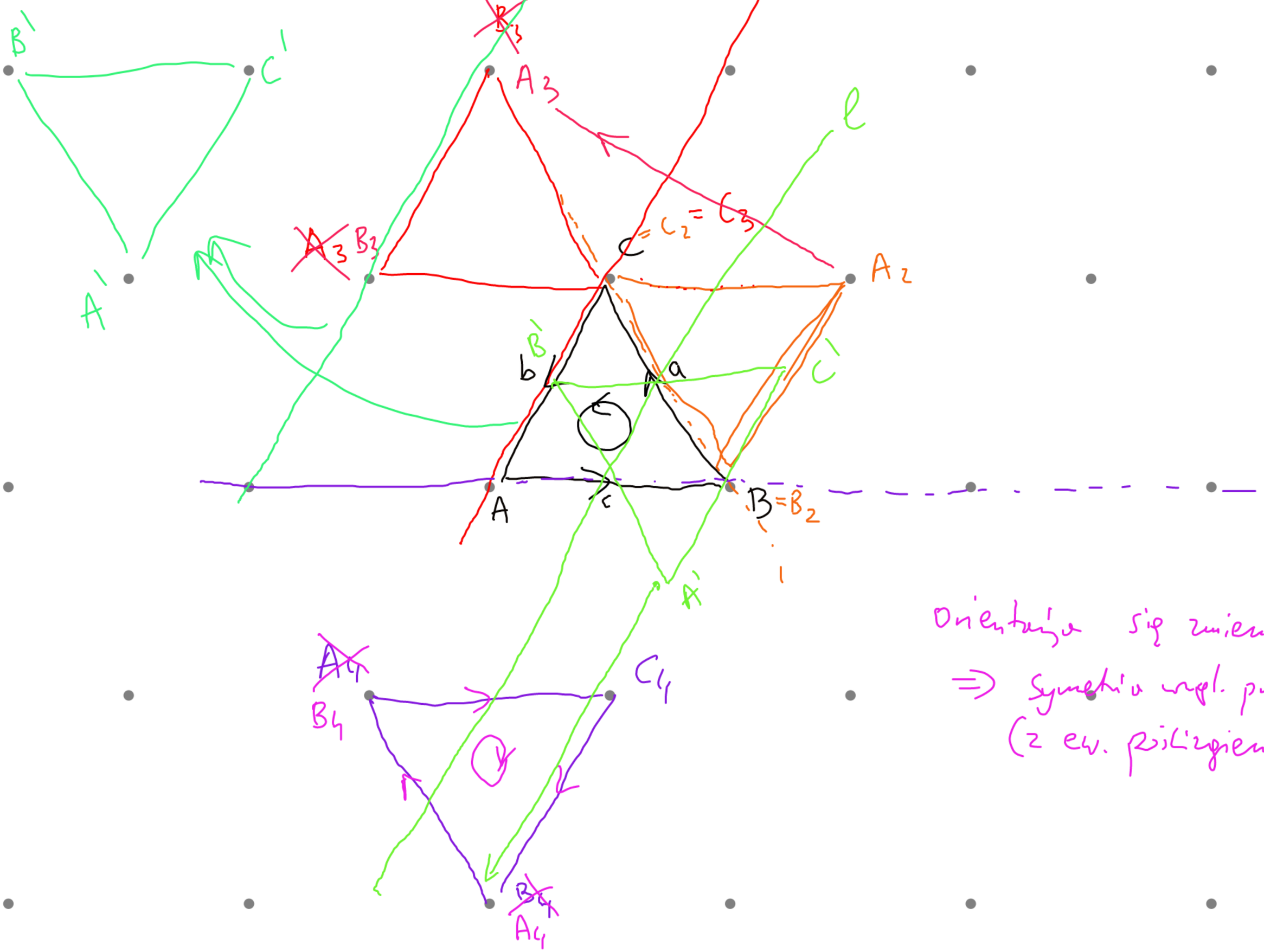
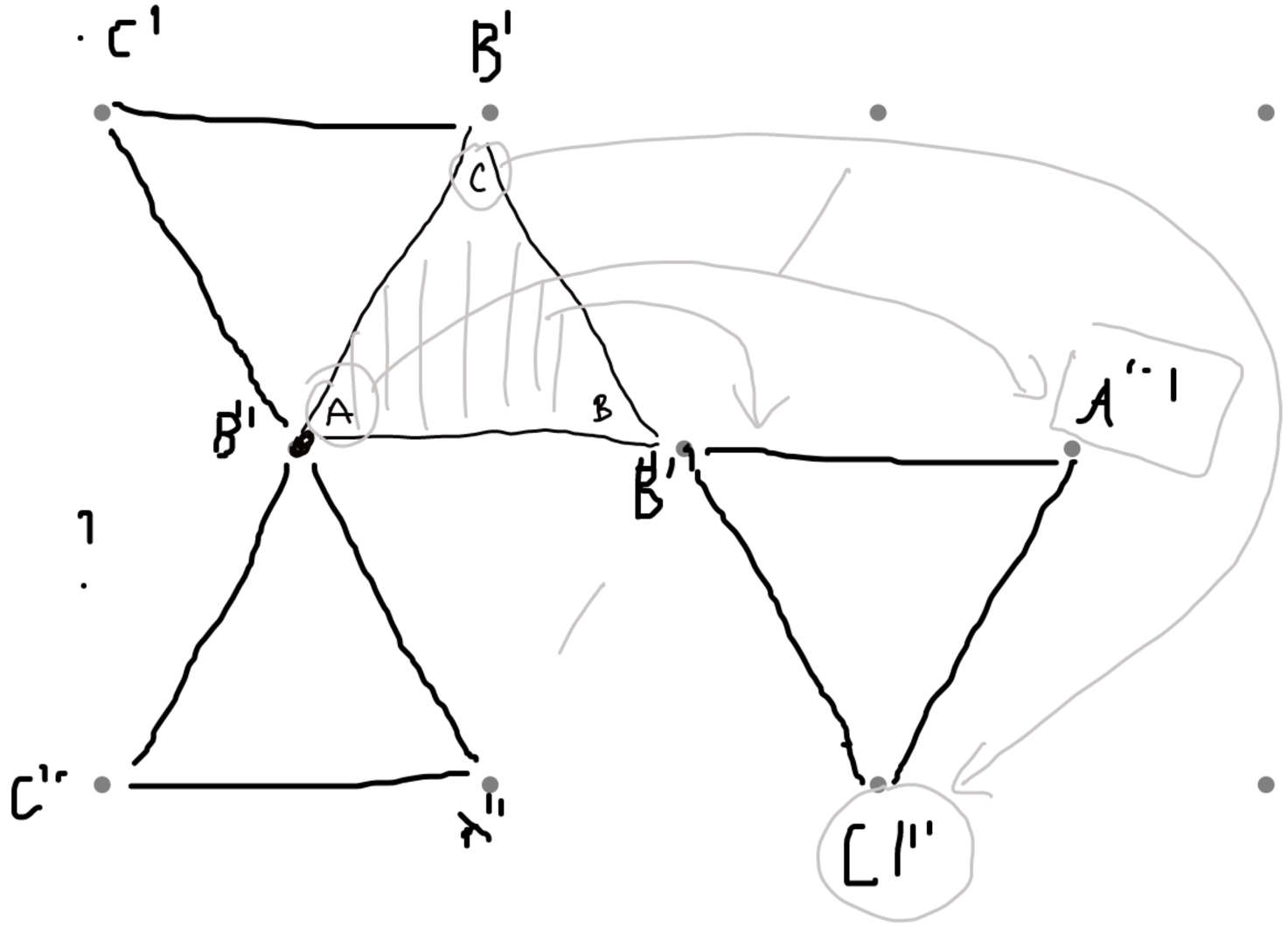
$R_c \circ R_b \circ R_a (P) = R_c(R_b(R_a(P))) = G^{\ell}_{\frac{3}{2}\vec{CA}}$



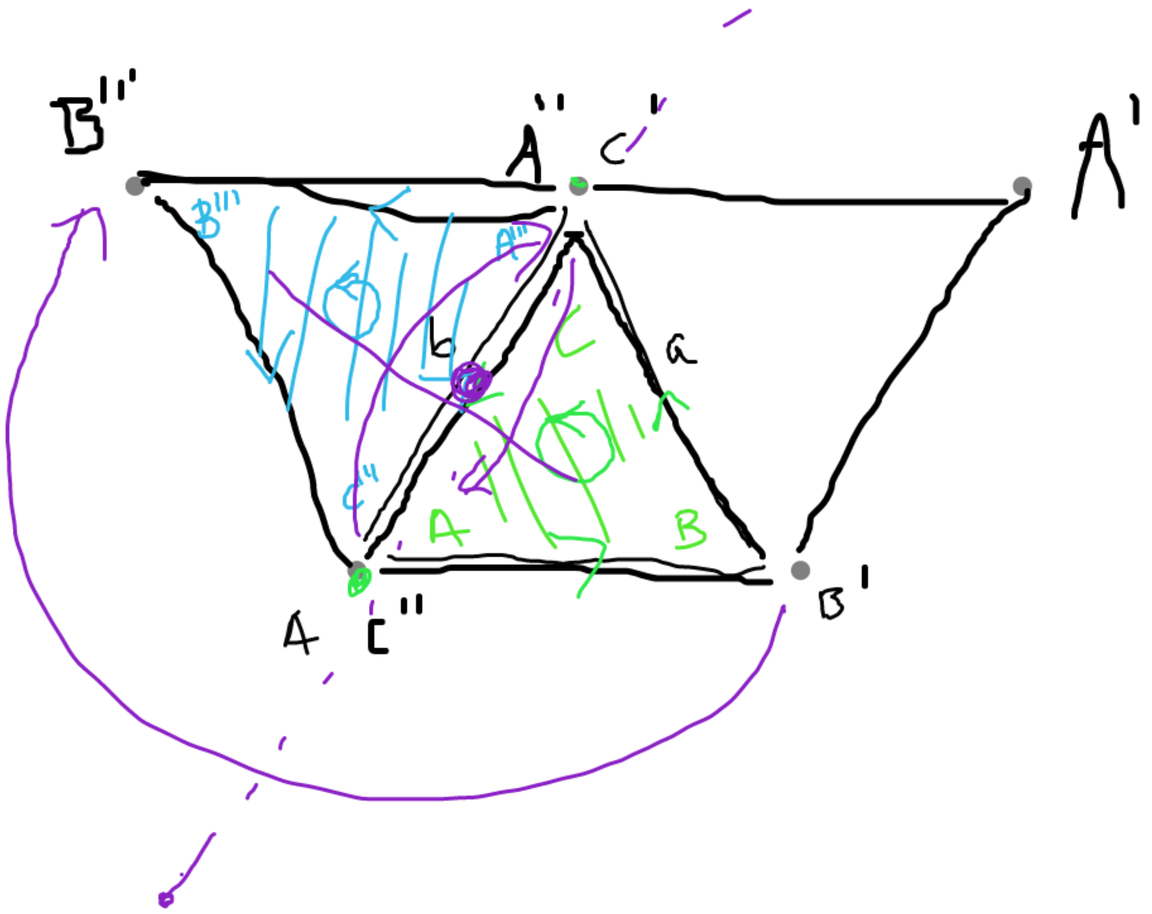
Orientacja się zmieniła
$\Rightarrow$ Symetria wzgl. prostej
(z ew. poślizgiem)

$$\underbrace{O_C^{60^\circ} O_B^{60^\circ} O_A^{60^\circ}}_{} = \underbrace{O_B^{180^\circ}}_{} = H_B$$



$R_b \, O_B^{60^\circ} \, R_a = O_D^{180^\circ}$

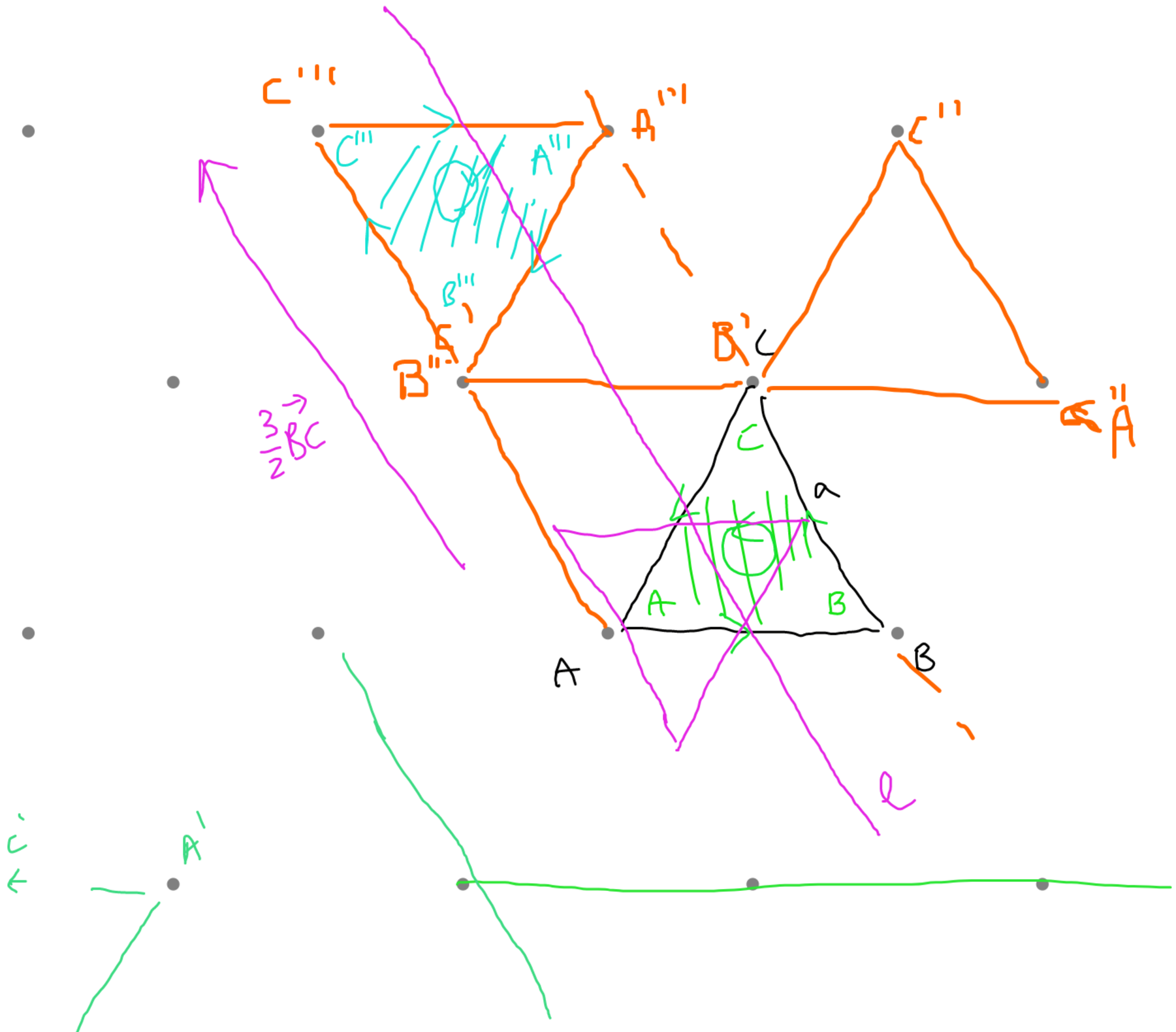
D = środek AC



orientacja się nie zmienia

⇒ przesunięcie lub obrót

$O_A^{60^\circ} R_a O_A^{60^\circ} = G_{\frac{3}{2}\vec{BC}}^{l}$



Orientacja się zmienia:

więc będzie to symetria względem prostej i ew. przesunięcie

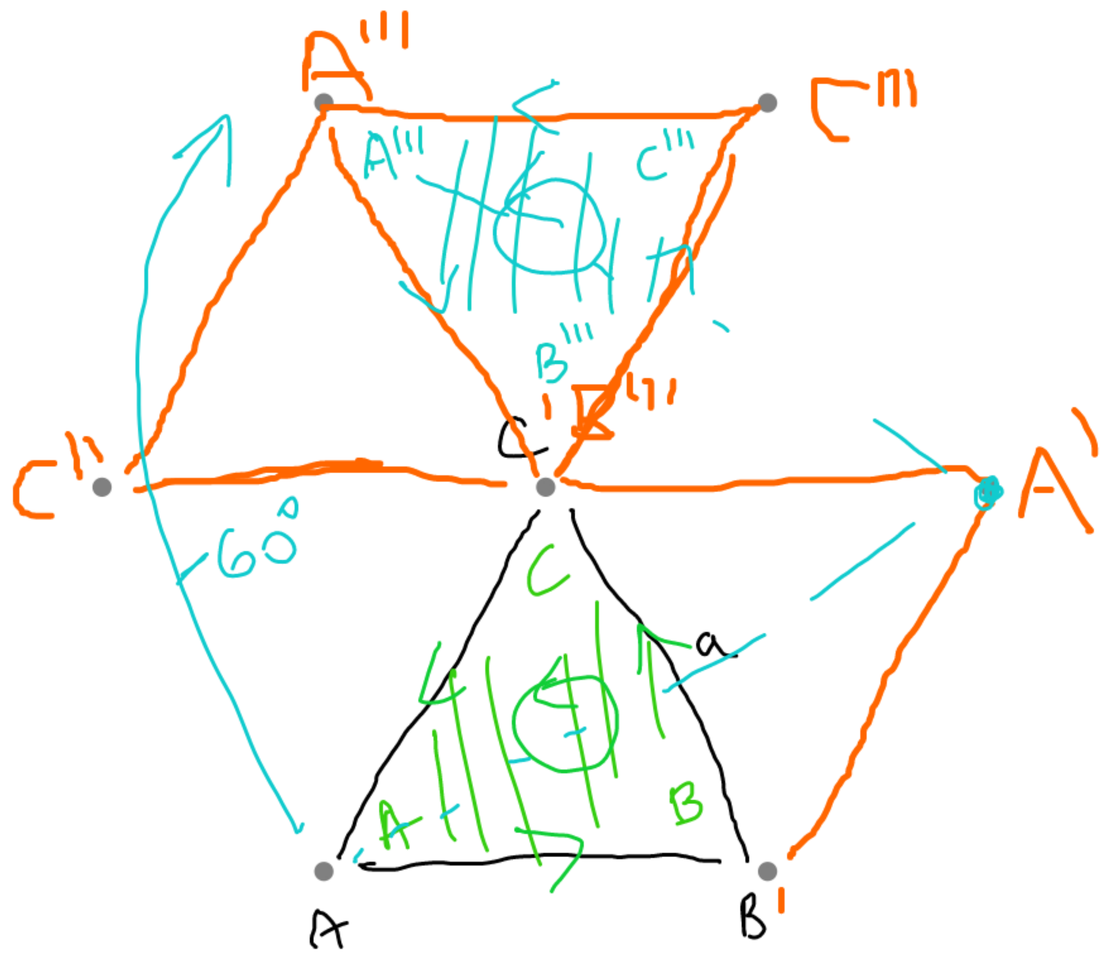
$$R_a \, O_A^{60^\circ} R_a = O_{A'}^{-60^\circ}$$

zmiana orientacji — złożenie — zmiana orientacji

złożenie orientacji

$\Downarrow$

przesunięcie lub obrót



$\vec{O_D O_C} \vec{O_B O_A}$

$\parallel$

$T_4 \vec{AD}$

D_4 C_4

A_4 B_4

3

90°

C_1 B_1 3 A_3 D_3

D C 2

A B

1 2

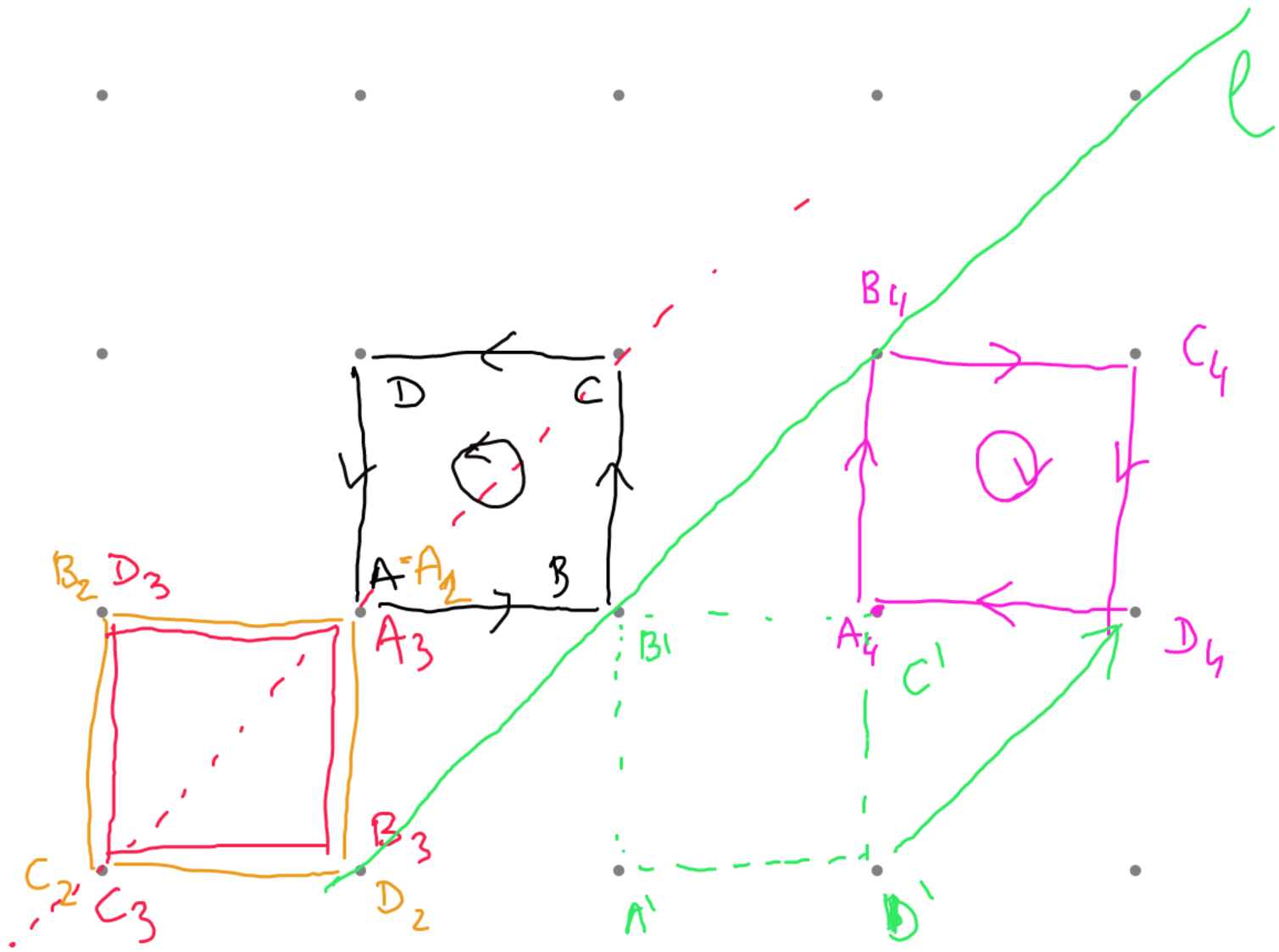
A_1 B_3

B_2 A_2

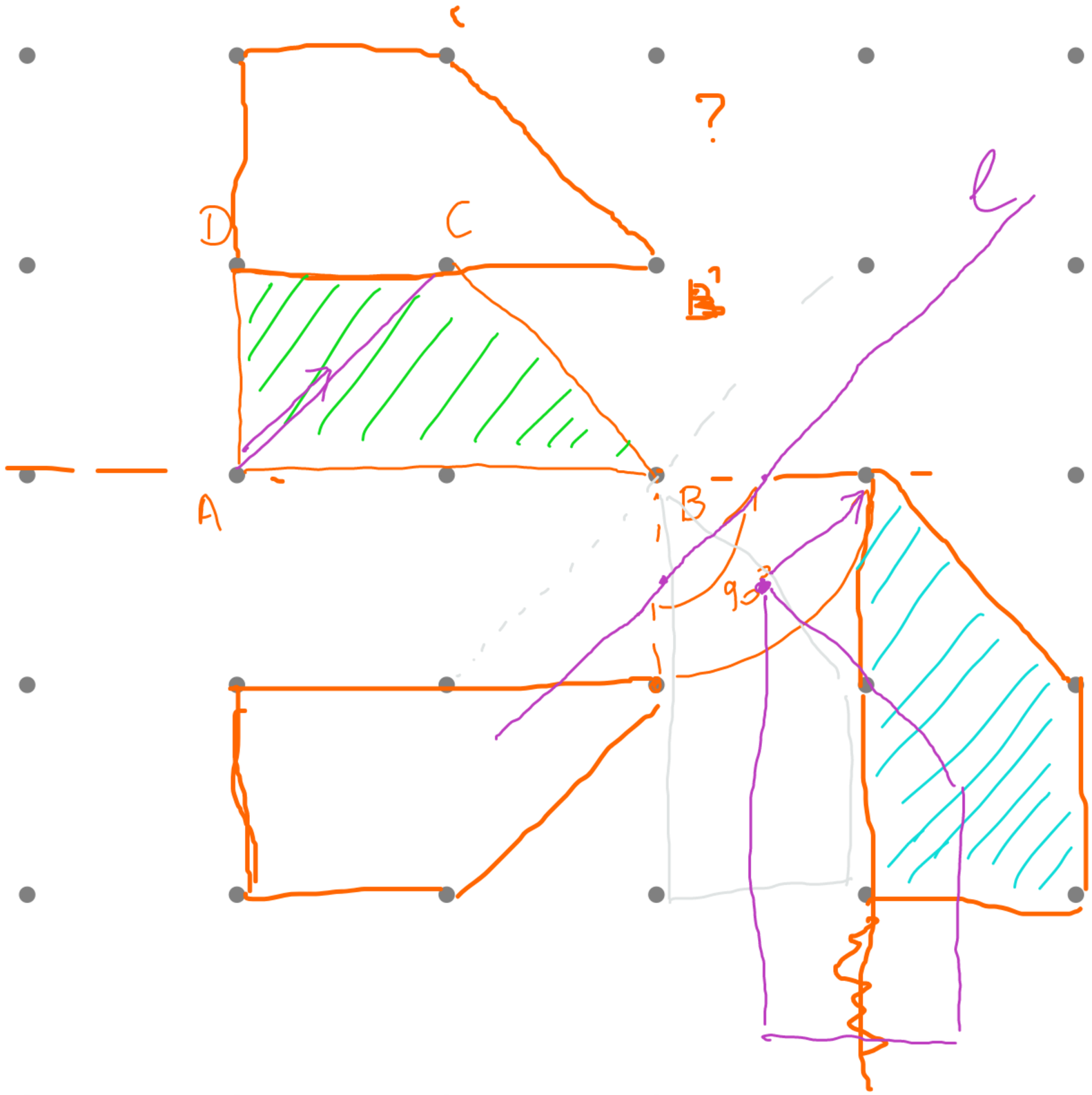
C_2 D_2

5) $H_B R_{AC} H_A = G_{\vec{AC}}^{\ell}$

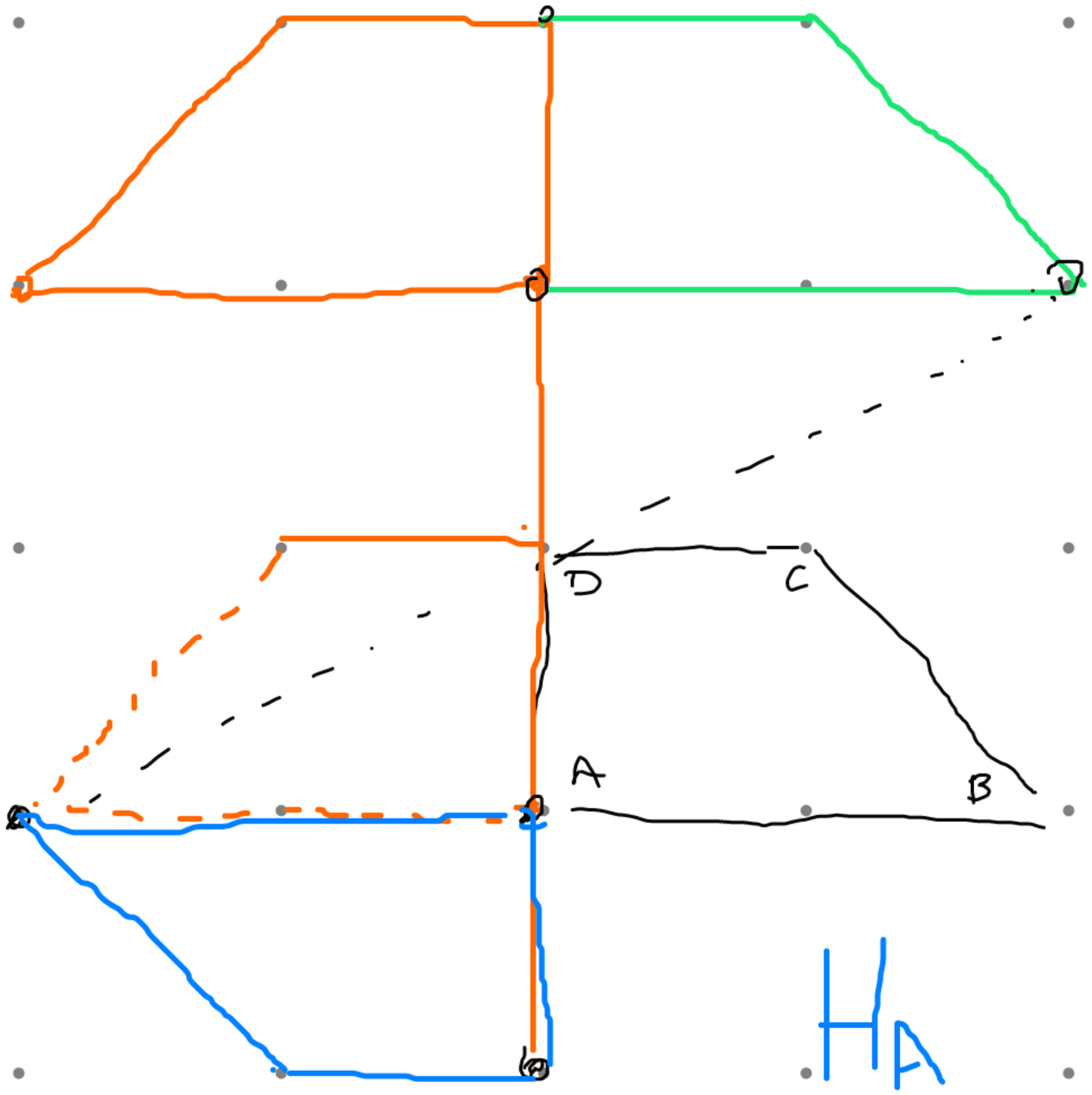
$H_A = O_A^{180°}$



$$O_B^{g_3} R_{AB} \overline{T}_{AD} = G^{\ell}_{\frac{1}{2}\vec{AC}}$$



3) $H_D R_{AD} G_{2AD}^{l_{AD}} = H_A$



$$R_{DC}\, H_D\, R_{CA}\, R_{CB} = G^{DC}_{\vec{BA}}$$