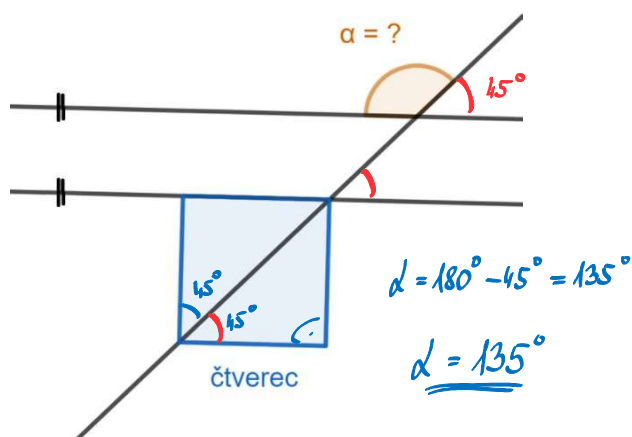
5)



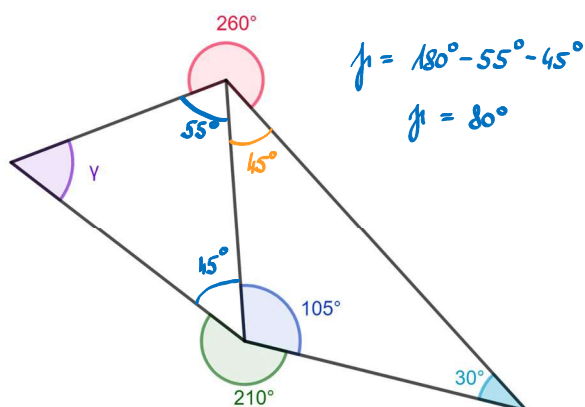
6)



7)



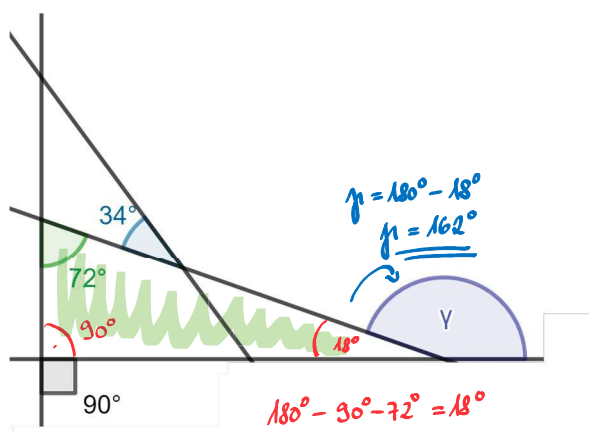
8)



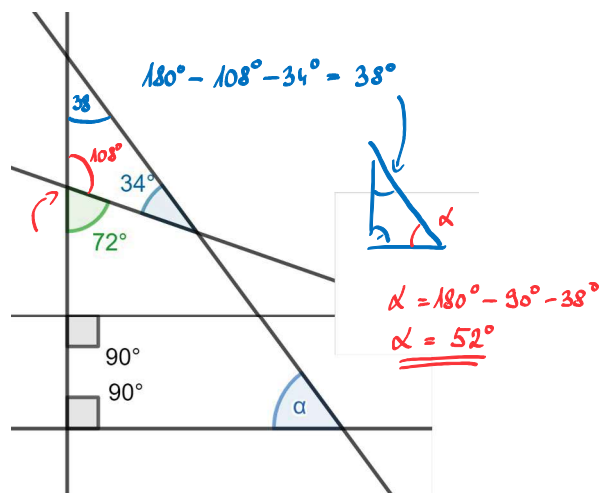
Procvičování 2

Dopočítej chybějící úhly.

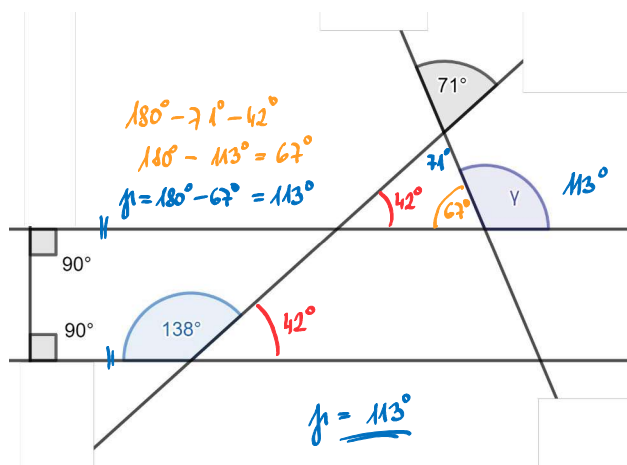
1)



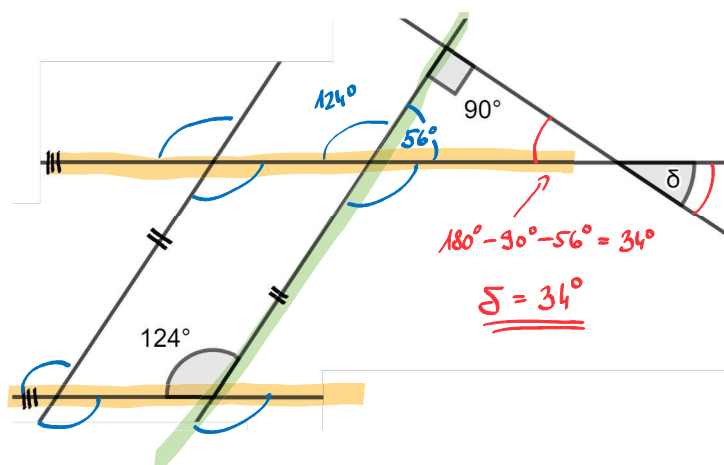
2)



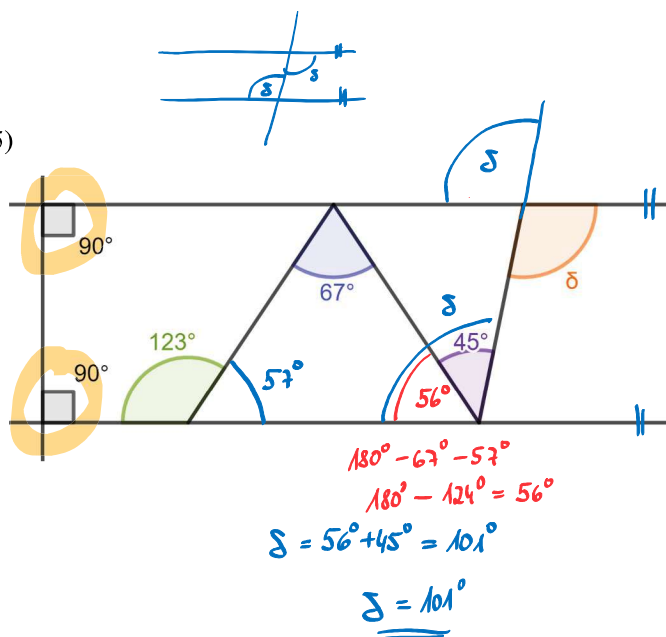
3)



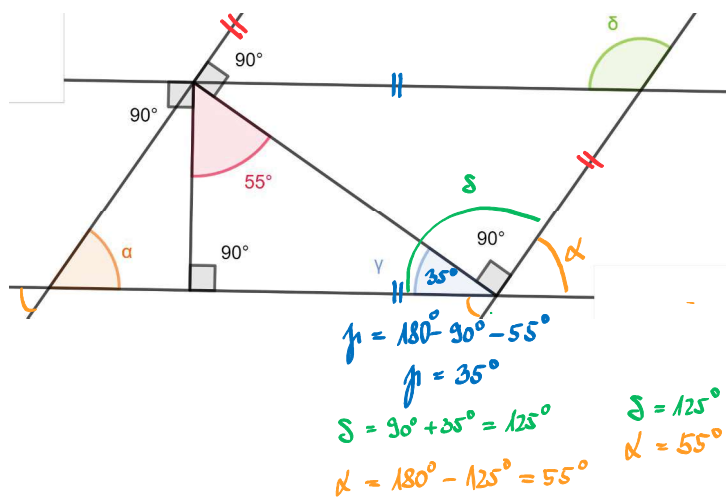
4)



5)



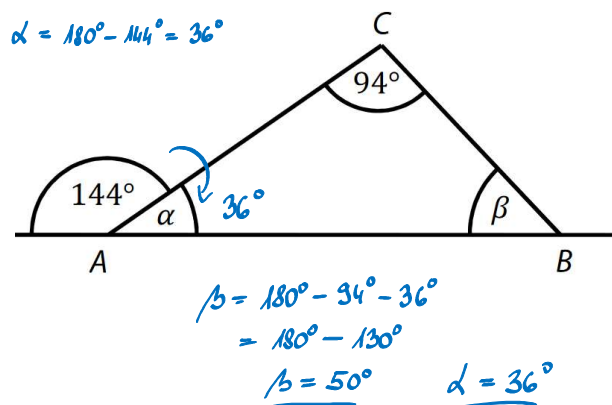
6)



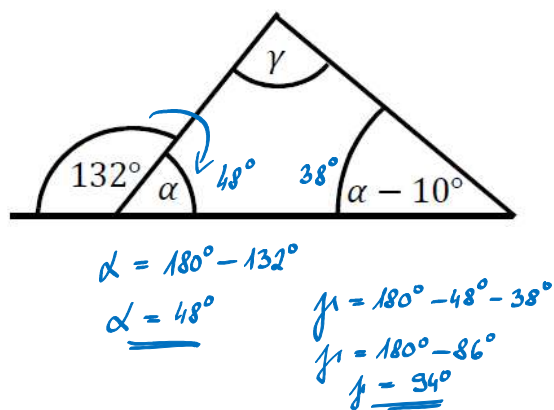
Procvičování 3

Dopočítej chybějící úhly.

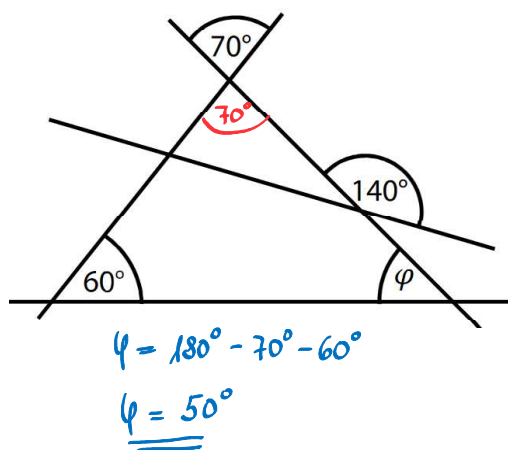
1)



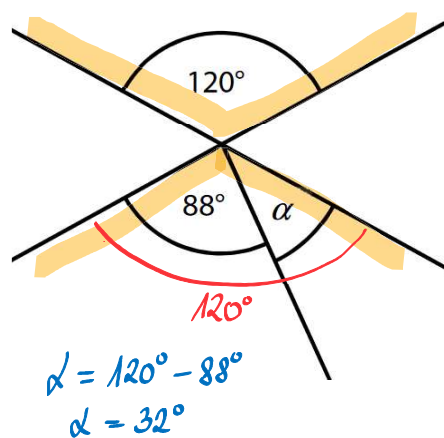
2)



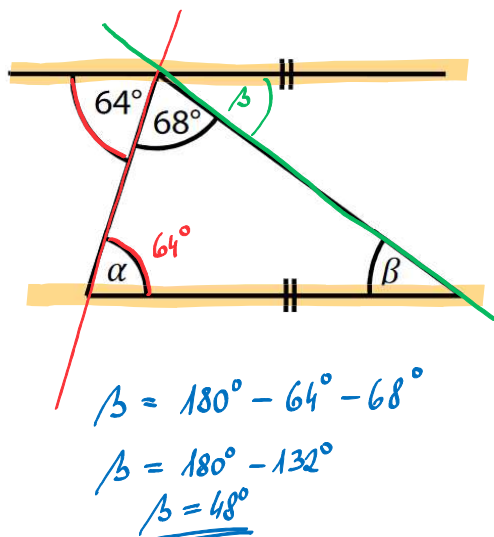
3)



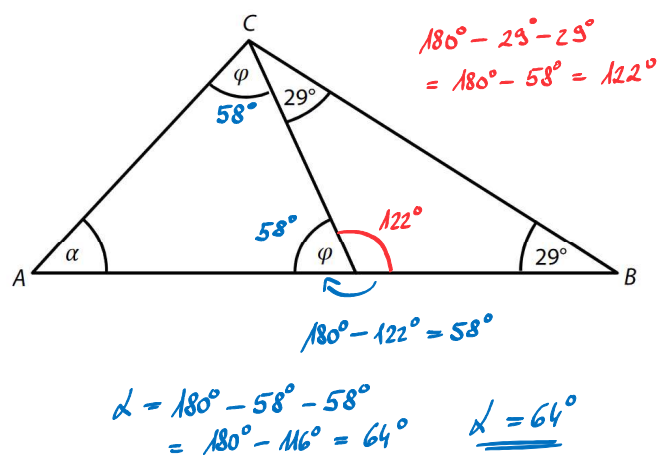
4)



5)



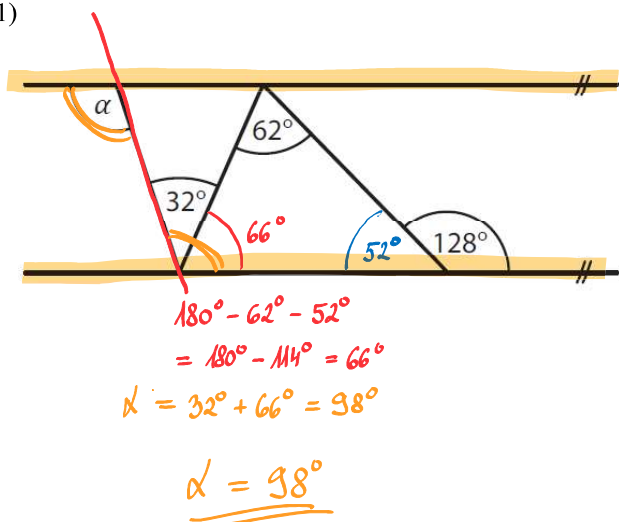
6)



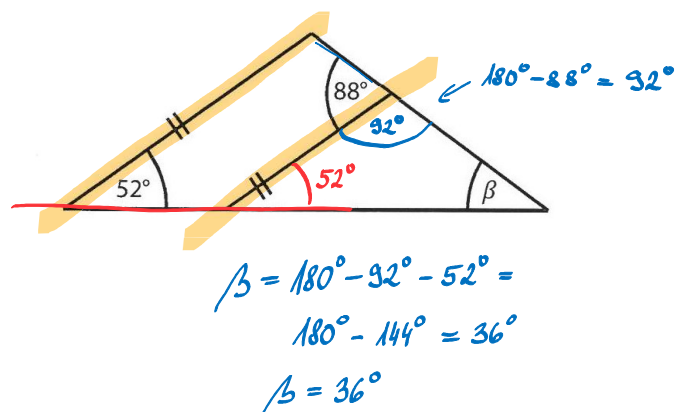
Procvičování 4

Dopočítej chybějící úhly.

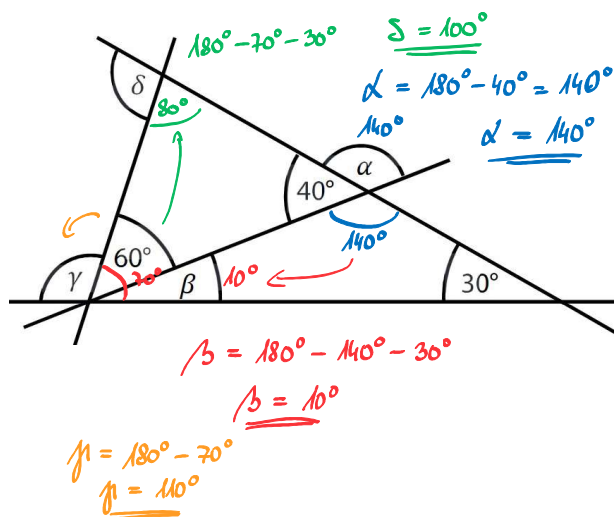
1)



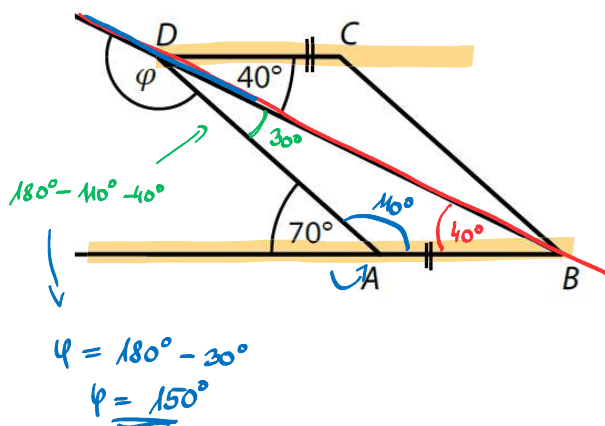
2)



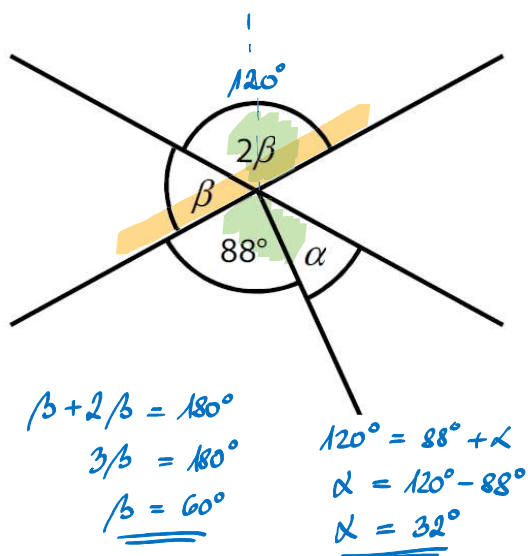
3)



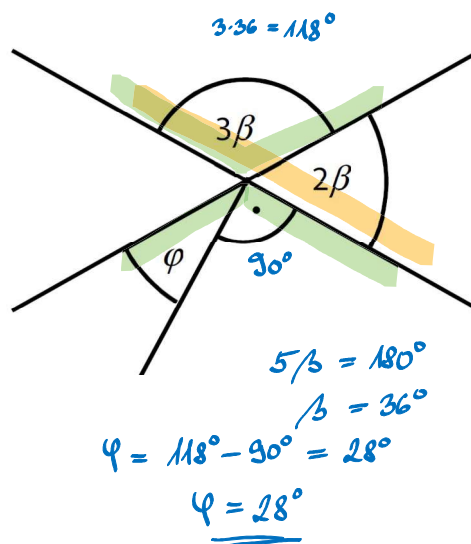
4)



5)



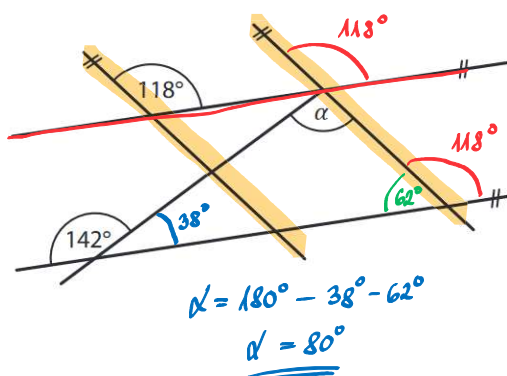
6)



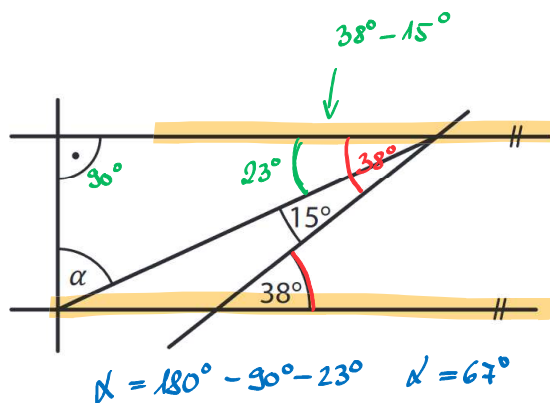
Procvičování 5

Dopočítej chybějící úhly.

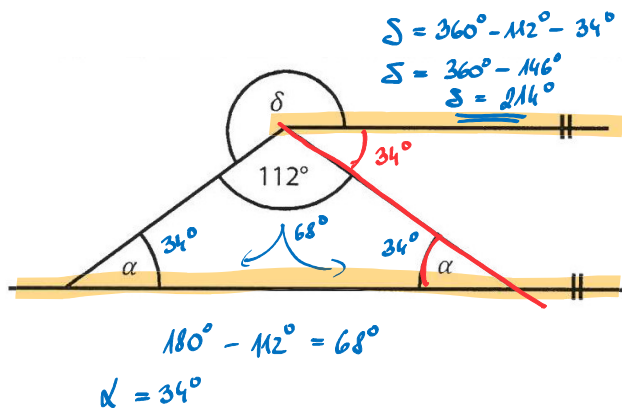
1)



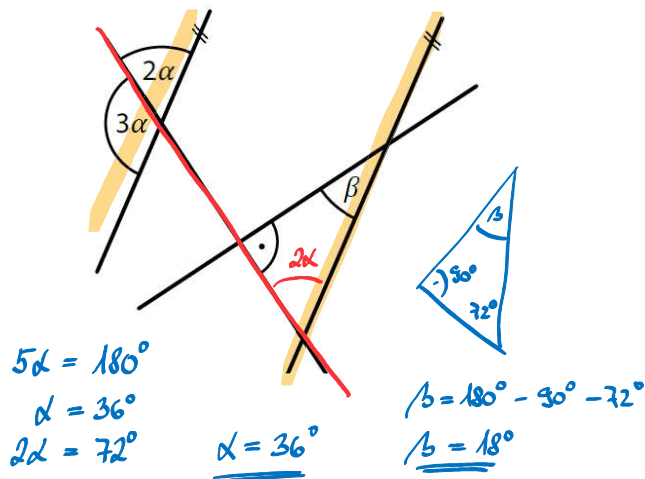
2)



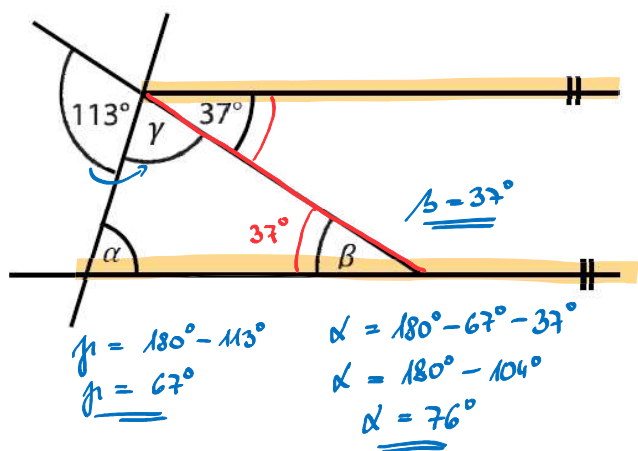
3)



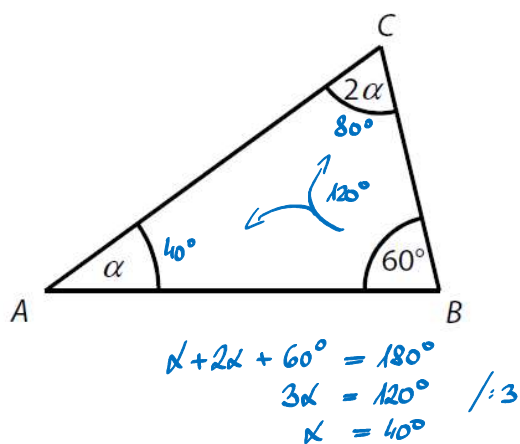
4)



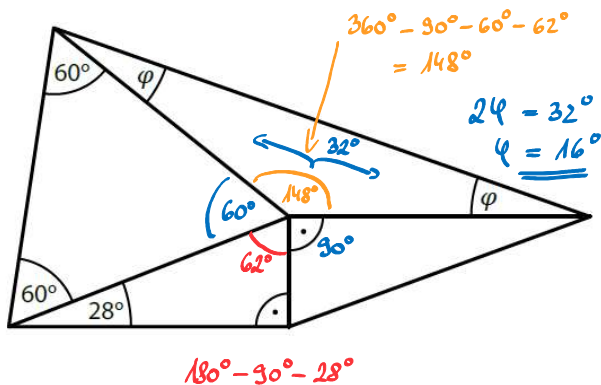
5)



6)



7)



8)

