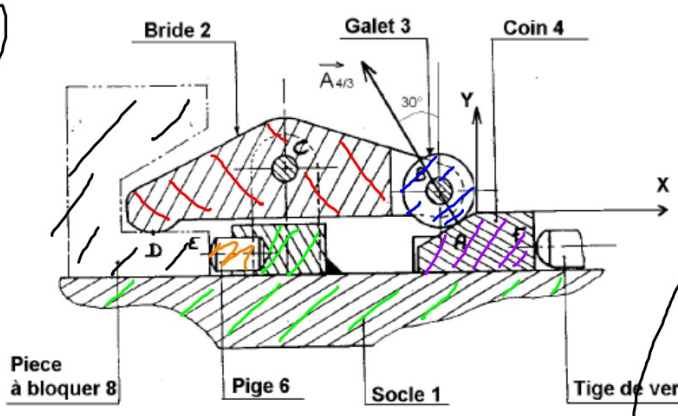
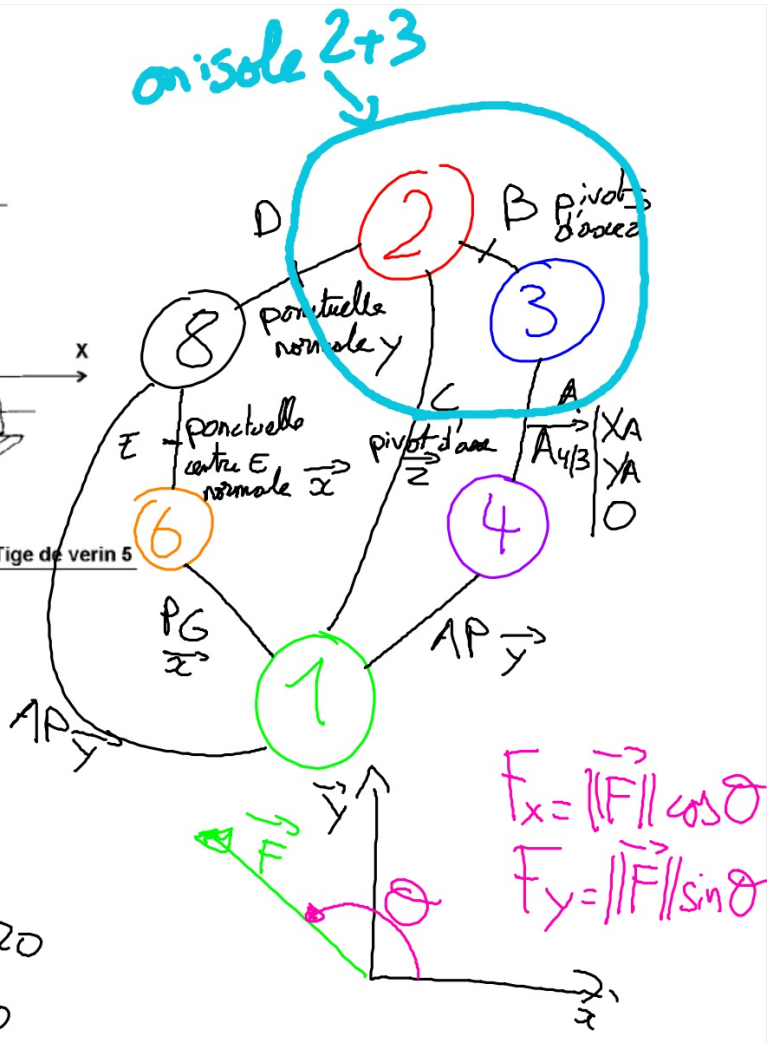
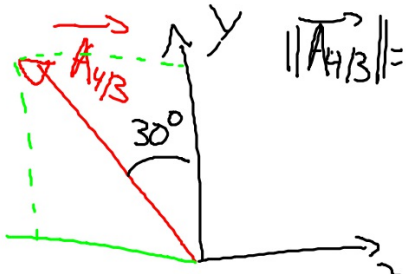
Bride escamotable

1)





2)



$\|\vec{A}_{4/3}\| = 5000N$

$X_A = -5000 \sin 30 = 5000 \cos 120$

$Y_A = 5000 \cos 30 = 5000 \sin 120$

$F_x = \|\vec{F}\| \cos\theta$

$F_y = \|\vec{F}\| \sin\theta$

3) On isole 2+3

BATTE

T	R
1	1
0	1
1	1

D : ponctuelle de normale $\vec{y}$

$$\{\mathcal{C}_{8/2}\} = \begin{Bmatrix} 0 & 0 \\ Y_D & 0 \\ 0 & 0 \end{Bmatrix}_{D,R}$$

C : pivot d'axe $\vec{z}$

pb plan

$$\{\mathcal{C}_{1/2}\} = \begin{Bmatrix} X_C & X_C = 0 \\ Y_C & Y_C = 0 \\ Z_C = 0 & 0 \end{Bmatrix}_{C,R}$$

A : $\vec{A}_{4/3}$ $\begin{vmatrix} X_A \\ Y_A \\ 0 \end{vmatrix}$

$$\{\mathcal{C}_{4/3}\} = \begin{Bmatrix} -2500 & 0 \\ 4330 & 0 \\ 0 & 0 \end{Bmatrix}_{A}$$

4) Appliquer le PFS en C

$$\{\mathcal{G}_{8/2}\} + \{\mathcal{G}_{1/2}\} + \{\mathcal{G}_{4/3}\} = \{0\}$$

$$\{\mathcal{G}_{8/2}\} = \begin{Bmatrix} 0 & 0 \\ Y_D & 0 \\ 0 & 0 \end{Bmatrix}_{D,R} = \left\{ \overrightarrow{D_{8/2}} \;\middle|\; \overrightarrow{\Pi_D} + \overrightarrow{CD} \wedge \overrightarrow{D_{8/2}} \right\}_C$$

$$= \left\{ \begin{matrix} 0 \\ Y_D \\ 0 \end{matrix} \;\middle|\; \begin{matrix} 0 \\ 0 \\ 0 \end{matrix} + \begin{matrix} -0,04 \\ -0,02 \\ 0 \end{matrix} \wedge \begin{matrix} 0 \\ Y_D \\ 0 \end{matrix} \right\}_C$$

$$\begin{pmatrix} -0,04 \\ -0,02 \\ 0 \end{pmatrix} \wedge \begin{pmatrix} 0 \\ Y_D \\ 0 \end{pmatrix} = \begin{pmatrix} -0,02 \times 0 - 0 \times Y_D \\ 0 \times 0 - (-0,04) \times 0 \\ -0,04 \times Y_D - (-0,02) \times 0 \end{pmatrix}$$

$$= \left\{ \begin{matrix} 0 \\ Y_D \\ 0 \end{matrix} \;\middle|\; \begin{matrix} 0 \\ 0 \\ -0,04 Y_D \end{matrix} \right\}_{R,C}$$

$$\{\mathcal{G}_{4/3}\} = {}_A\left\{\begin{matrix}-2500\\4330\\0\end{matrix}\middle|\begin{matrix}0\\0\\0\end{matrix}\right\} = {}_C\left\{\begin{matrix}\overrightarrow{A_{4/3}}\\ \overrightarrow{\Gamma_A} + \overrightarrow{CA} \wedge \overrightarrow{A_{4/3}}\end{matrix}\right\}$$

$$\overrightarrow{CA} \wedge \overrightarrow{A_{4/3}} = \begin{pmatrix}0{,}052 & -2500\\ -0{,}016 & 4330\\ 0 & 0\end{pmatrix}$$

$$\{\mathcal{G}_{4/3}\} = {}_C\left\{\begin{matrix}-2500\\4330\\0\end{matrix}\middle|\begin{matrix}0\\0\\185{,}16\end{matrix}\right\} = \begin{pmatrix}0\\0\\0{,}052 \times 4330 - (-0{,}016) \times -2500\end{pmatrix}$$

$$\begin{Bmatrix} -2500 \\ 4330 \\ 0 \end{Bmatrix}_C \begin{Bmatrix} 0 \\ 0 \\ 185{,}16 \end{Bmatrix} + \begin{Bmatrix} 0 \\ Y_D \\ 0 \end{Bmatrix}_C \begin{Bmatrix} 0 \\ 0 \\ -0{,}04Y_D \end{Bmatrix}_R + \begin{Bmatrix} X_C \\ Y_C \\ 0 \end{Bmatrix}_C \begin{Bmatrix} 0 \\ 0 \\ 0 \end{Bmatrix} = \{0\}$$

$$\begin{cases} -2500 + 0 + X_C = 0 \\ 4330 + Y_D + Y_C = 0 \\ 0+0+0=0 \\ 0=0 \\ 0=0 \\ 185{,}16 - 0{,}04Y_D = 0 \end{cases}$$

$$\Rightarrow \begin{cases} X_C = 2500 \\ Y_D = \dfrac{185{,}16}{0{,}04} = 4629 \\ Y_C = -4330 - 4629 = -8959 \end{cases}$$

$$\Rightarrow \begin{Bmatrix} \infty \\ \theta_{B/2} \end{Bmatrix} = \begin{Bmatrix} 0 \\ 4629 \\ 0 \end{Bmatrix}_D \begin{Bmatrix} 0 \\ 0 \\ 0 \end{Bmatrix} \qquad \begin{Bmatrix} \infty \\ \theta_{A/2} \end{Bmatrix} = \begin{Bmatrix} 2500 \\ -8959 \\ 0 \end{Bmatrix}_C \begin{Bmatrix} 0 \\ 0 \\ 0 \end{Bmatrix}$$