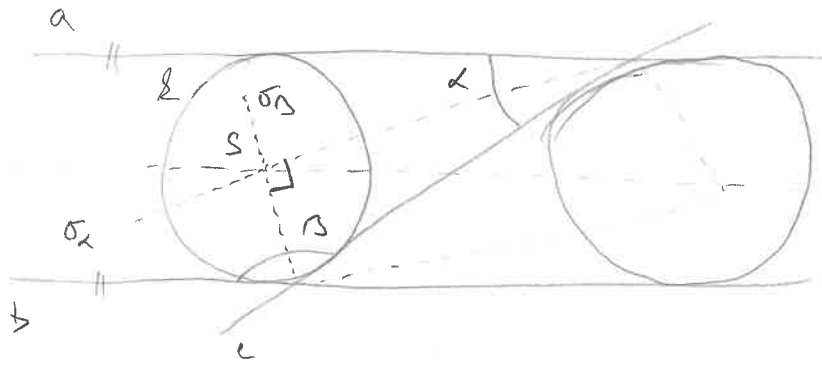


1)



* $|Sa| = |Sc| \Rightarrow$

$S \in \sigma_2$

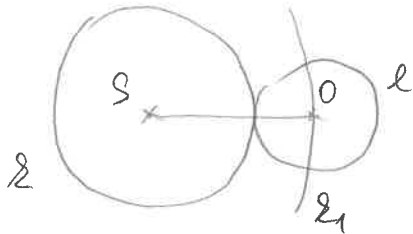
* $|Sb| = |Sc| \Rightarrow$

$S \in \sigma_3$

$\Rightarrow S \in \sigma_2 \cap \sigma_3 \Rightarrow |Sa| = |Sb| \Rightarrow S$ leží také na ose páru mezi a, b

(pozn. $\alpha + \beta = 180^\circ \Rightarrow \frac{\alpha}{2} + \frac{\beta}{2} = 90^\circ \Rightarrow \sigma_2 \perp \sigma_3$)

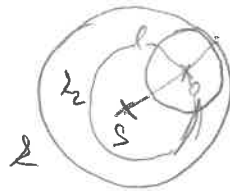
2) * vnější dotyk kružnic $\mathcal{K}(S; r_k)$ a $\mathcal{K}(O; r)$



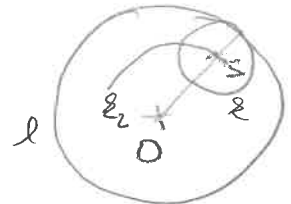
$\Rightarrow |SO| = r_k + r \Rightarrow O \in \mathcal{K}_1(S; r_k + r)$

* vnitřní dotyk \mathcal{K} a \mathcal{K} :

$|SO| = r_k - r$



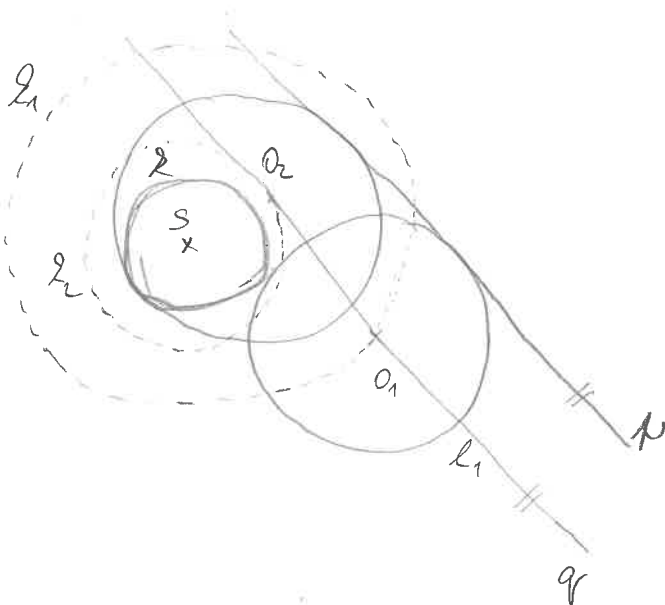
resp.



$|SO| = r - r_k$

dohromady: $|SO| = |r - r_k|$ (pro $r = r_k$ vnitřní dotyk nenastane)
 $\Rightarrow O \in \mathcal{K}_2(S; |r - r_k|)$

$D: \mathcal{K}(S; r_k); \mu$ ($\mu \cap \mathcal{K} = \emptyset$), r



$\mathcal{K}_1(S; r + r_k)$

$\mathcal{K}_2(S; |r - r_k|)$

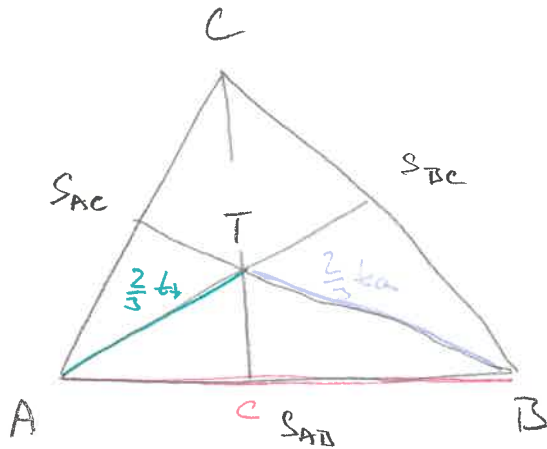
$|q \cap \mu| = r$ (q a S leží

ve stejné poloze
 ve stejné poloze
 v hranicích přímkou μ)

$O_1 \in \mathcal{K}_1 \cap q \Rightarrow l_1, \mathcal{K}$ vnější dotyk

$O_2 \in \mathcal{K}_2 \cap q \Rightarrow l_2, \mathcal{K}$ vnitřní dotyk

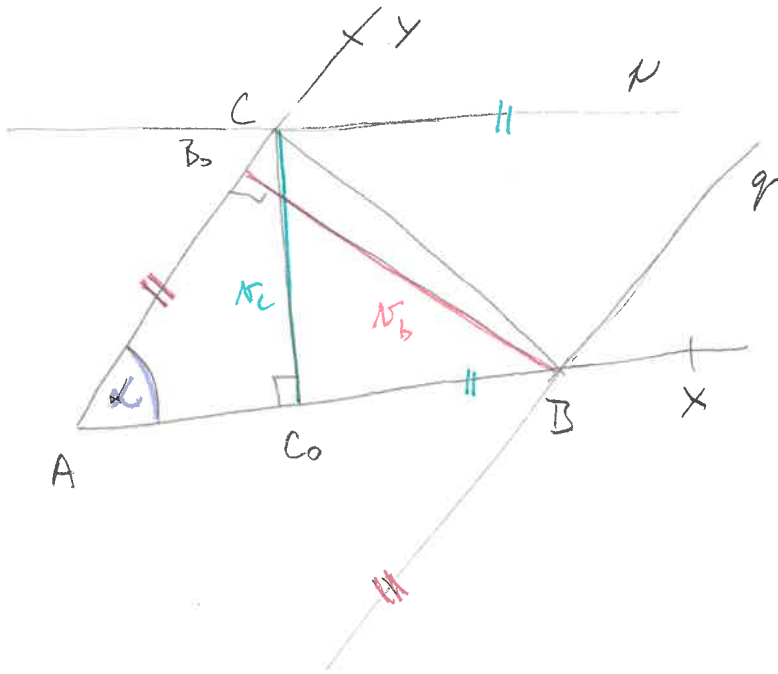
3) D: c, t_a, t_b



$\triangle ART$ ($\triangle BT$)

$C \in \overrightarrow{S_{ABT}}$; $\exists |S_{ABT}| = |S_{ABC}|$

4) D: α, ν_b, ν_c



$\exists XAY$; $|\overrightarrow{XAY}| = \alpha$

$|\overrightarrow{BAY}| = \nu_b \Rightarrow$

$B \in q$;

$|qAY| = \nu_b$

$B \in q \cap \overrightarrow{AX}$

$|\overrightarrow{CAX}| = \nu_c \Rightarrow$

$C \in p$; $|pAX| = \nu_c$

$C \in p \cap \overrightarrow{AY}$

