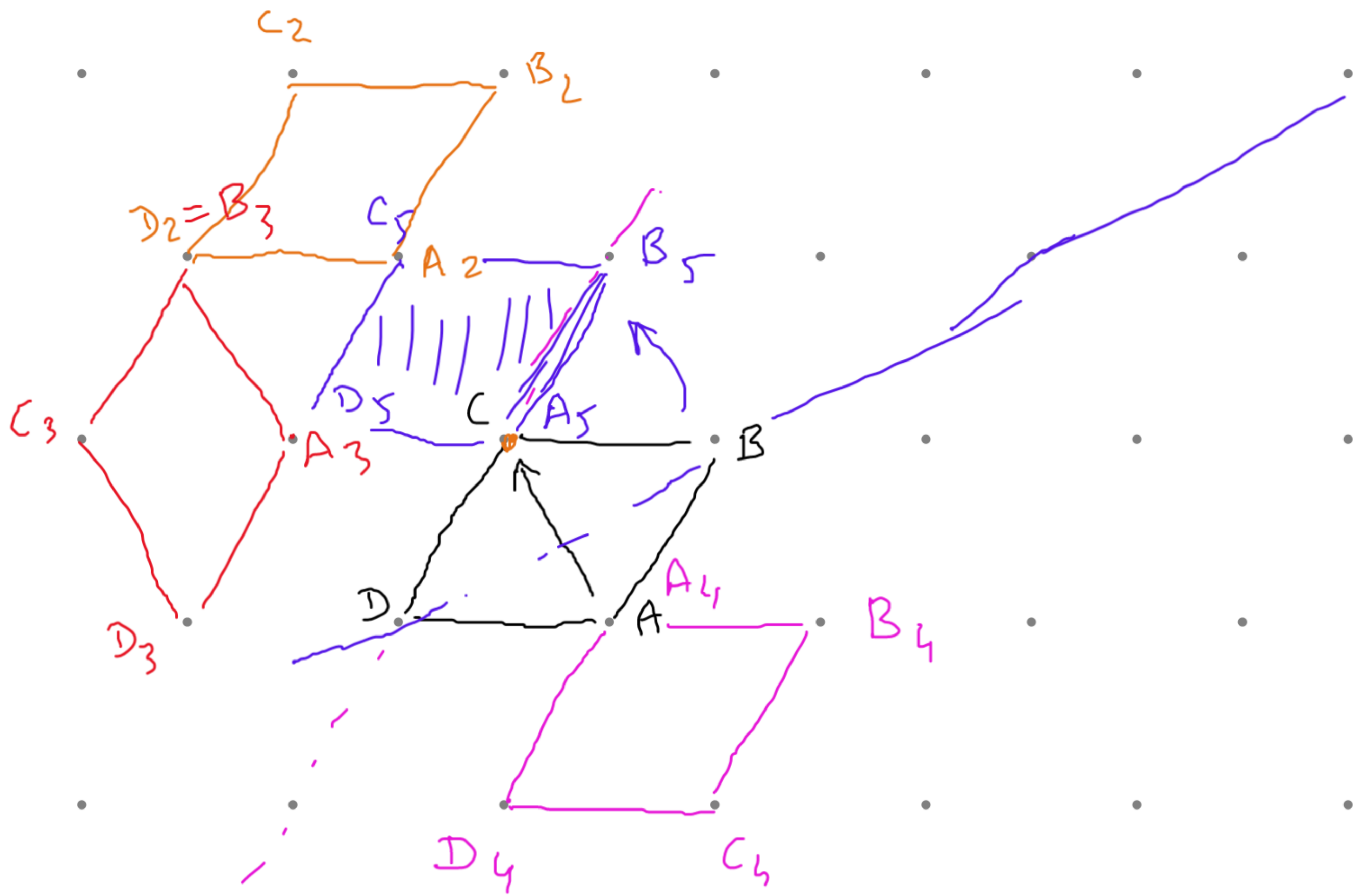


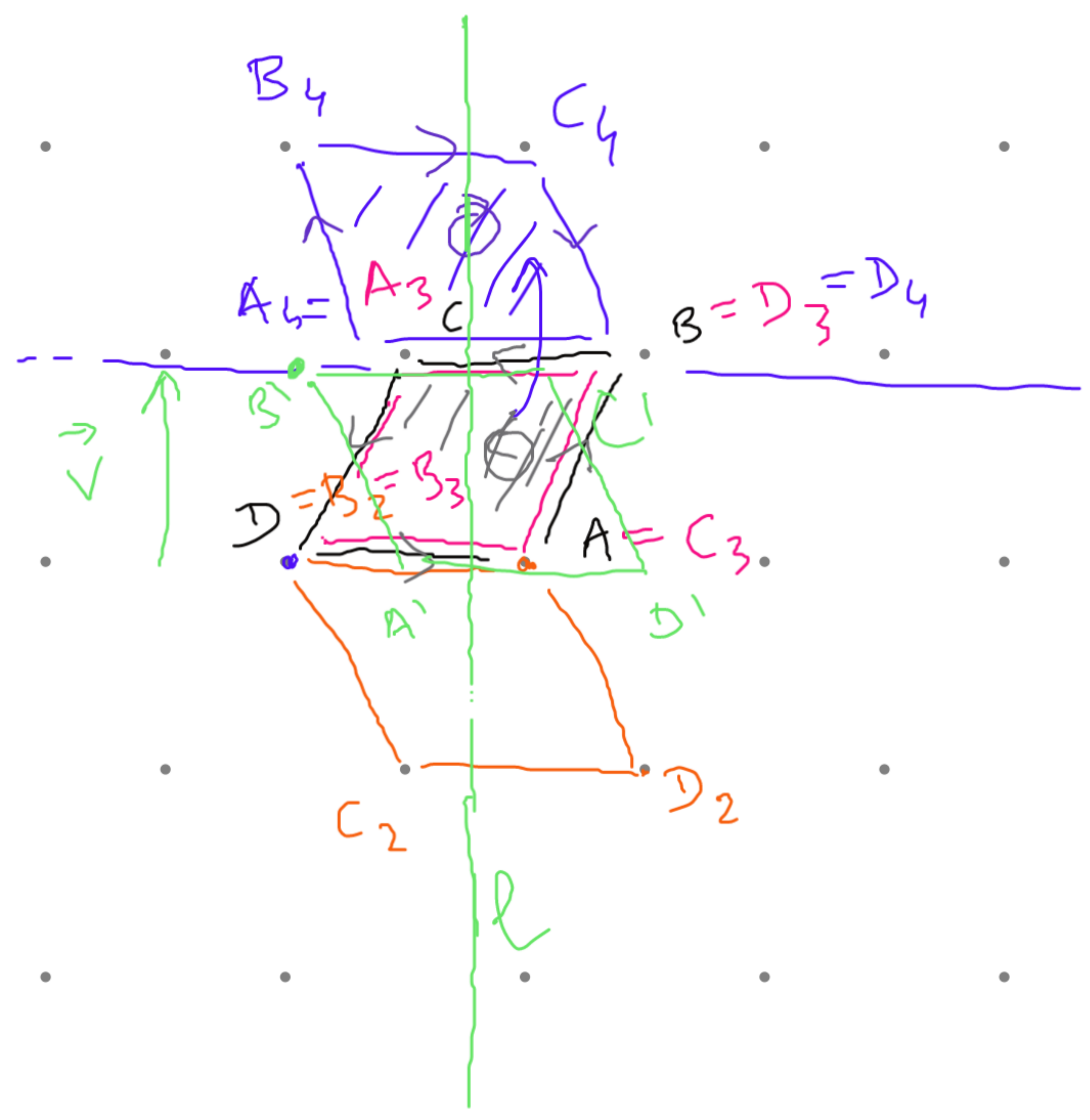
$$\underbrace{1V-1}_{R_{BD}} R_{CD} O_C^{G_0} \underline{T_{2AC}} = T_{AC}$$



IV-2
RBC

$\bigcirc_D^{60^\circ} \bigcirc_A^{120^\circ} = G \begin{matrix} l \\ \rightarrow \\ v \end{matrix}$

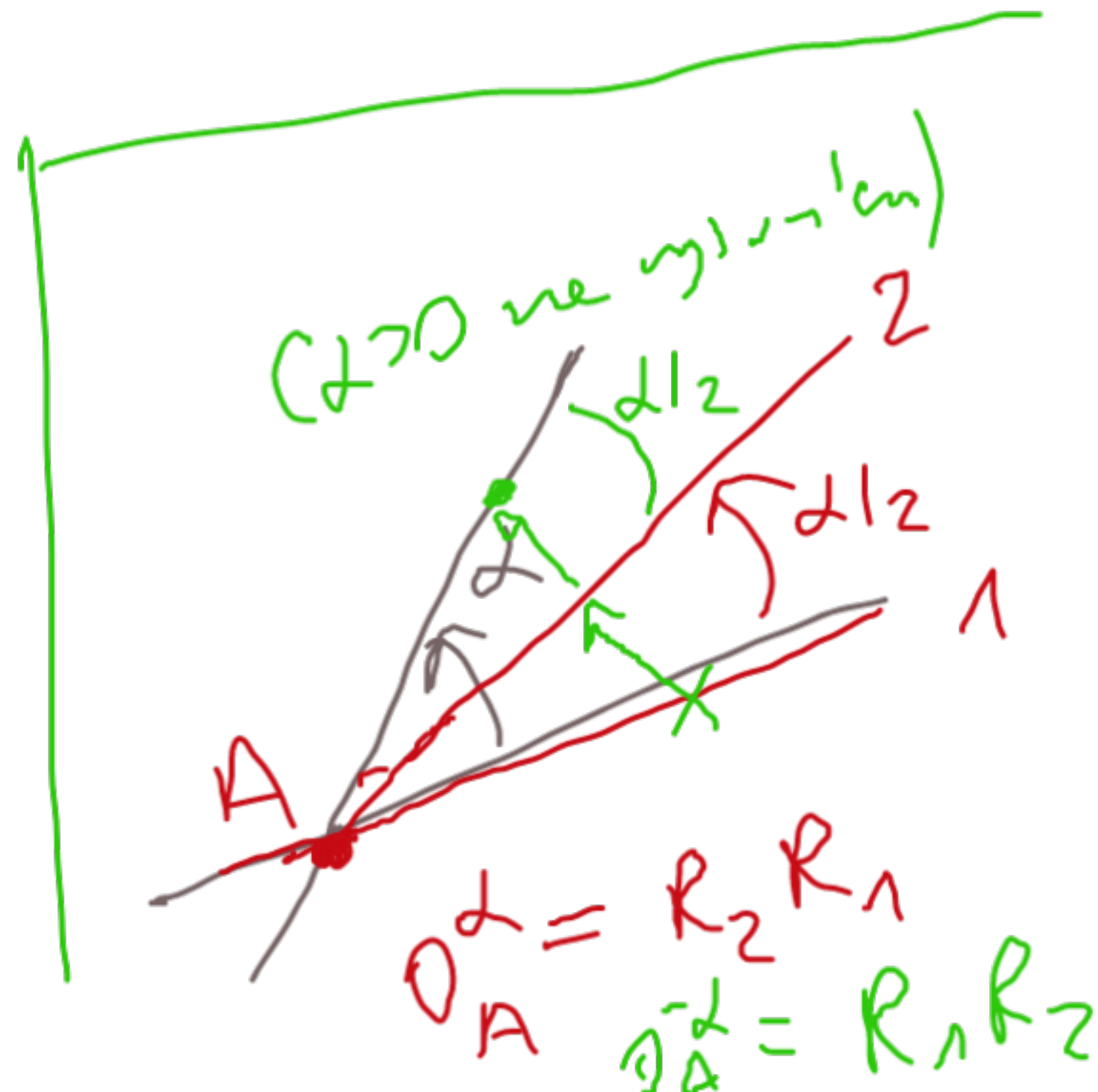
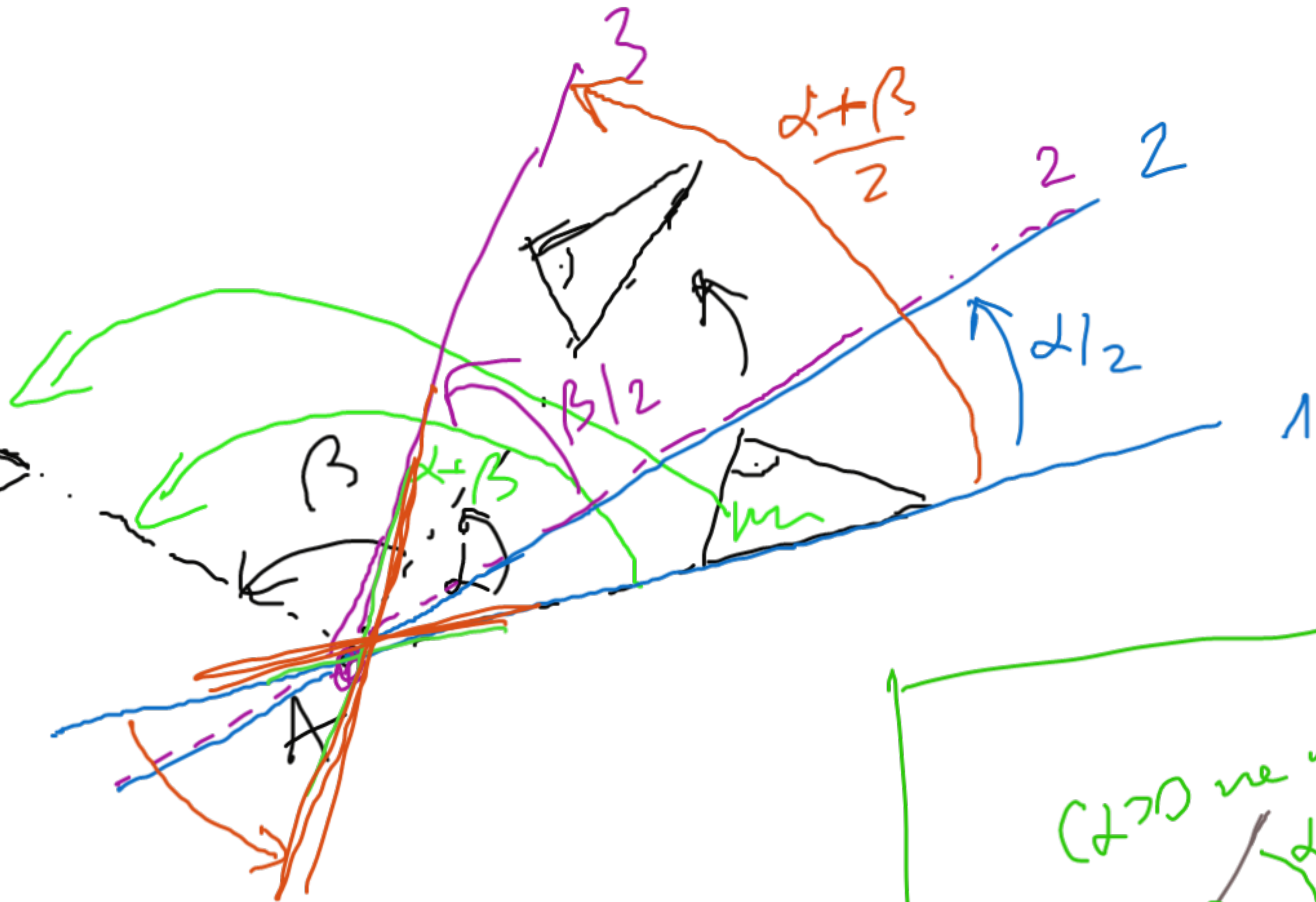
Orientacja się zmienia



$$\frac{V-1}{\beta} O_{A O_A}^\alpha = O_{A A}^{\alpha+\beta}$$

$$\underbrace{R_3 R_2}_{\text{purple}} \underbrace{R_2 R_1}_{\text{blue}} = I_d$$

$$\underbrace{R_3 R_1}_{\text{purple}} = O_{A A}^{\alpha+\beta}$$



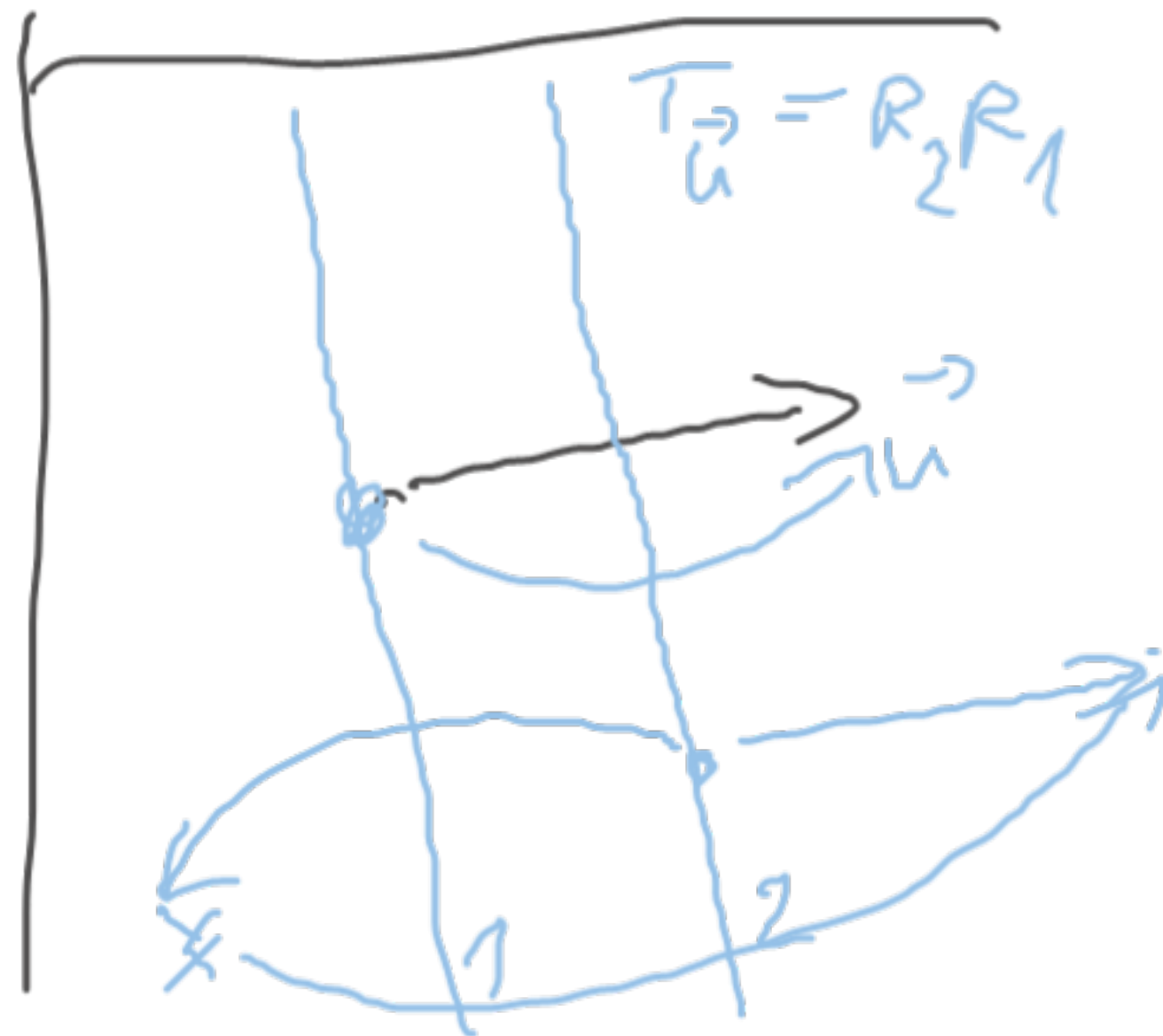
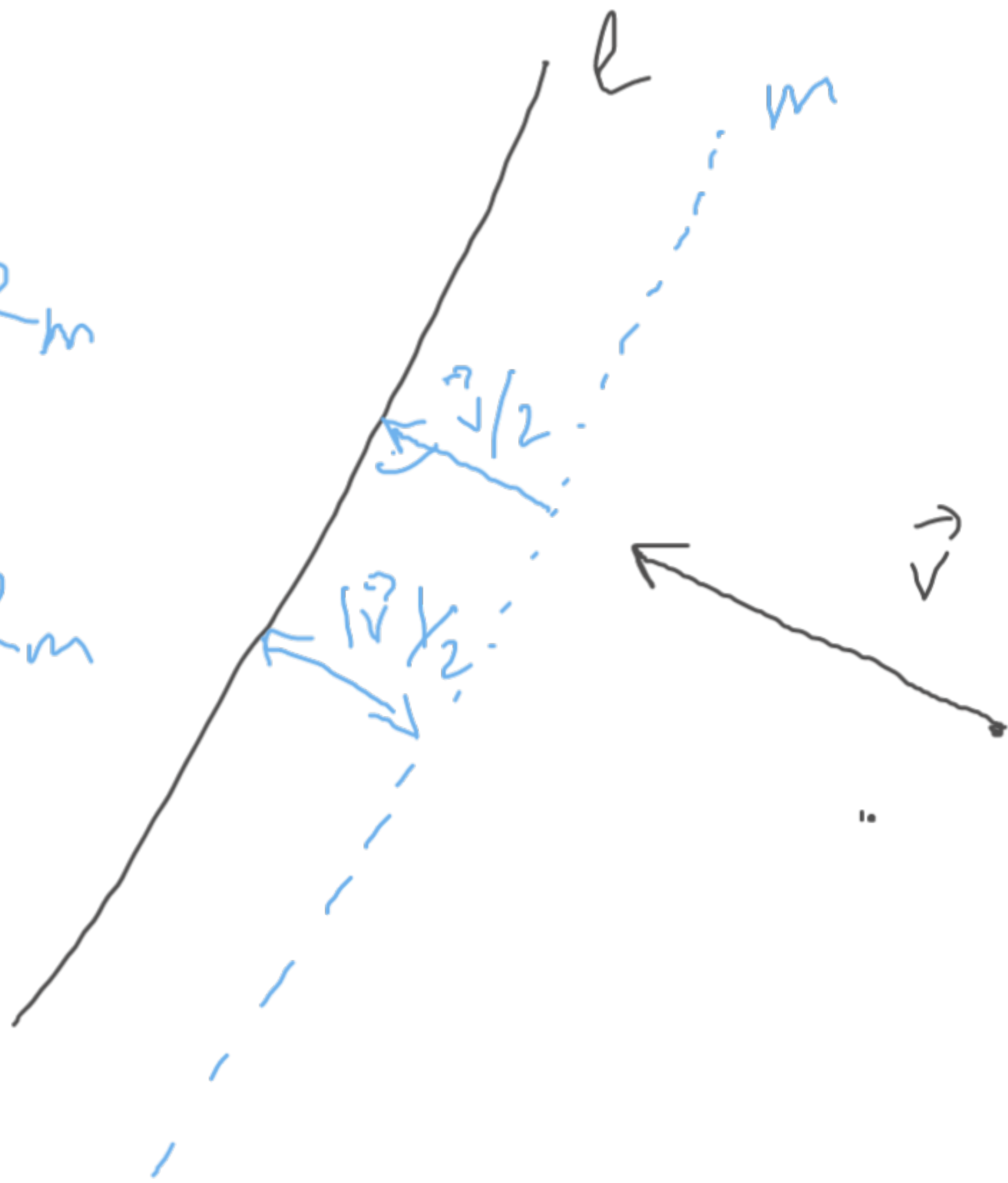
$$O_A^\alpha = R_2 R_1$$

$$O_A^{-\alpha} = R_1 R_2$$

V-5

$R_l T_{\vec{v}} =$
Zet. ie $\vec{v} \perp l$ $R_l R_m$

$$= R_l R_l R_m = R_m$$

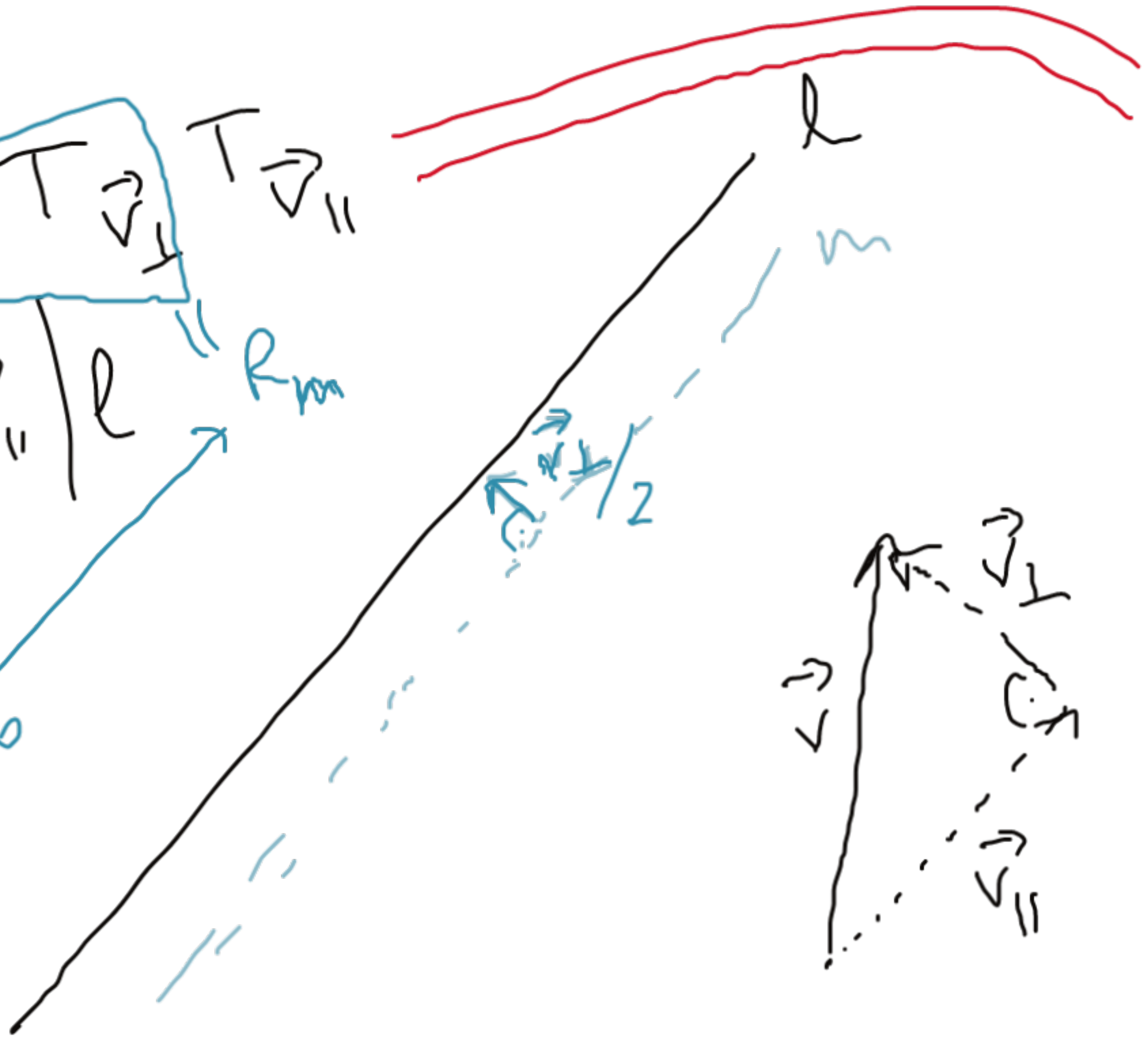


$v \rightarrow$
ogólny przypadek

$$R_l T \vec{v} = \boxed{R_l T \vec{v}_\perp} T \vec{v}_\parallel$$

$$\vec{v} = \vec{v}_\parallel + \vec{v}_\perp, \quad \vec{v}_\parallel \parallel l$$

2 poprzedniego
przypadku



$$R_m T \vec{v}_\parallel = G^m \vec{v}_\parallel$$

np.
gdz $\vec{v}_\perp = 0$,
to $l = m$

$$\frac{v-l}{v}$$

$R_2 O_A$
 $\alpha \neq 180^\circ$

$A \neq l$

$$(R_2 R_1) = (R_2 R_1) R_1 = T_{2v} R_1 =$$

$$2v = \vec{u}_\perp + \vec{u}_\parallel$$

$R_3 R_1$

$$= T_{\vec{u}_\parallel} \underbrace{T_{\vec{u}_\perp} R_1}_{\parallel}$$

$$= T_{\vec{u}_\parallel} R_3 \underbrace{R_1 R_1}_{Id}$$

$$= T_{\vec{u}_\parallel} R_3 = \begin{matrix} l_3 \\ \vec{u}_\parallel \end{matrix}$$

