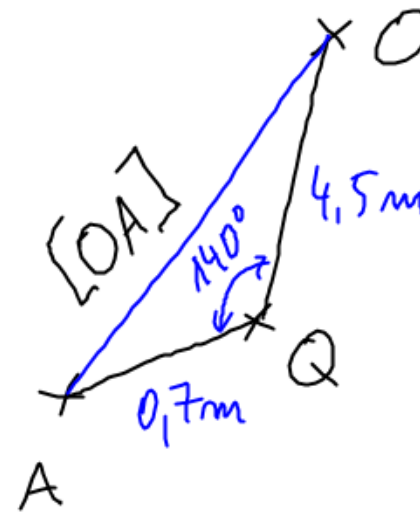
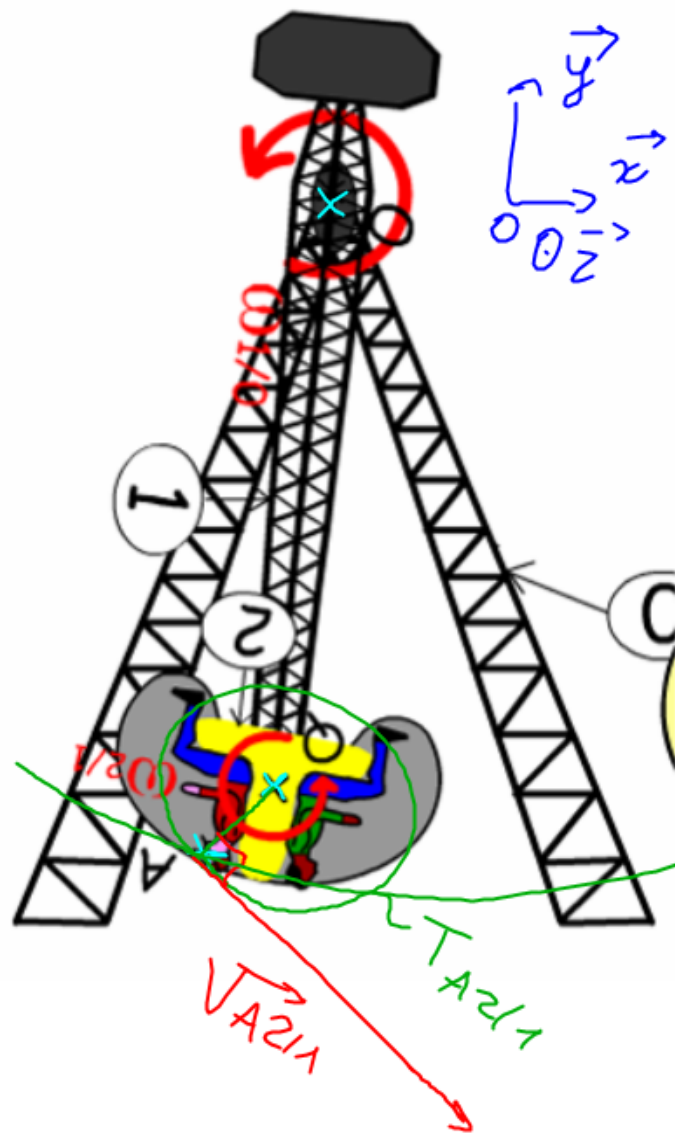


- 1) Mut_{1/0}: rotation autour de l'axe $O\vec{z}$
Mut_{2/1}: _____ $Q\vec{z}$
- 2) Mut_{2/0}: qcg dans le plan $\vec{x}O\vec{y}$
- 3) TA_{2/1}: cercle de centre Q et de rayon QA
 $\|\vec{V}_{A2/1}\| = \omega_{2/1} \cdot R_{QA}$
- TA_{1/0} relative = $\frac{17 \cdot 10}{30} \cdot 0,7 \approx 0,733 \text{ m/s}$
- 4) TA_{1/0}: cercle de centre O et de rayon OA

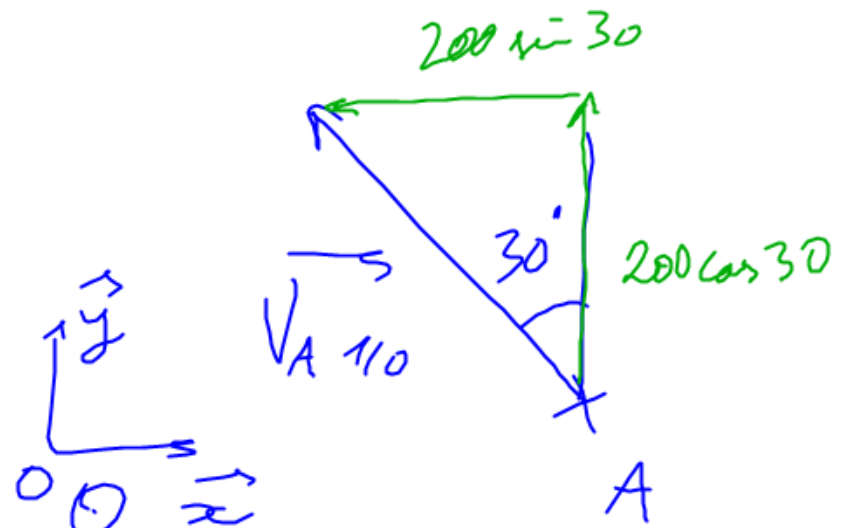


$$OA = \sqrt{4,5^2 + 0,7^2 - 2 \cdot 4,5 \cdot 0,7 \cdot \cos 140} \approx 5,06m$$

Formule de Al-Kashi

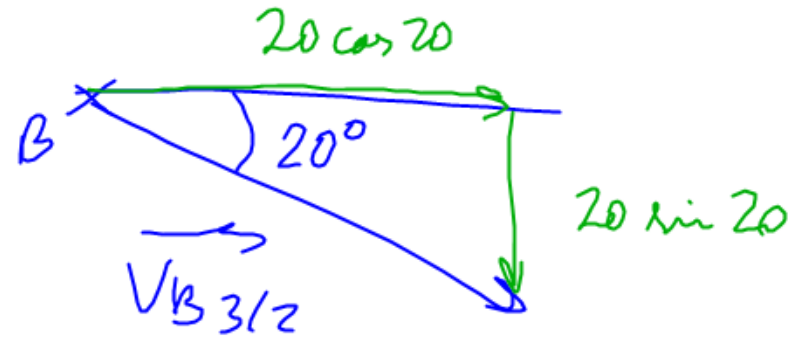


$$c^2 = a^2 + b^2 - 2 \cdot a \cdot b \cdot \cos d$$



$$\|\vec{V}_{A1/0}\| = 200 \text{ m/s}$$

$$\vec{V}_{A1/0} = \begin{pmatrix} -200 \sin 30 \\ 200 \cos 30 \\ 0 \end{pmatrix}$$



$$\|\vec{V}_{B3/2}\| = 20 \text{ m/s}$$

$$\vec{V}_{B3/2} = \begin{pmatrix} 20 \cos 20 \\ -20 \sin 20 \\ 0 \end{pmatrix}$$