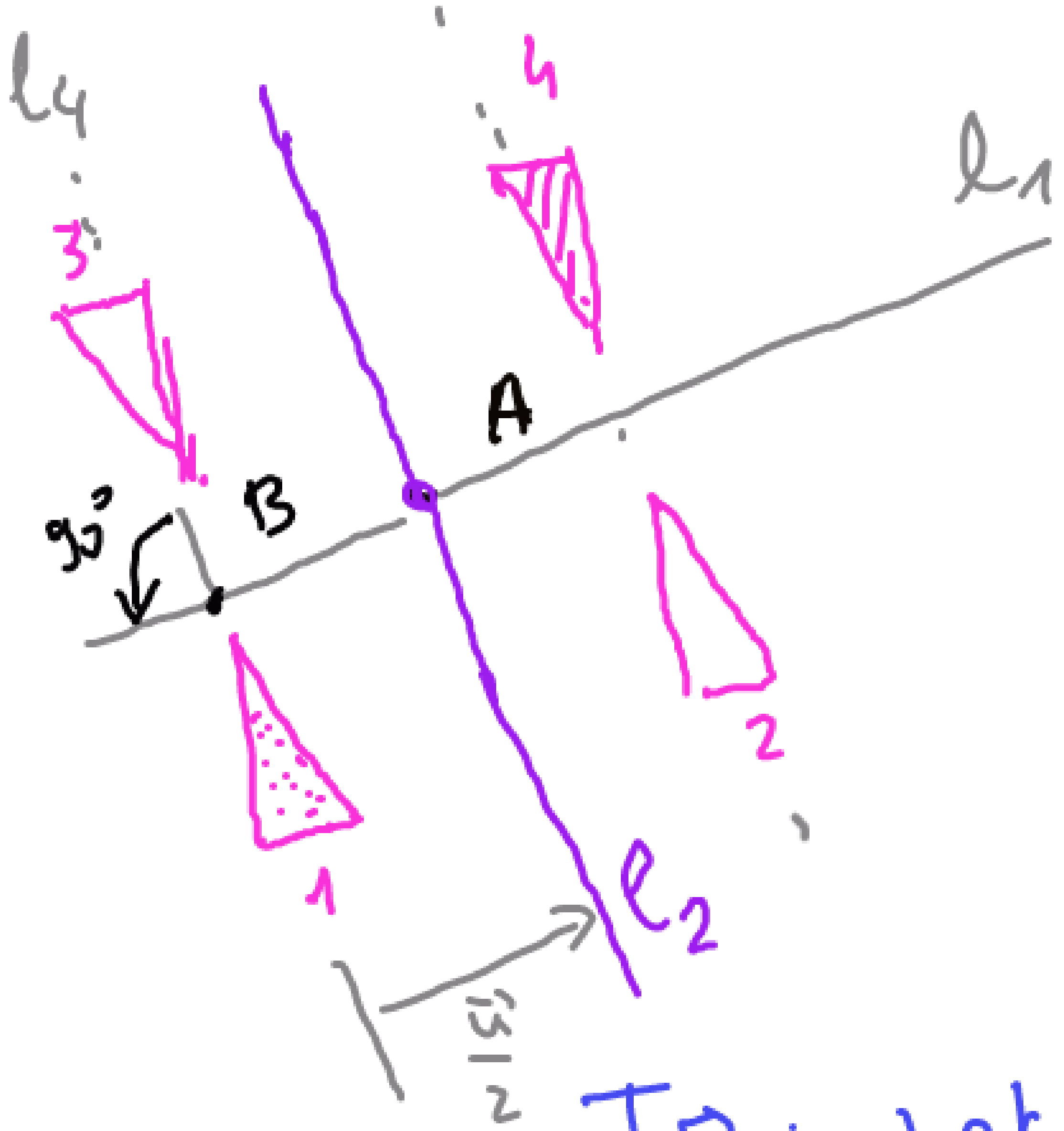
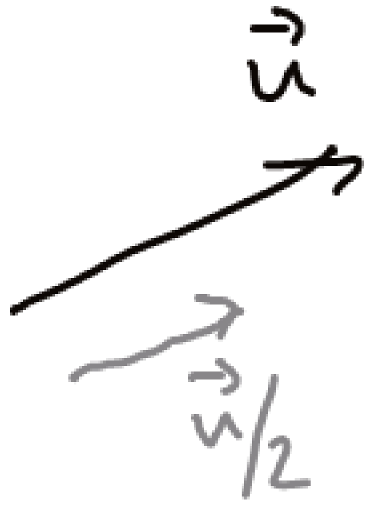
VI-2

$T_u H_A T_u = R_{l_1} R_{l_2} R_{l_2} R_{l_4} = T_u R_{l_1} R_{l_4} = T_u H_B = R_{l_2} R_{l_1} R_{l_1} R_{l_1} = R_{l_2} R_{l_1} = H_A$

chcemy wziąć prostą przechodzącą przez A i prostopadłą do $\vec{u}$ || H_B

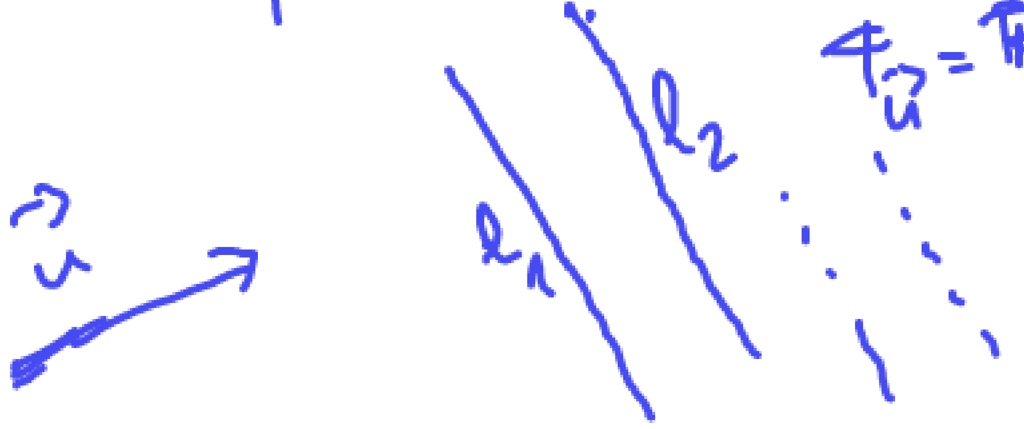
prosta przech. przez B i prostopadła do $\vec{u}$



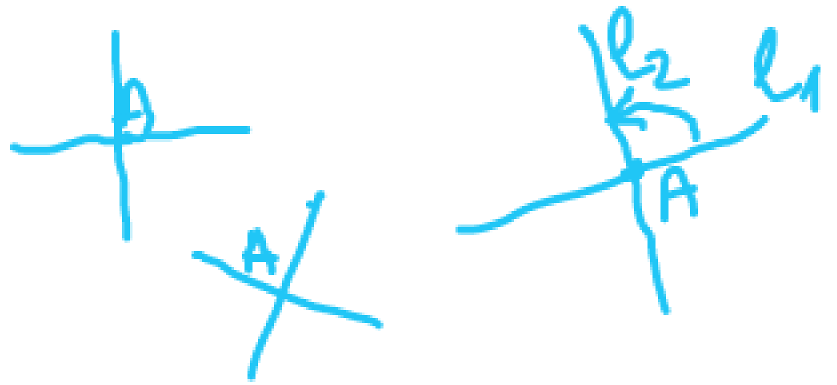


$T_{\vec{u}}$ jest złożeniem dwóch odbić wzgl. prostych prostop. do $\vec{u}$ i przesuniętych względem siebie o $\frac{\vec{u}}{2}$

$T_{\vec{u}} = R_{l_2} R_{l_1}$



H_A jest złożeniem dwóch odbić wzgl. prostych przec. się w A i prostopadłych



VI-3

$$G_u^l T_u G_u^l = R_1 T_u T_u R_1 T_u =$$

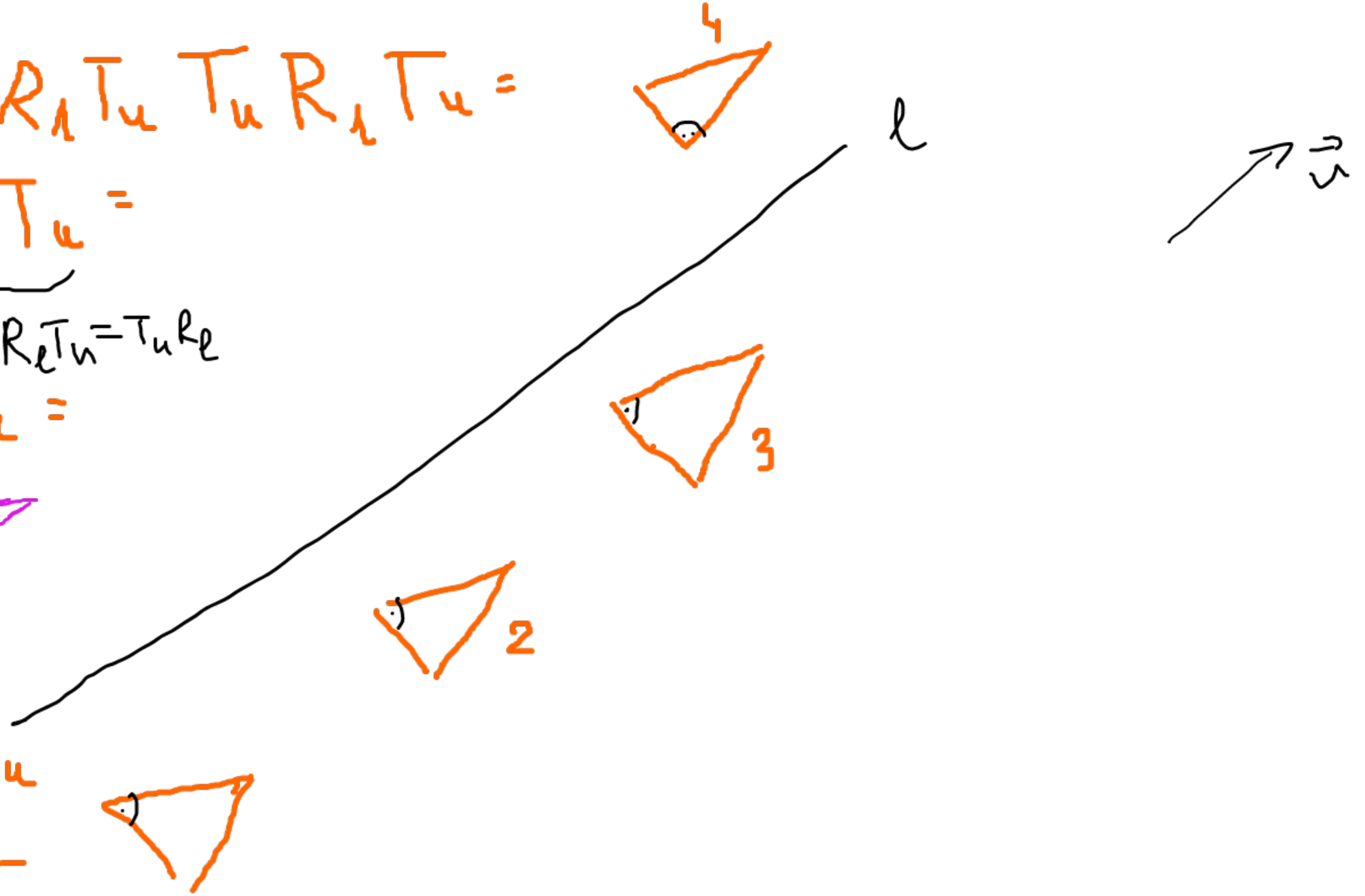
$$= R_L \cdot \underbrace{T_u R_l T_u}_{G_u^l = R_l T_u = T_u R_l} =$$

$$= R_L T_{2u} T_u R_L =$$

$$= R_L \underbrace{T_{3u} R_L}_{G_{3u}^l} =$$

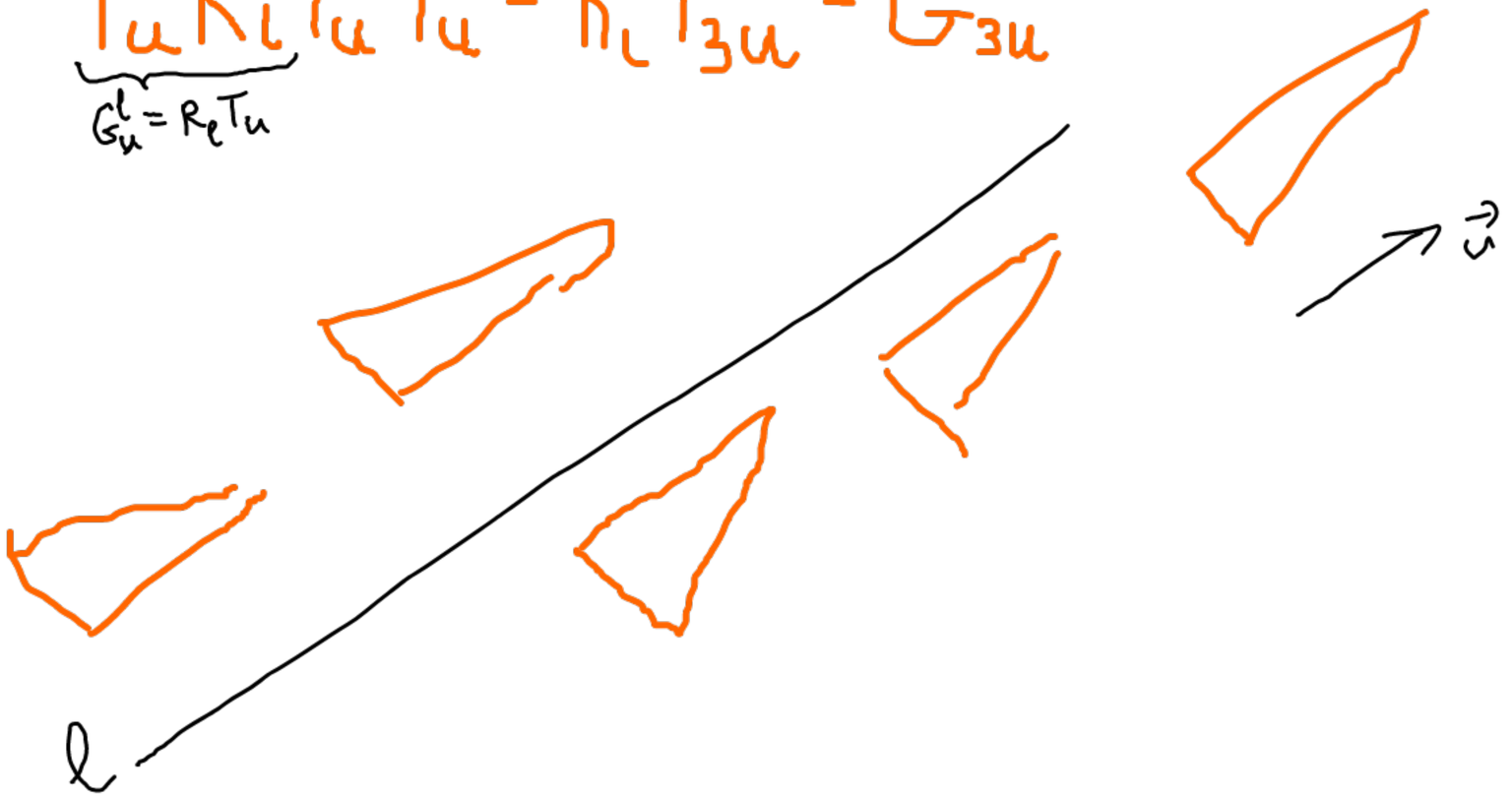
$$= R_L G_{3u}^l = R_L T_{3u}$$

$$= R_L R_L T_{3u} = T_{3u}$$



VI-4

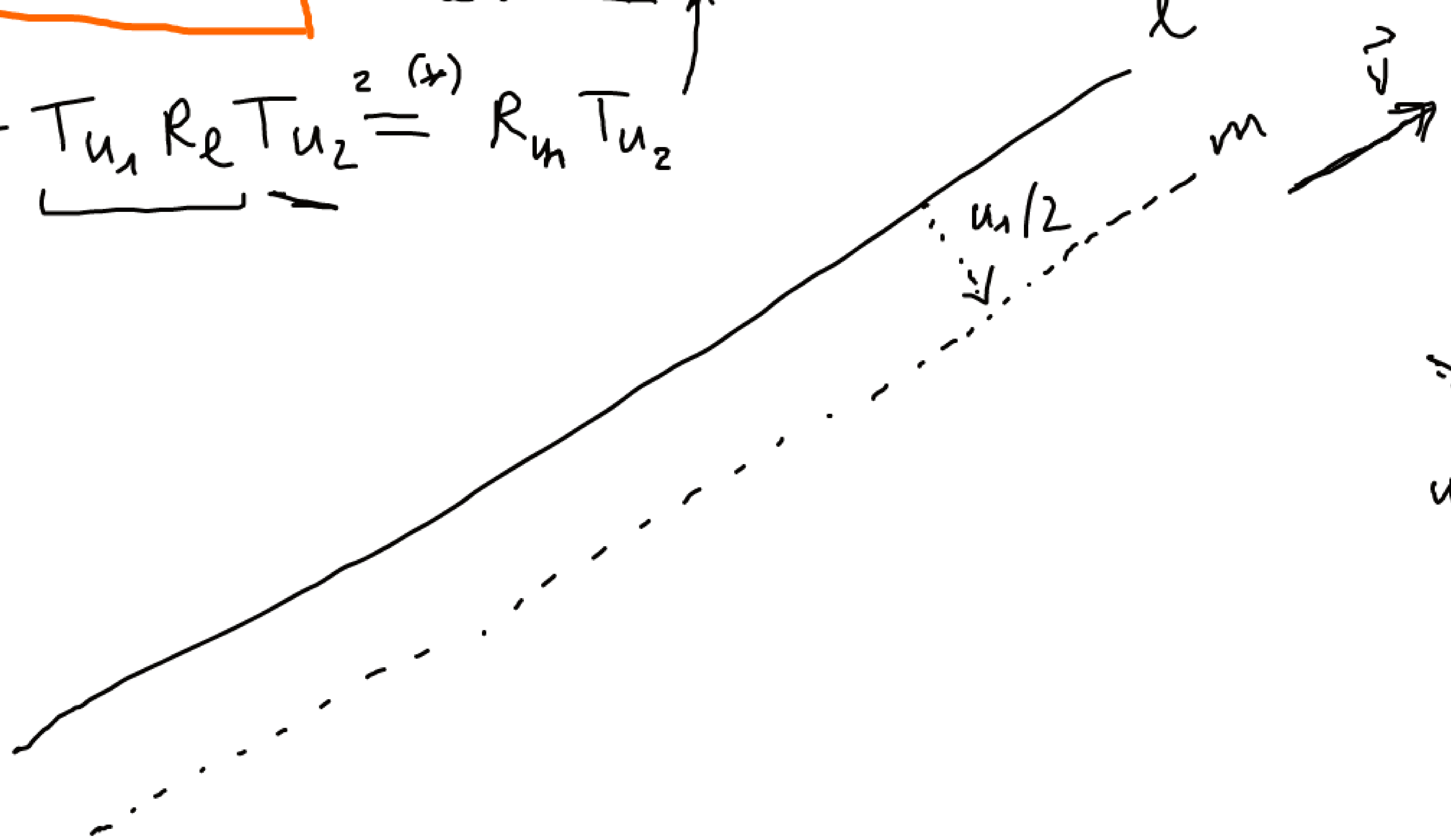
$$T_u G_u^l T_u = \underbrace{T_u R_l T_u}_{G_u^l = R_l T_u} T_u = R_l T_{3u} = G_{3u}^l$$



VI-5 $T_u G^l_v T_u = T_u R_l T_v T_u = T_u R_l T_{u+v} = R_m T_{u_2} T_{u+v} = R_m T_{u+u_2+v} = R_m T_{u_1} T_{2u_2+v}$ (Δ)

?

$T_u R_l = T_{u_1} \underbrace{T_{u_2} R_l}_{G^l_{u_2}} = T_{u_1} R_l T_{u_2} \overset{z\ (*)}{=} R_m T_{u_2}$



$u = u_1 + u_2$

$u_1 \perp l,\ u_2 \parallel l$

(*):

$\underbrace{T_{u_1} R_l}_{} = \underbrace{R_m R_l}_{T_{u_1}} R_l = R_m$

(**):

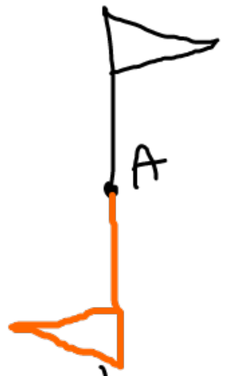
$R_m T_{u_1} = \underbrace{R_m R_m}_{} R_l = R_l$

dalej: 1. wiersz:

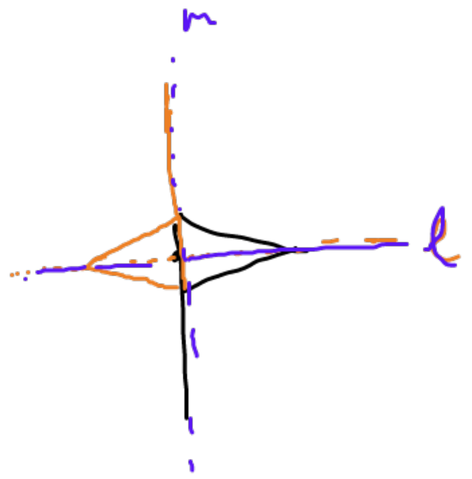
$(\Delta) \overset{z\ (**)}{=} R_l T_{2u_2+v} = G^l_{2u_2+v}$

VII – 1

$C_1 = \{Id\}$



$C_2 = \{Id, H_A\}$

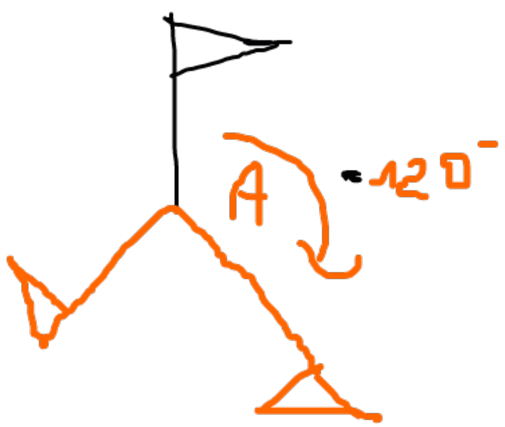


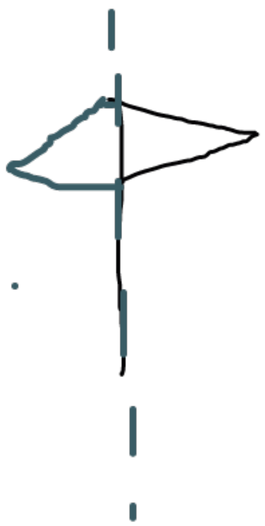
$D_2 = \{Id, H_A, R_\ell, R_m\}$

$C_3 = \{Id, H_A^{120°}, H_A^{240°}\}$

ordre $H_A^{120°}$

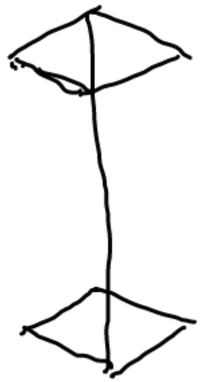
$D_1 = \{Id, R_\ell\}$

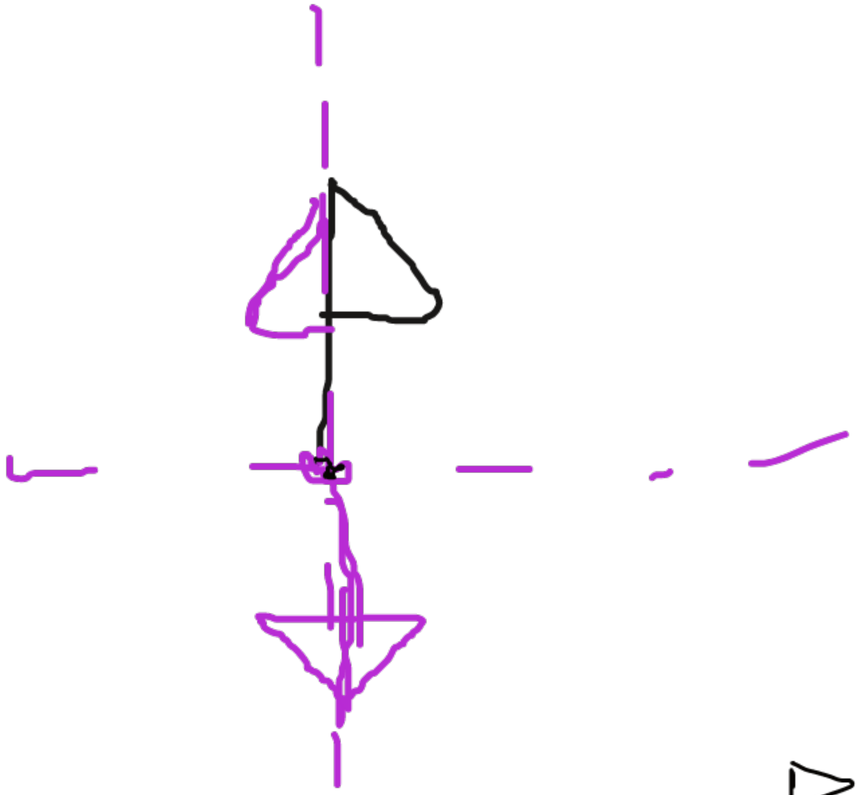




VII-1

$D_2 = \{Id, R_\ell, R_m, H_A\}$ $\quad \ell \perp m,\ \ell \cap m = \{A\}$

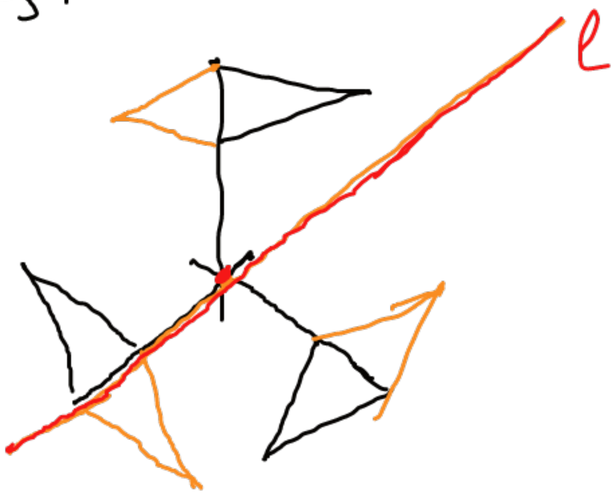




D_3

D_3

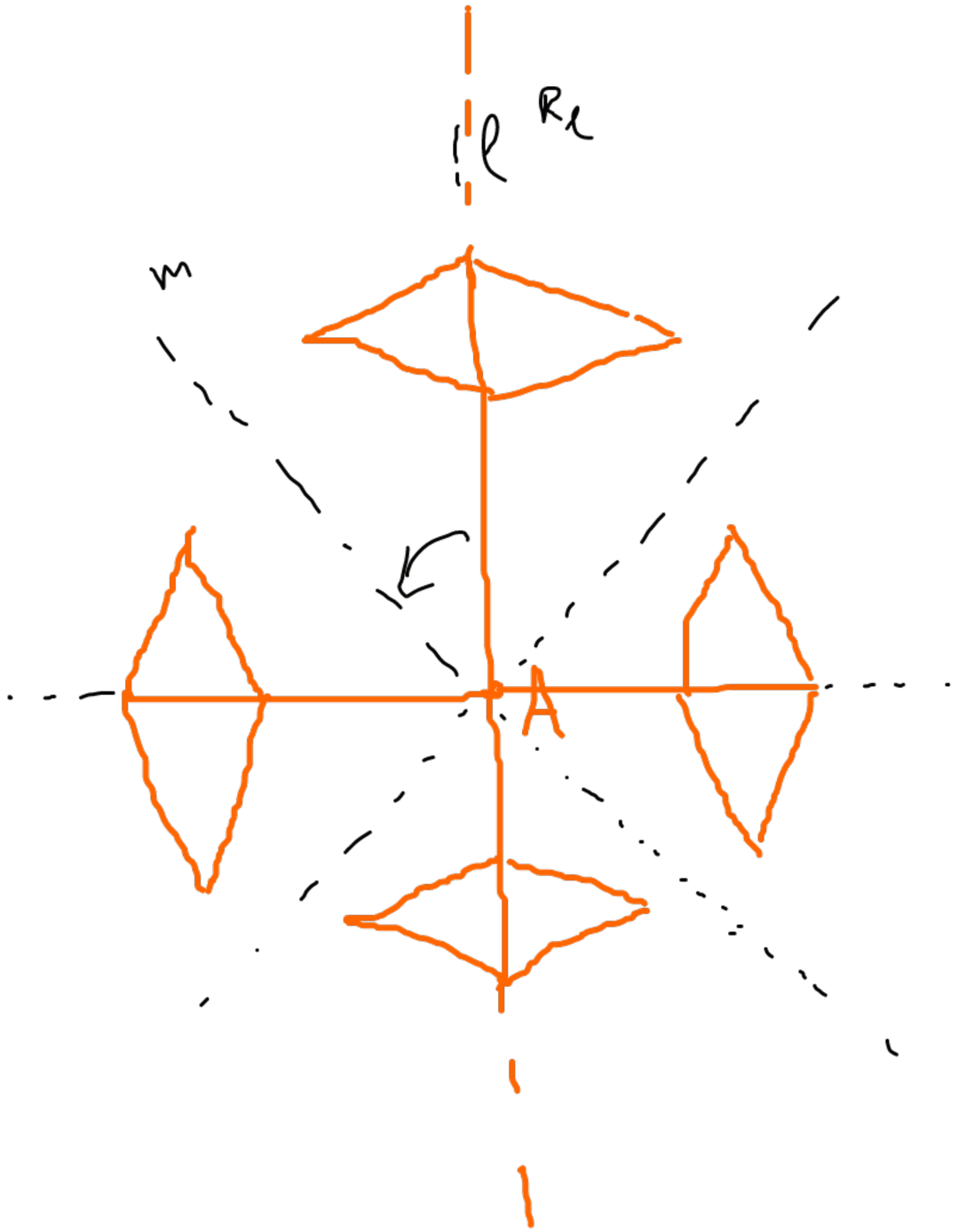
C_3 :



VII - 1

D_4

4 osie symetrii



$$O_A^{90^\circ} = R_m R_l$$

$$O_A^{90^\circ} R_l = R_m R_l R_l = R_m$$

VII-2

C_3