VI-12

$O_A^\alpha R_\ell O_A^\alpha$

$\boxed{A \in \ell}$

$O_A^\alpha = R_m R_\ell$

$R_m \underbrace{R_\ell R_\ell}\; O_A^\alpha$

$\parallel$

$R_m O_A^\alpha$

$\parallel$

$R_m R_m R_\ell$

$\parallel$

R_ℓ

$R_m R_\ell = O_A^\alpha$

VI-12 $A \notin \ell$ $\alpha \neq 180°$

$$O_A^{\alpha} R_{\ell} O_A^{\alpha} = O_A^{\alpha} \underbrace{R_{\ell} R_m R_p}_{H_B} = \ldots$$

$$\begin{cases} O_A^{\alpha} = R_m R_p = R_n R_m \end{cases}$$

$$\ldots = O_A^{\alpha} H_B R_p = \underbrace{R_n R_m}_{O_A^{\alpha}} \underbrace{R_m R_{\ell}}_{H_B} R_p =$$

$$= \underbrace{R_n R_{\ell} R_p}_{O_C^{180+\alpha}} = O_C^{180°+\alpha} R_p =$$

$$= R_{\ell} R_q R_p = R_{\ell} T_u \enspace \textcircled{$2l_2$}$$

ℓ

n

$\beta/2$

$\alpha/2$

B αl_2 A $\alpha/2$

$90+\alpha/2$ $180°-\alpha l_2$ m

90 αl_2

h C αl_2 $90°+\alpha l_2$

p

q

u

t

$$R_e T_u = R_e \overline{T_{u_1} T_{u_2}} = T_{u_1} R_e \overline{T_{u_2}} =$$

$$\underbrace{\phantom{R_e T_{u_1}}}_{G^\ell_{u_1}}$$

$$= T_{u_1} \overline{R_e R_e} R_m = T_{u_1} R_m = G^m_{u_1}$$

$$\underbrace{}_{T_{u_2}}$$

$$u = u_1 + u_2$$

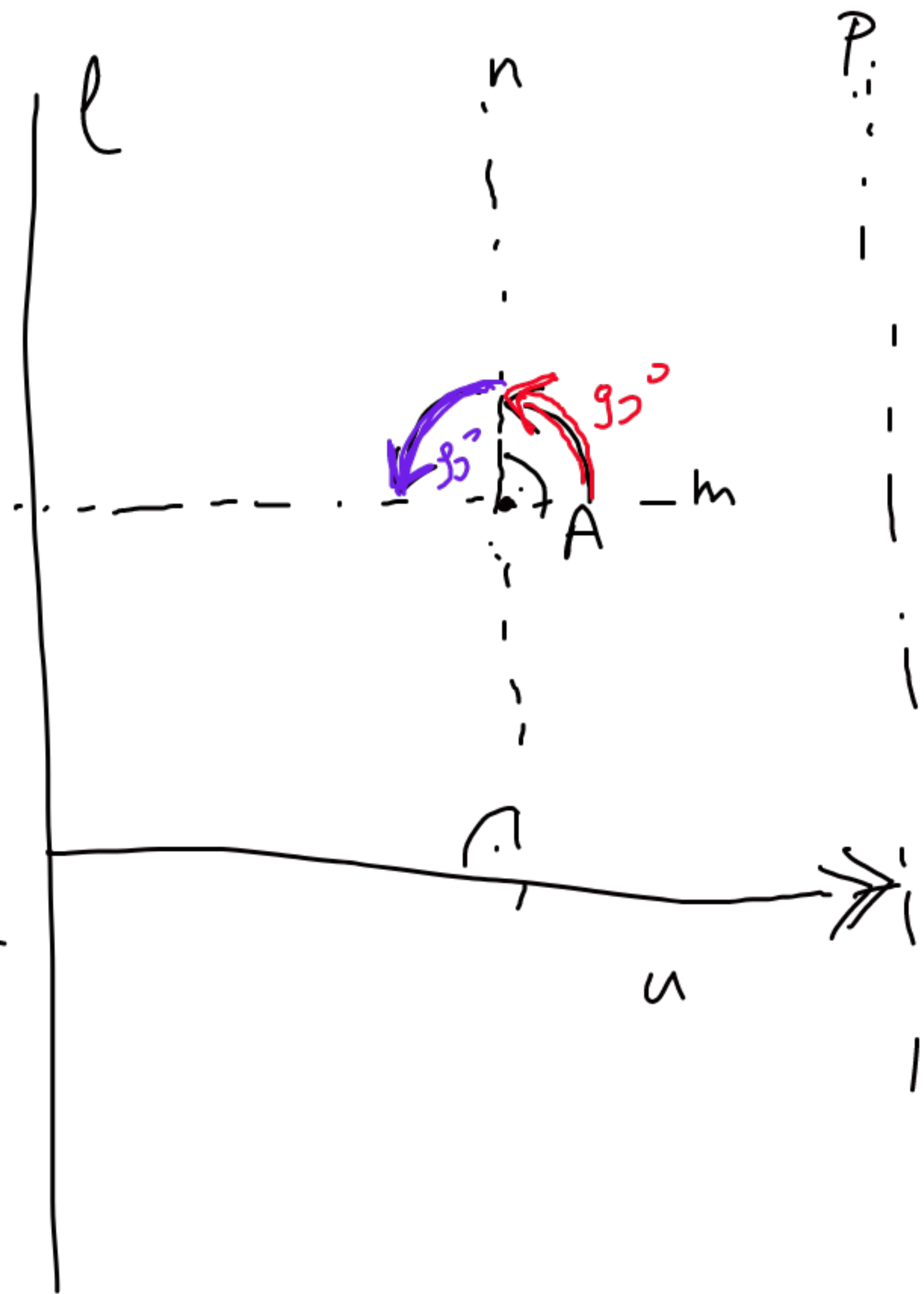$$u_1 \parallel \ell, \quad u_2 \perp \ell$$

VI-12 $A \notin \ell, \quad \alpha = 180°$

$$O_A^\alpha R_\ell O_A^\alpha = H_A R_\ell H_A = R_m \underbrace{R_n R_\ell}_{T_u} H_A =$$
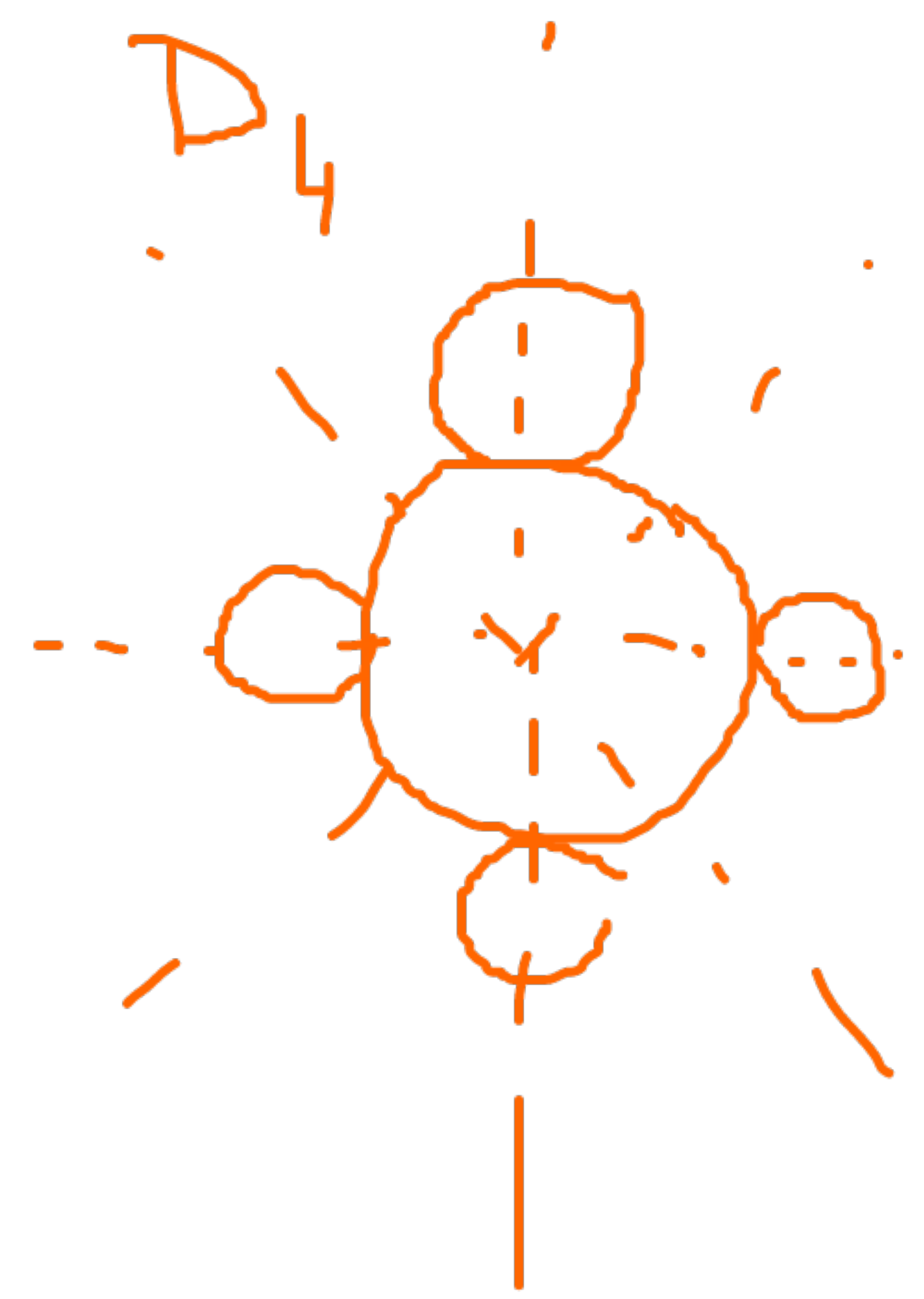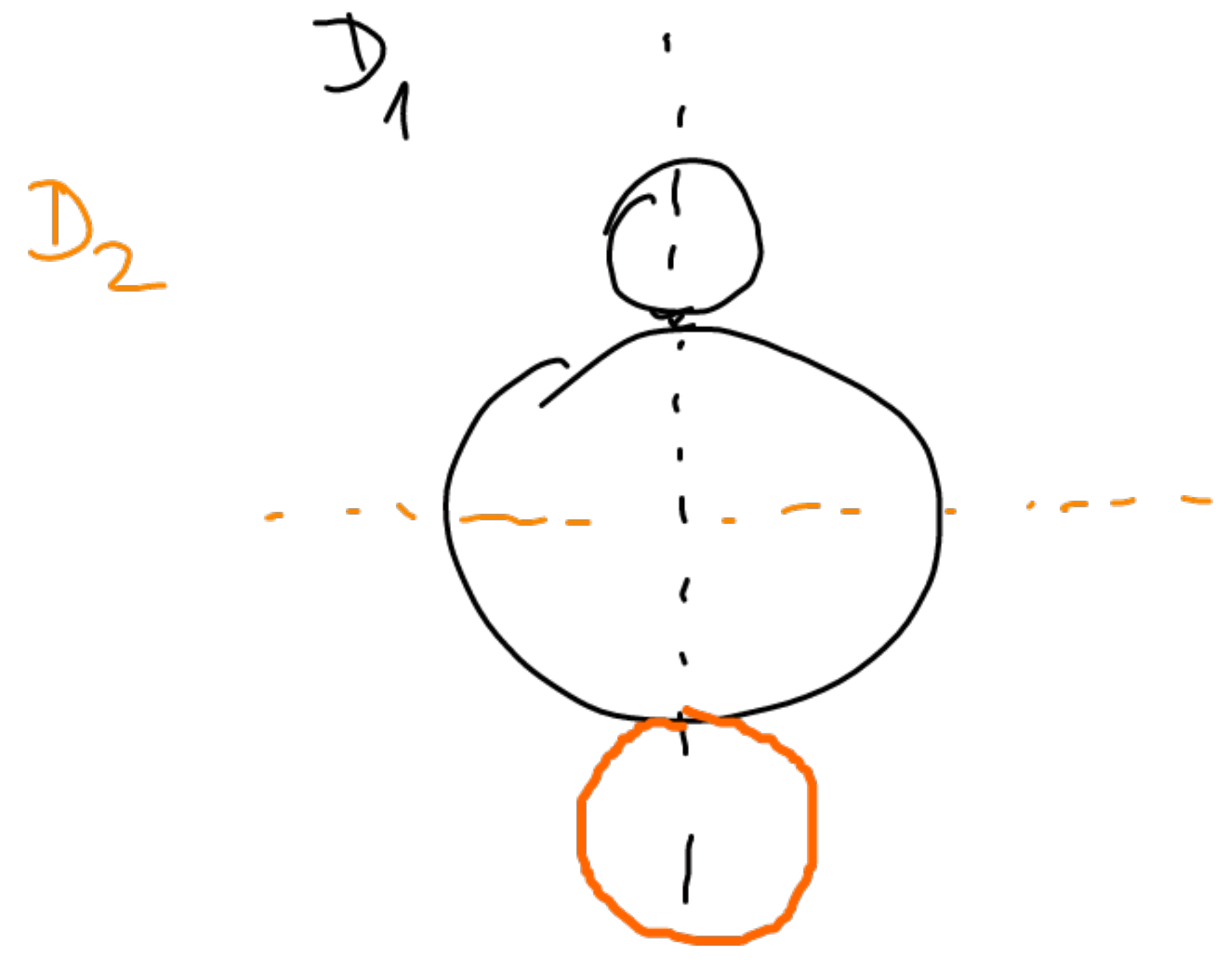
$$H_A = R_m R_n = \underbrace{R_n R_m}_{}$$
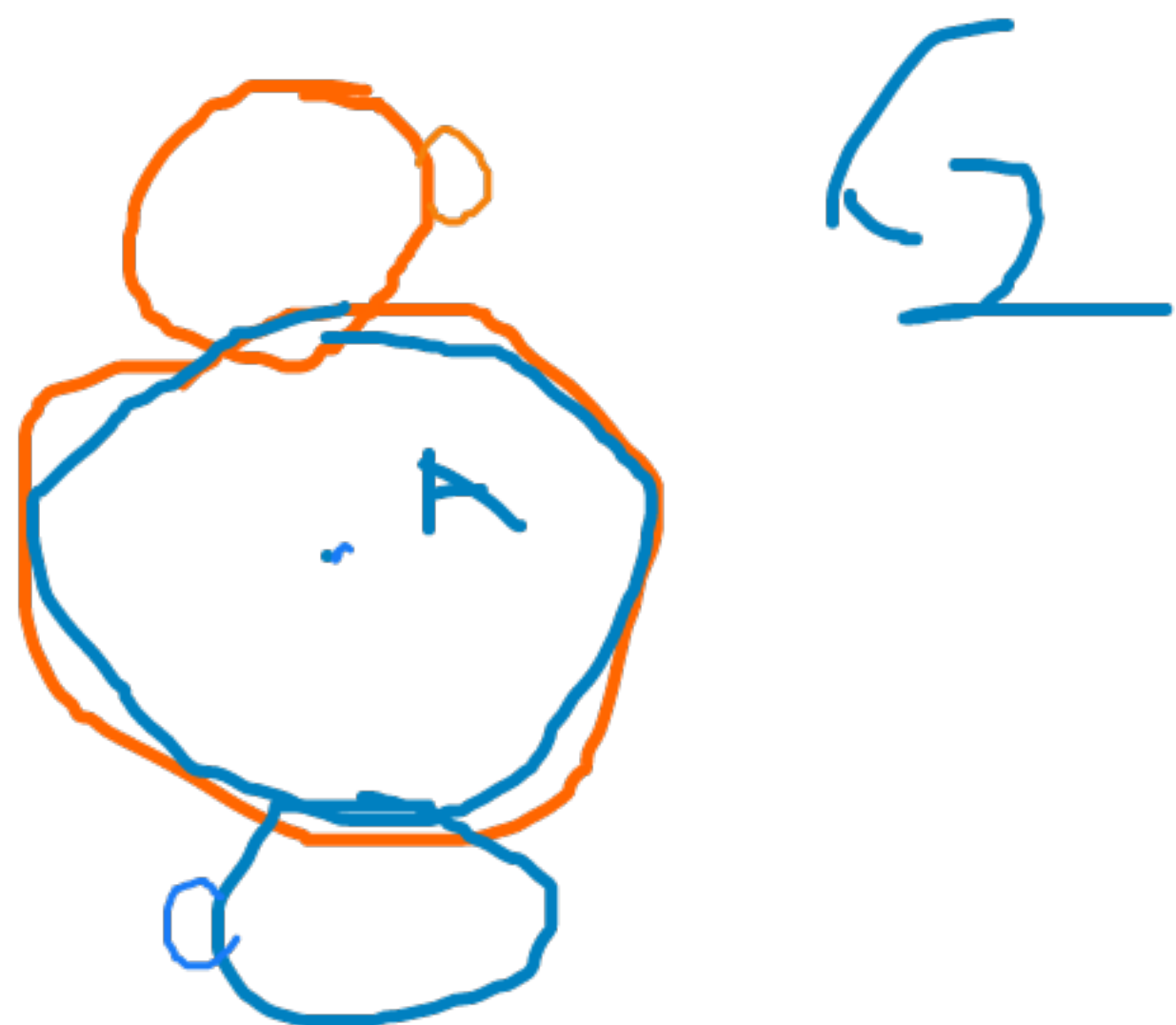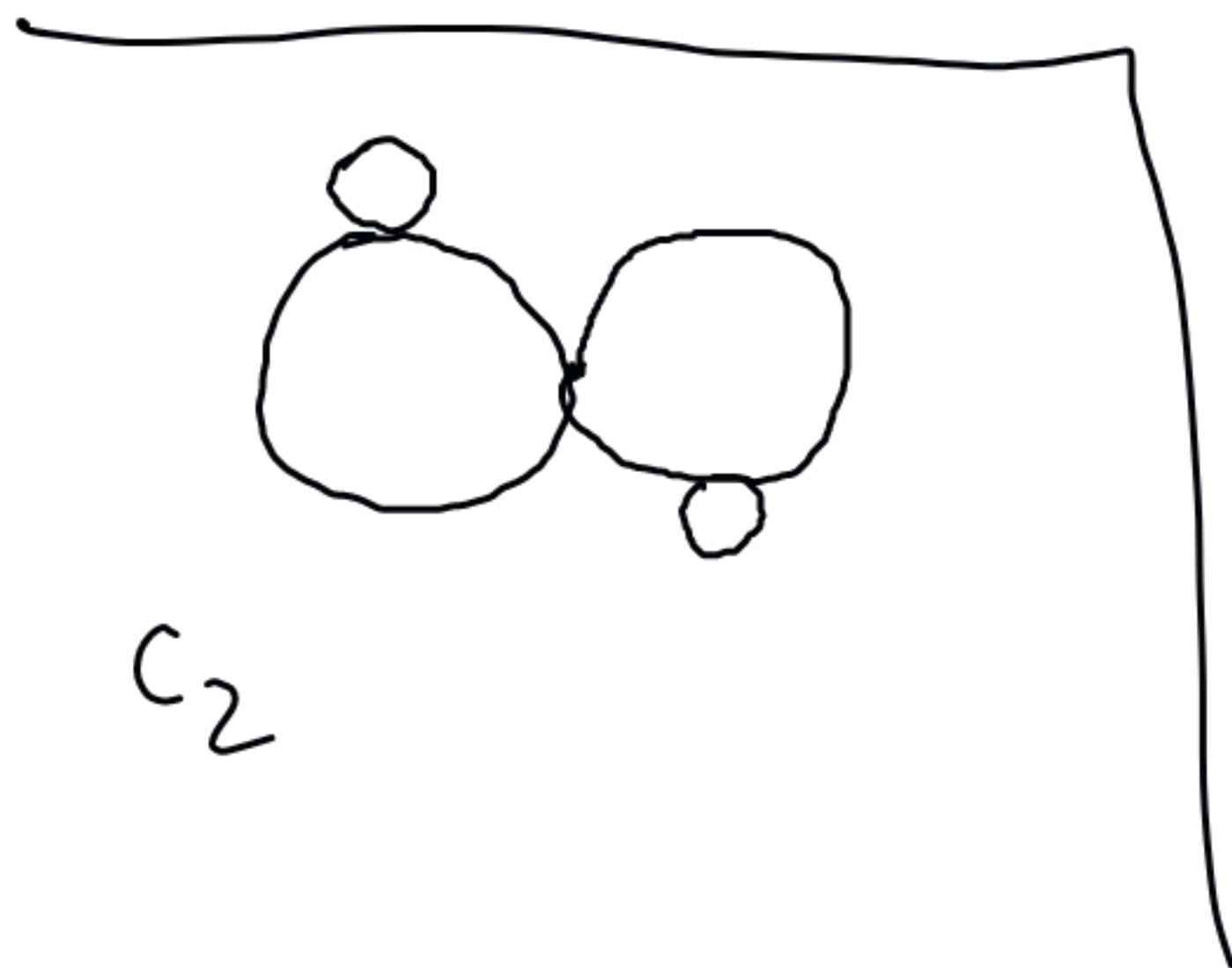$$\underbrace{}_{O_A^{2:95°}} \quad \underbrace{}_{O_A^{2:30°}}$$

$$= R_m T_u H_A = G_u^m H_A = T_u \underbrace{R_m R_m}_{} R_n = T_u R_n =$$

$$= R_p R_n R_n = \underline{R_p}$$

VII-4
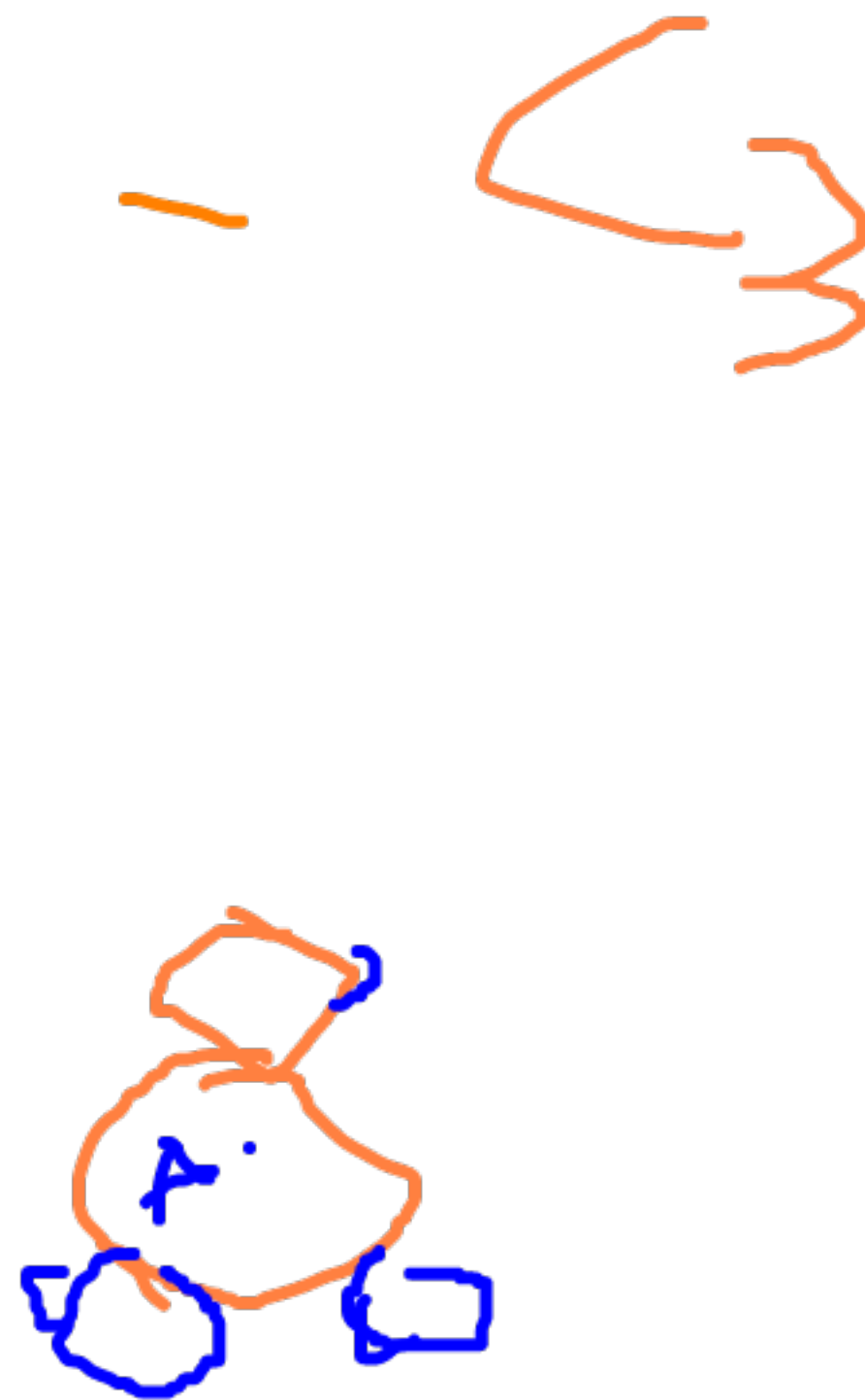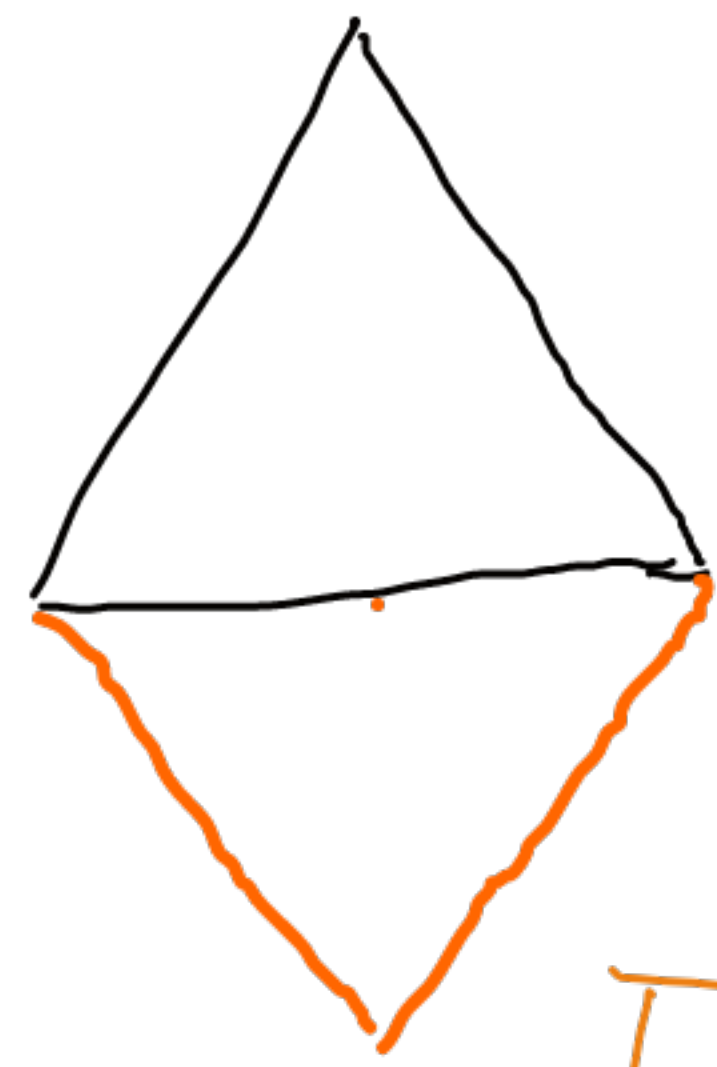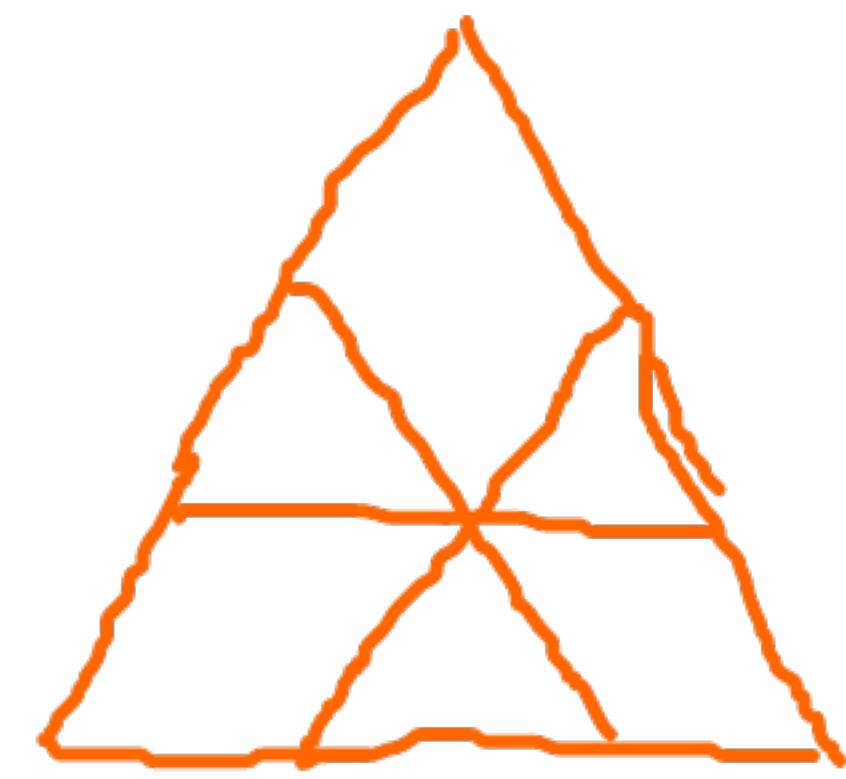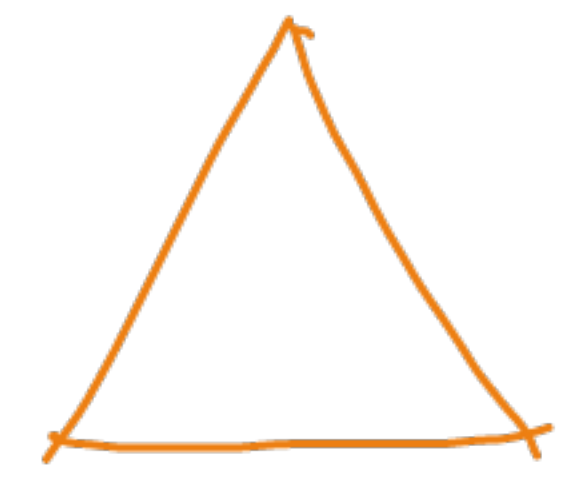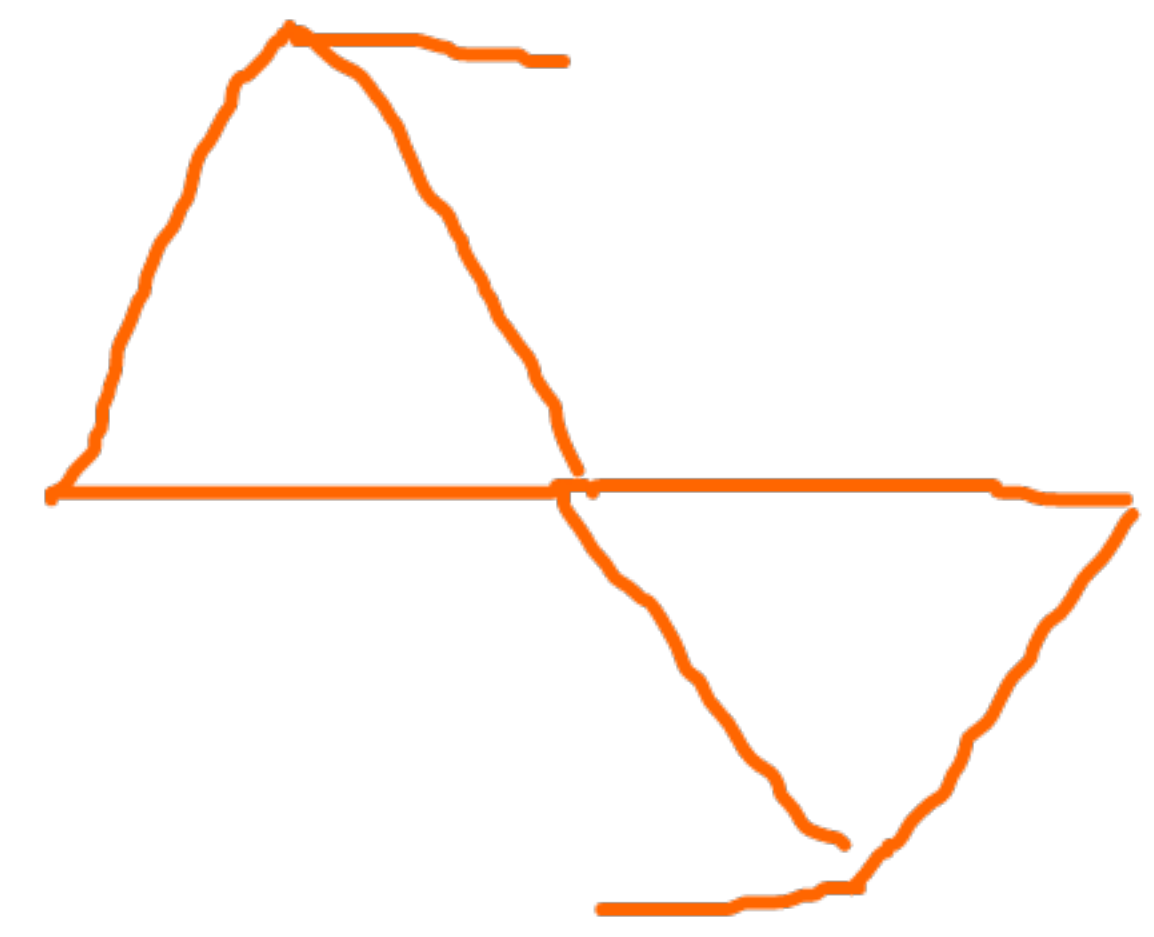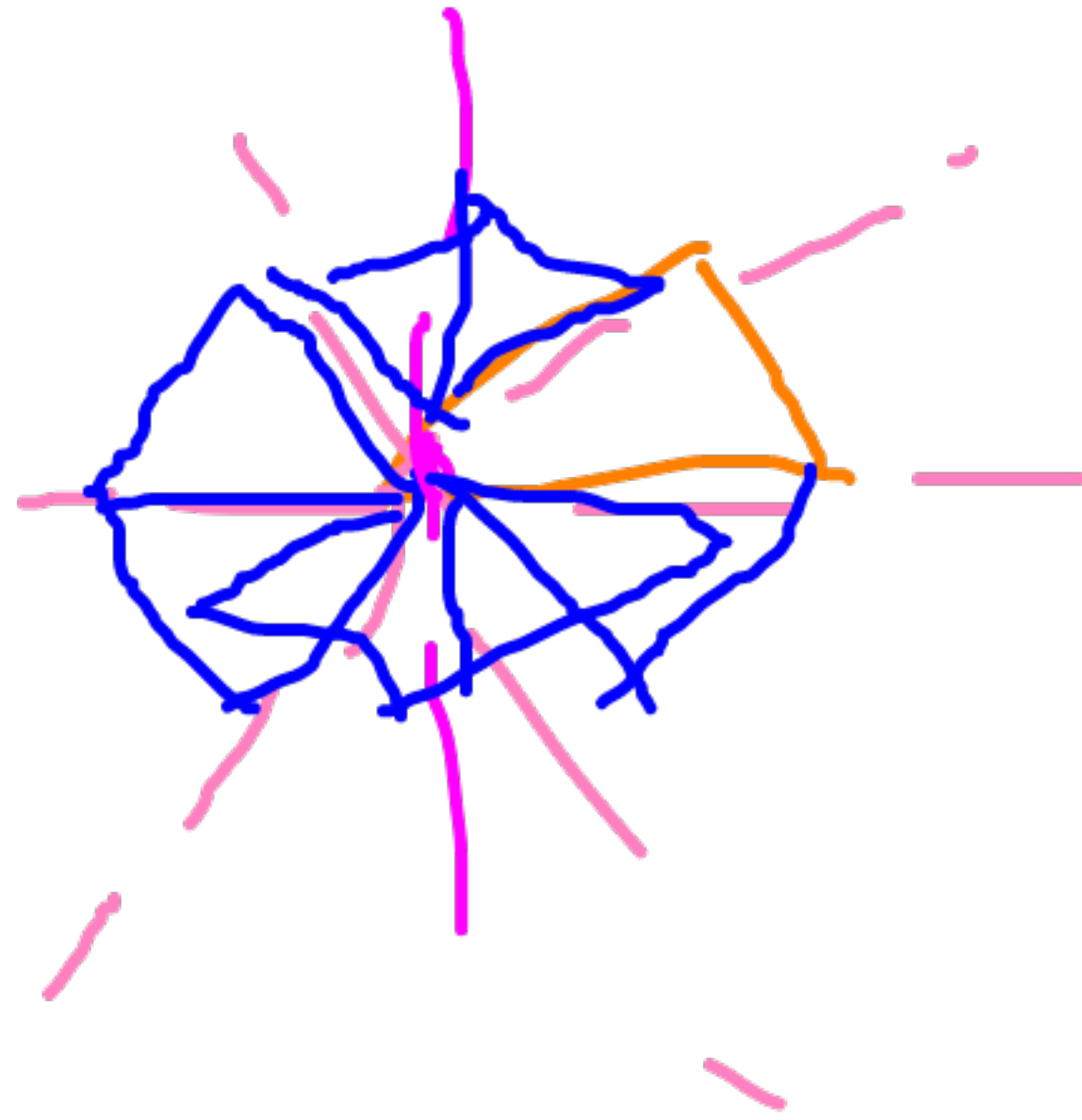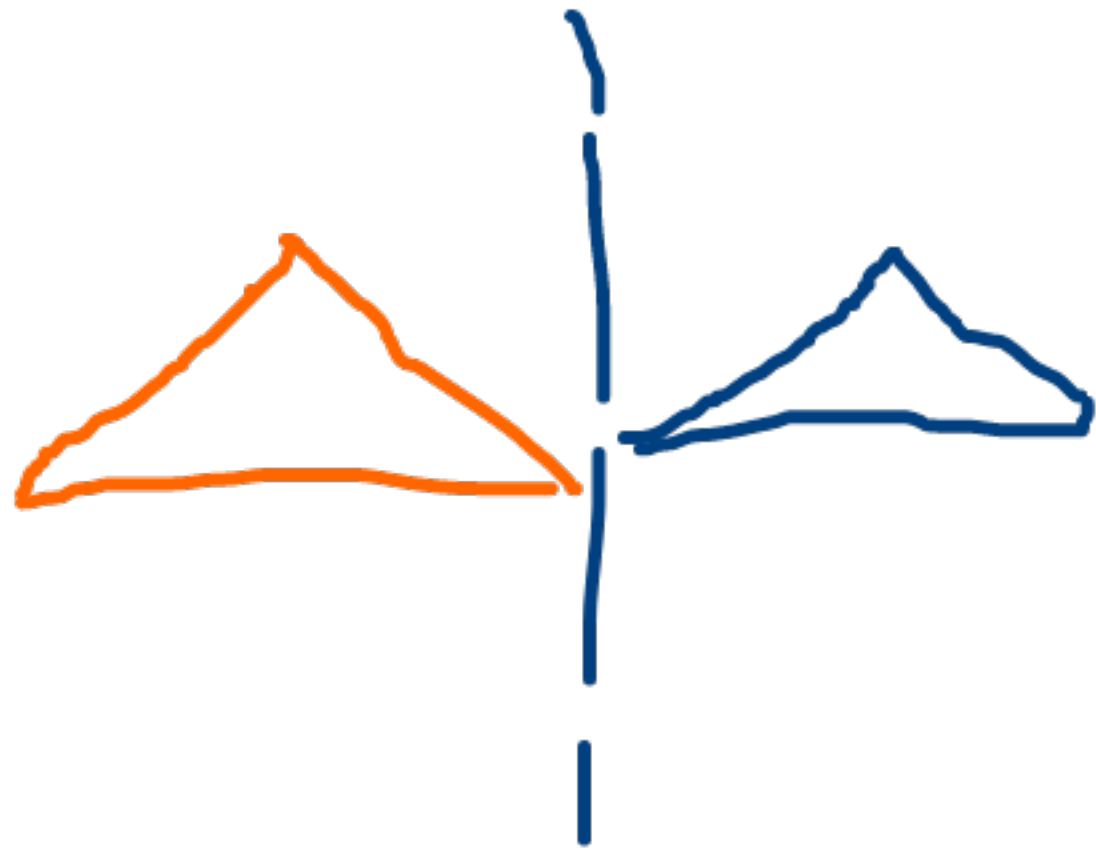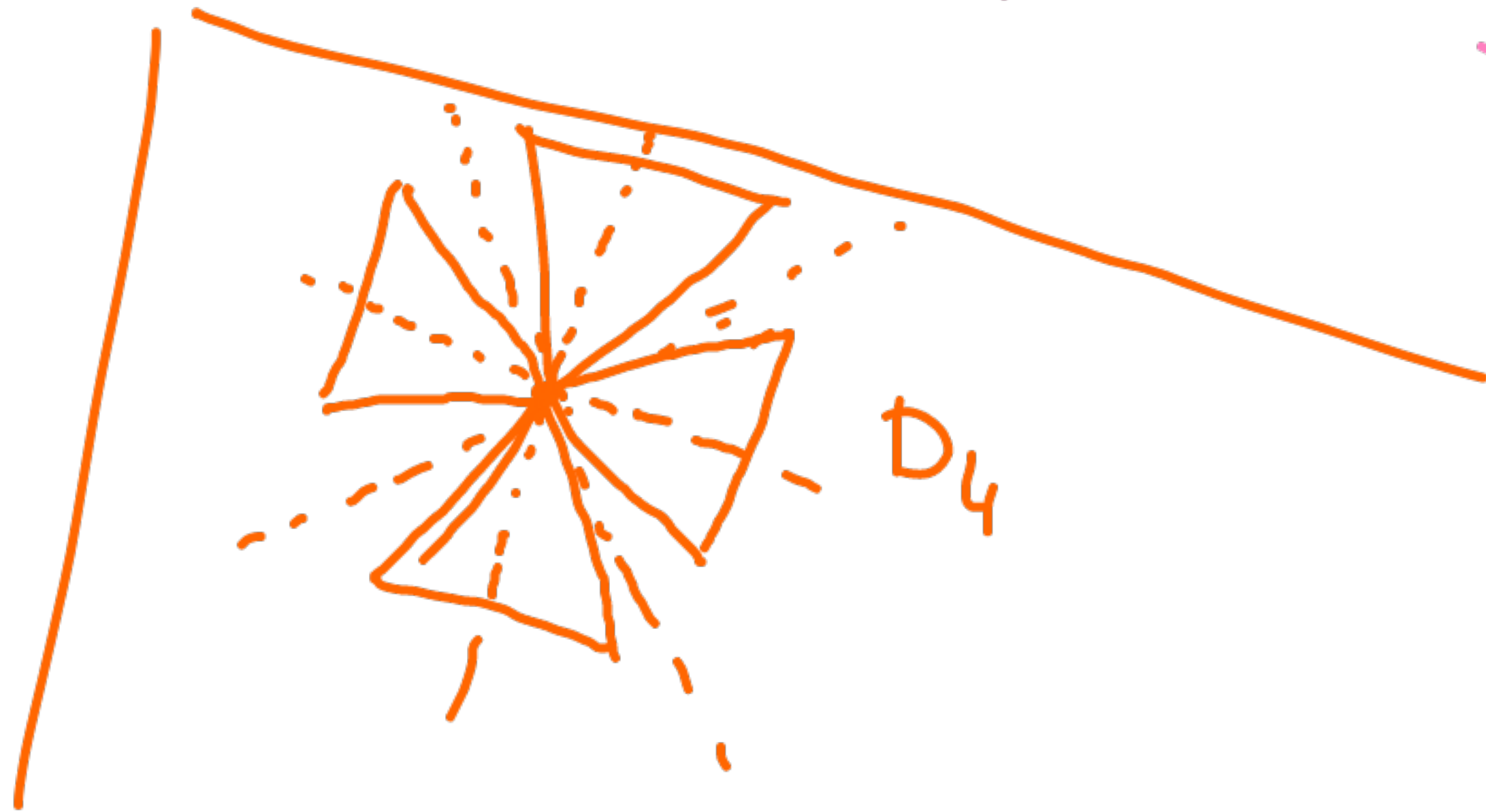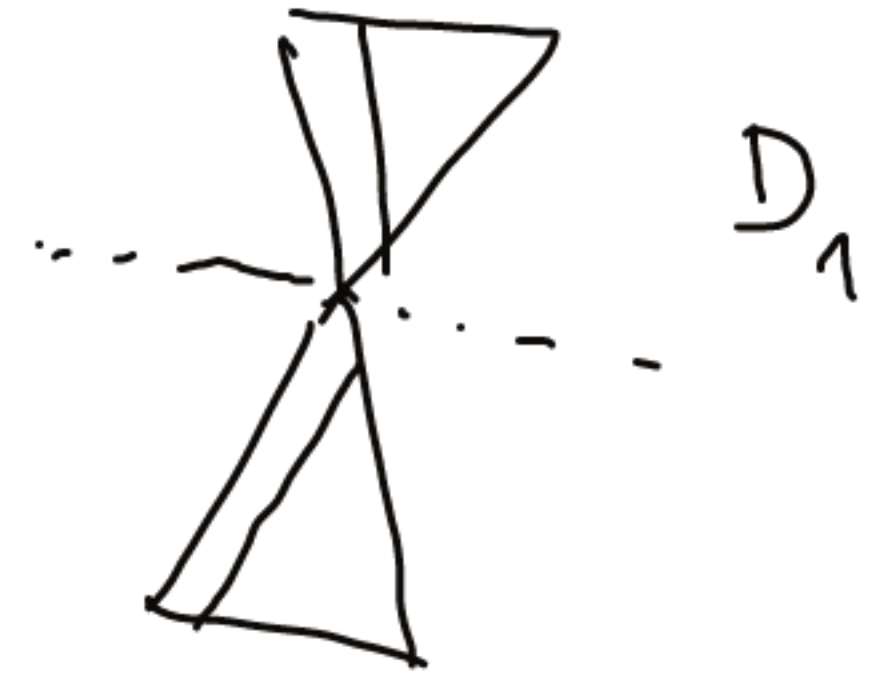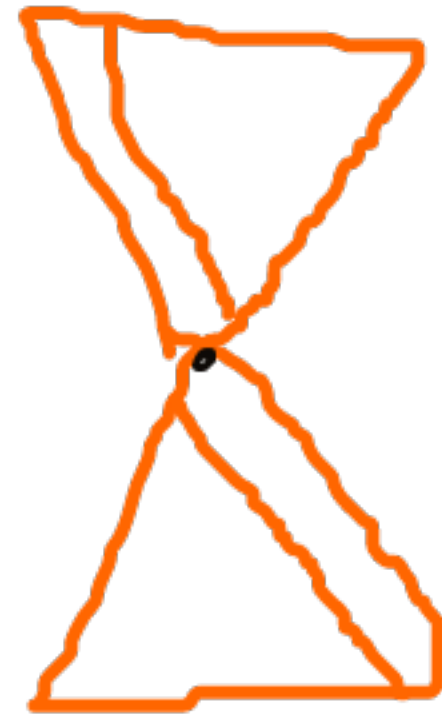
D_1 D_2 D_3 C_n D_4

C_2

C_1

C_2

A

A

$\cancel{C_1}$

D_2 ?

D_3

D_3

C_2

D_2

D_1

D_4

D_{∞}

D_4
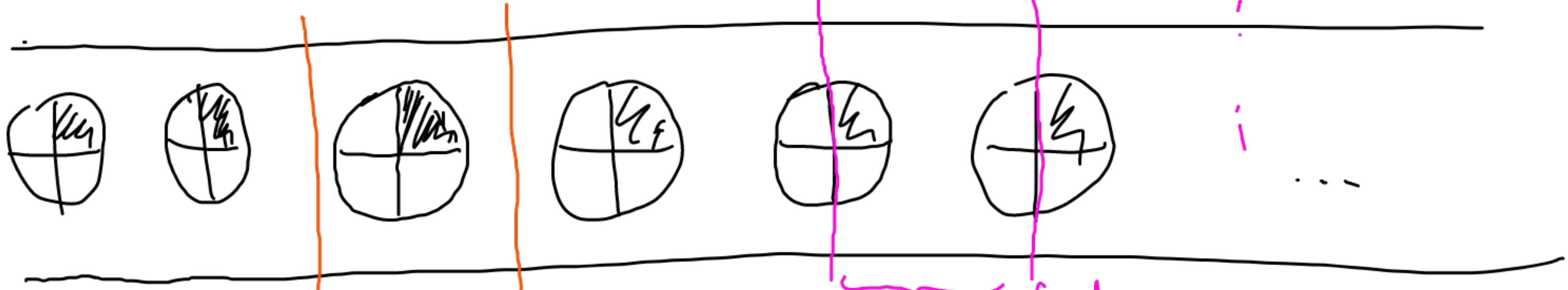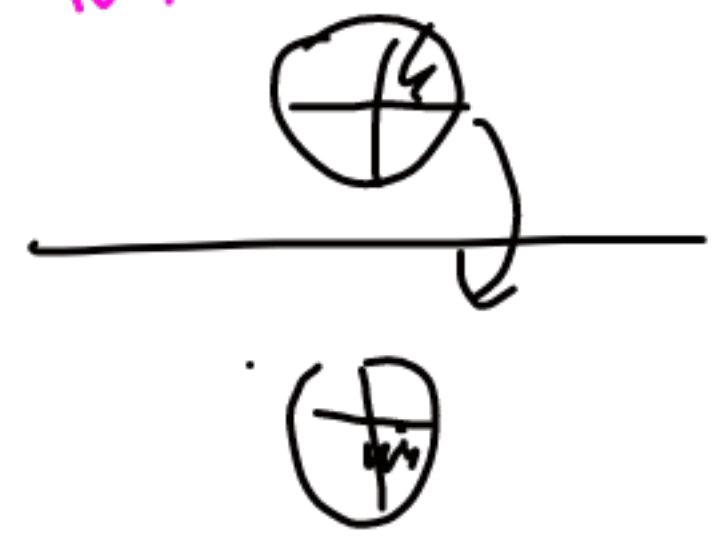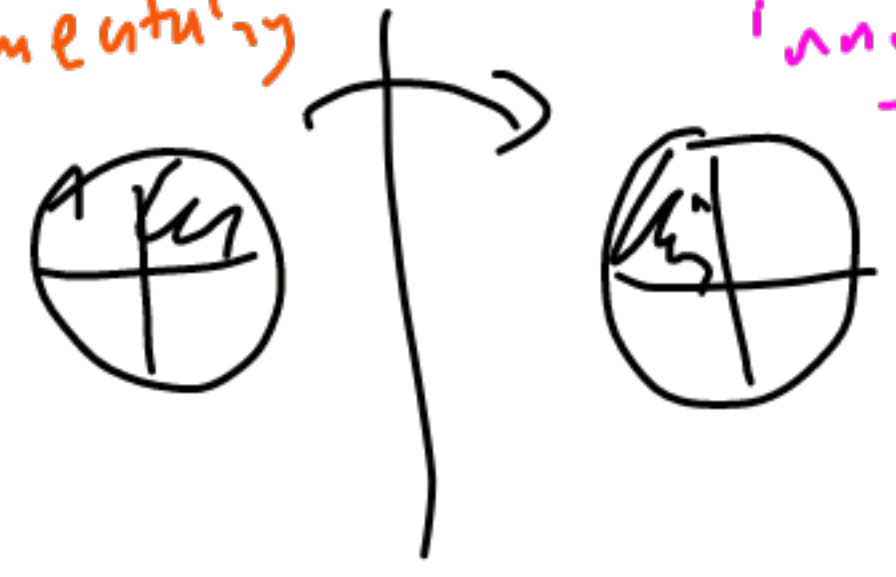
C_1, C_2

C_1

G

C_2

D_1

$$\Gamma_1 = \langle T_u \rangle = \{ \ldots, T_{-u}, T_0, T_{+}, T_{2u}, \ldots \}$$
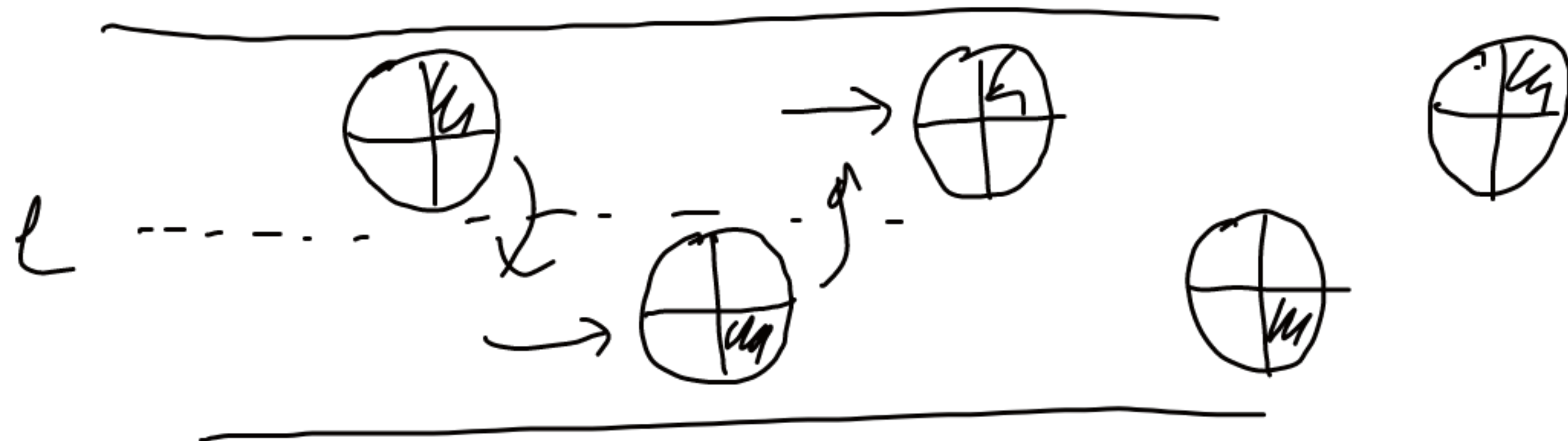
rytmiczny

obizer fundamentalny

inny obizer fund.

$T_2 = \langle G_u^\ell \rangle$

przemienny

u

obsz. fund.

$G_u^\ell \, G_u^\ell = T_{2u}$

ℓ

$T_3 = \langle R_\ell, R_m \rangle$

ℓ, m - pionowe pasie

$\ell \quad m \quad u$

$R_m R_\ell = T_u$
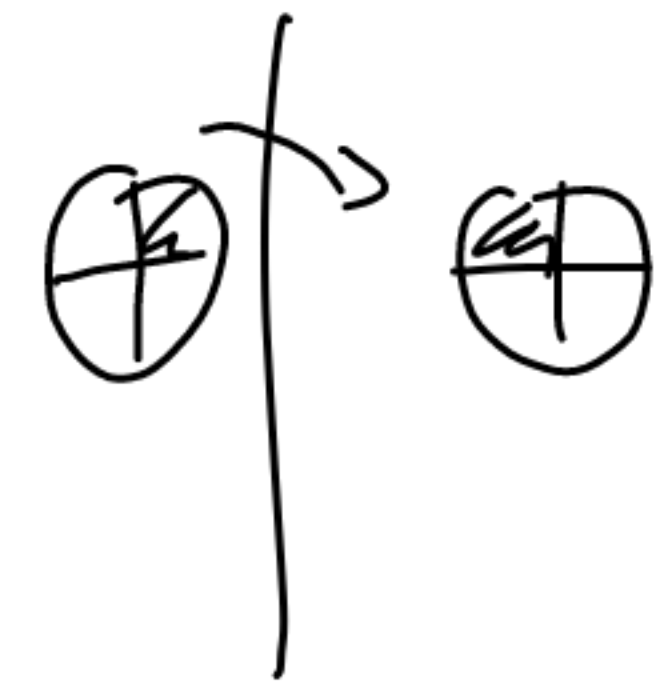
południkowy

Obszar fund.

n

T_3

$\ell \qquad m$

tego nie ma
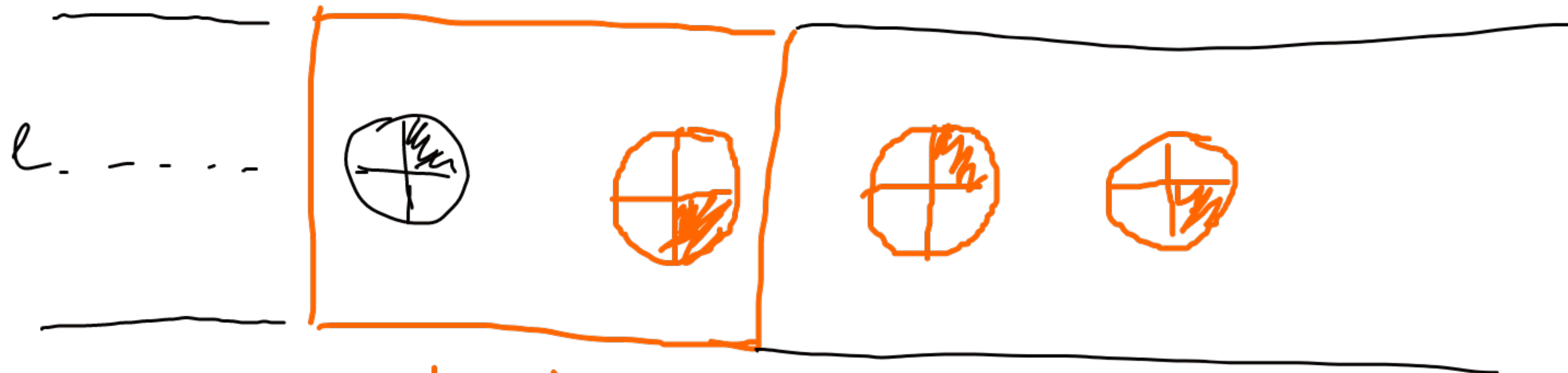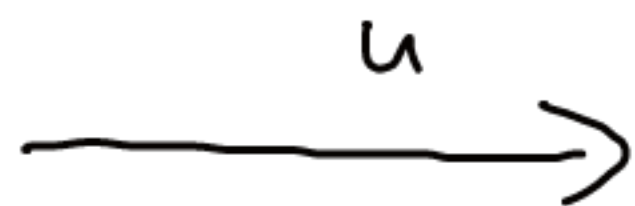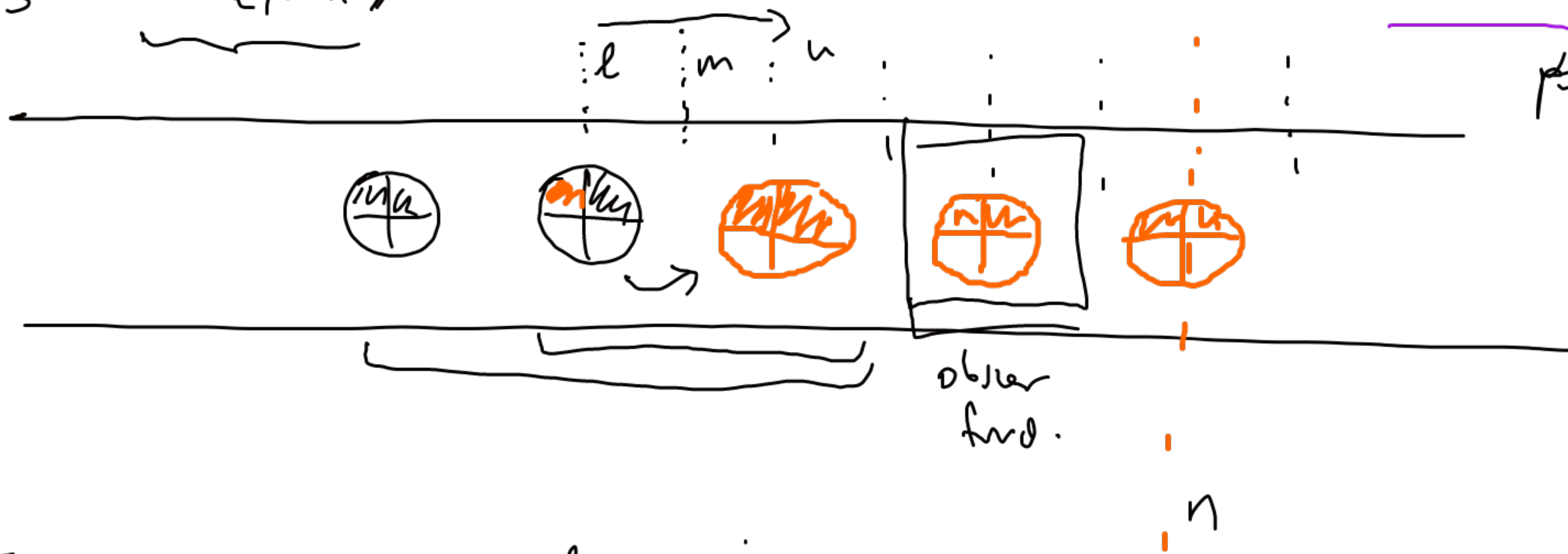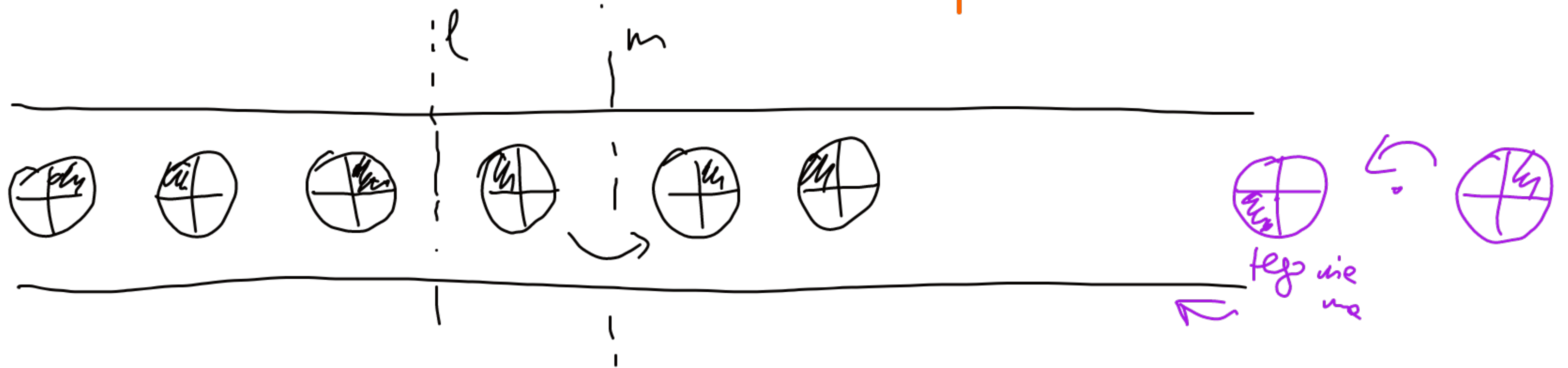
$\Gamma_4 = \langle H_A, H_B \rangle$ obrotowy $H_A H_A = \mathrm{Id}$ $H_A H_B = T_u$
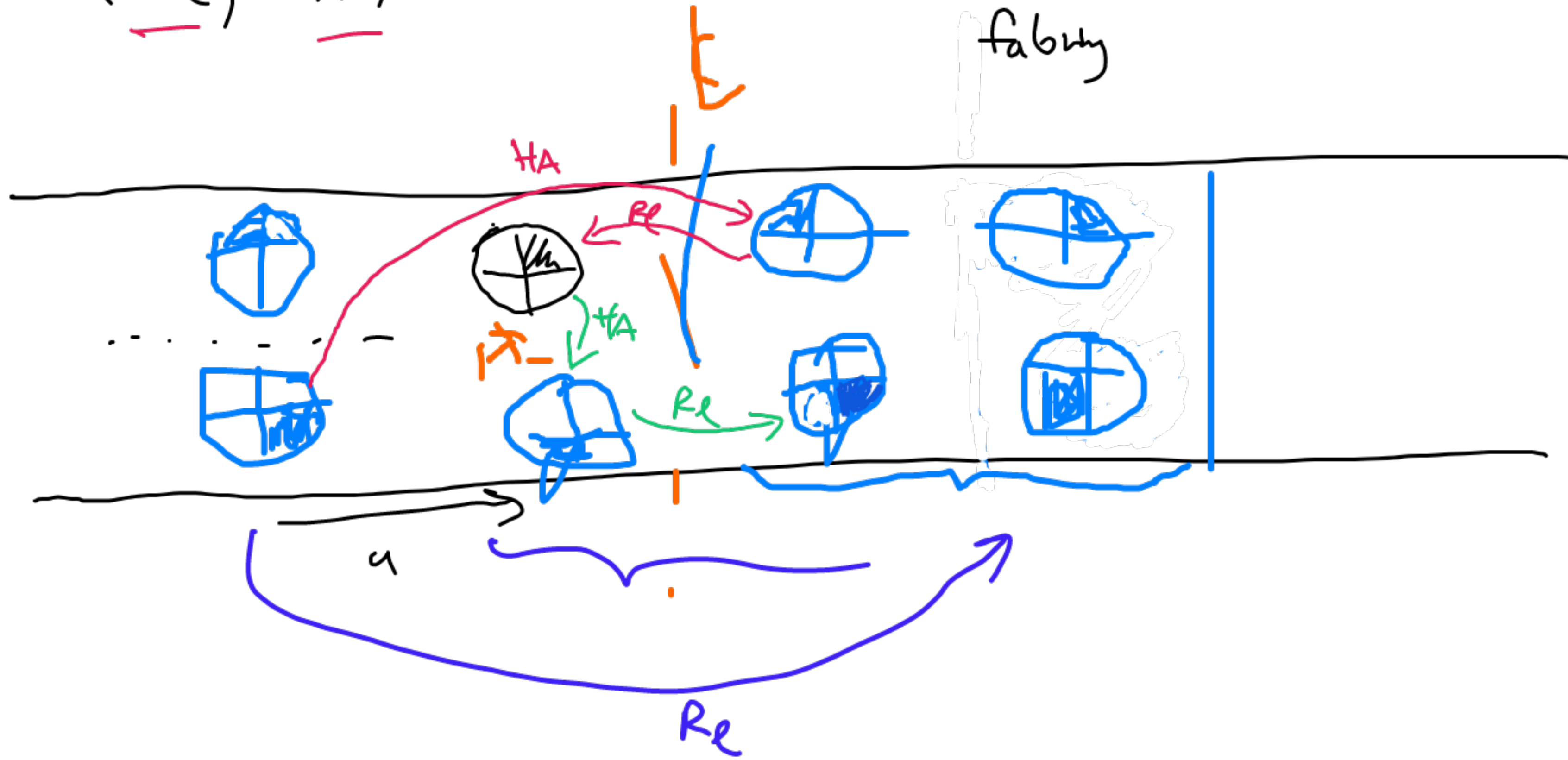
$$T_5 = \langle R_\ell, H_A \rangle$$

$\ell\text{-prisma}$, $A \notin \ell$

fabric

H_A

E

R_ℓ

H_A

R_ℓ

R_ℓ

u

$$G^\ell_u = \frac{R_\ell H_A}{}$$

$$R_\ell R_a$$

$$G^\ell_u G^\ell_u = T_{2u} = R_\ell H_A R_\ell H_A$$

$T_6 = \langle T_u, R_e \rangle$

równikowy

ℓ: pryzma prosta

u

w T_6 są jiku T_{ku},
R_ℓ, G^ℓ_{ku}

ℓ

$\Gamma_7 = \langle R_\ell, R_m, R_n \rangle$ ℓ - poziome, m,n - pionowe   krzyżowy

$$T_u = R_n R_m$$

$$H_A = \underline{R_\ell R_m}$$

$$R_n R_\ell = H_B$$