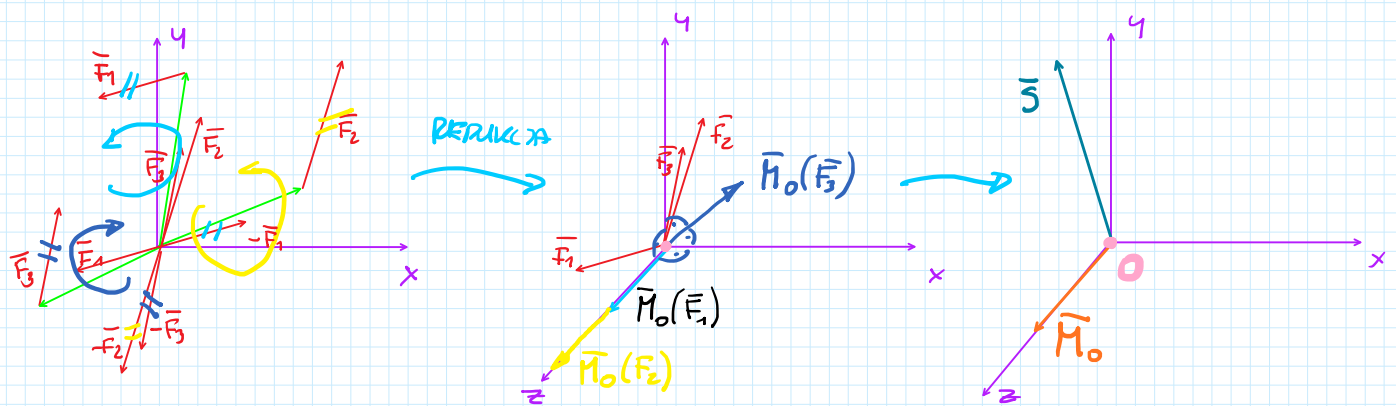
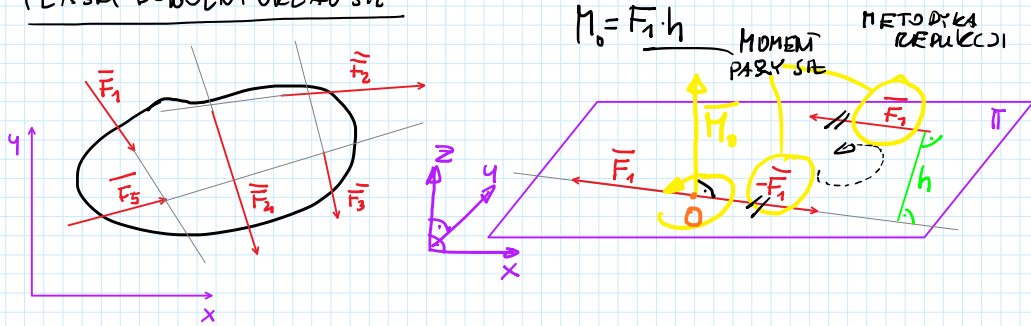
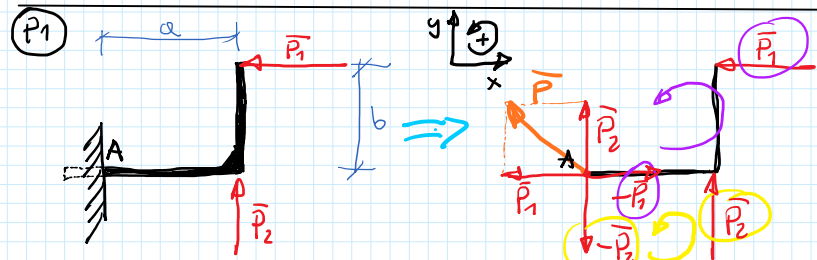


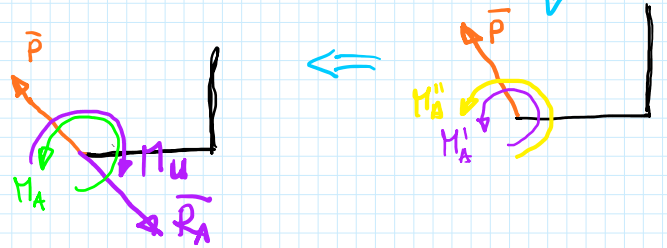
PLASKI DOWOLNY UKŁAD SIŁ



Wektor Główny Układu $\vec{S} = \vec{F}_1 + \vec{F}_2 + \vec{F}_3 \Rightarrow \sum \vec{F}_i$
 Moment Główny Układu $\vec{M}_0 = \vec{M}_0(\vec{F}_1) + \vec{M}_0(\vec{F}_2) + \vec{M}_0(\vec{F}_3) \Rightarrow \sum \vec{M}_i(\vec{F}_i)$



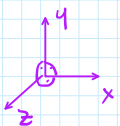
$M_A'(P_1) = +P_1 \cdot b$
 $M_A''(P_2) = +P_2 \cdot a$
 $\vec{P} = \vec{P}_1 + \vec{P}_2$
 $\vec{M}_A = \vec{M}_A' + \vec{M}_A''$



$M_A = -M_u$
 $R_A = -\vec{P}$

WARUNKI RÓWNOWAGI PŁASKIEGO DOWOLNEGO UKŁADU SIŁ

$\begin{cases} \vec{S} = 0 \\ \vec{M}_0 = 0 \end{cases} \Rightarrow \begin{cases} S_x = \sum F_{ix} = 0 \\ S_y = \sum F_{iy} = 0 \\ M_0 = \sum M_{oi} = 0 \end{cases}$ (I)

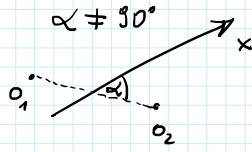


(II) $\begin{cases} \sum F_{ix} = 0 \\ \sum M = 0 \end{cases}$ $\alpha \neq 90^\circ$

2

II

$$\left\{ \begin{array}{l} \sum F_x = 0 \\ \sum M_{o_1} = 0 \\ \sum M_{o_2} = 0 \end{array} \right.$$



III

$$\left\{ \begin{array}{l} \sum M_{o_1} = 0 \\ \sum M_{o_2} = 0 \\ \sum M_{o_3} = 0 \end{array} \right.$$

