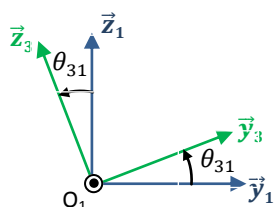
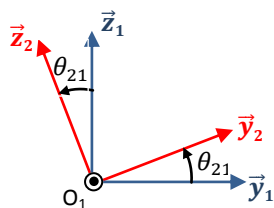


	nom du composant	mouvement /1	Paramètre (θ_{ij})
entrée	manivelle	rotation	θ_{21}
sortie	Bielle / lisse	rotation	θ_{31}

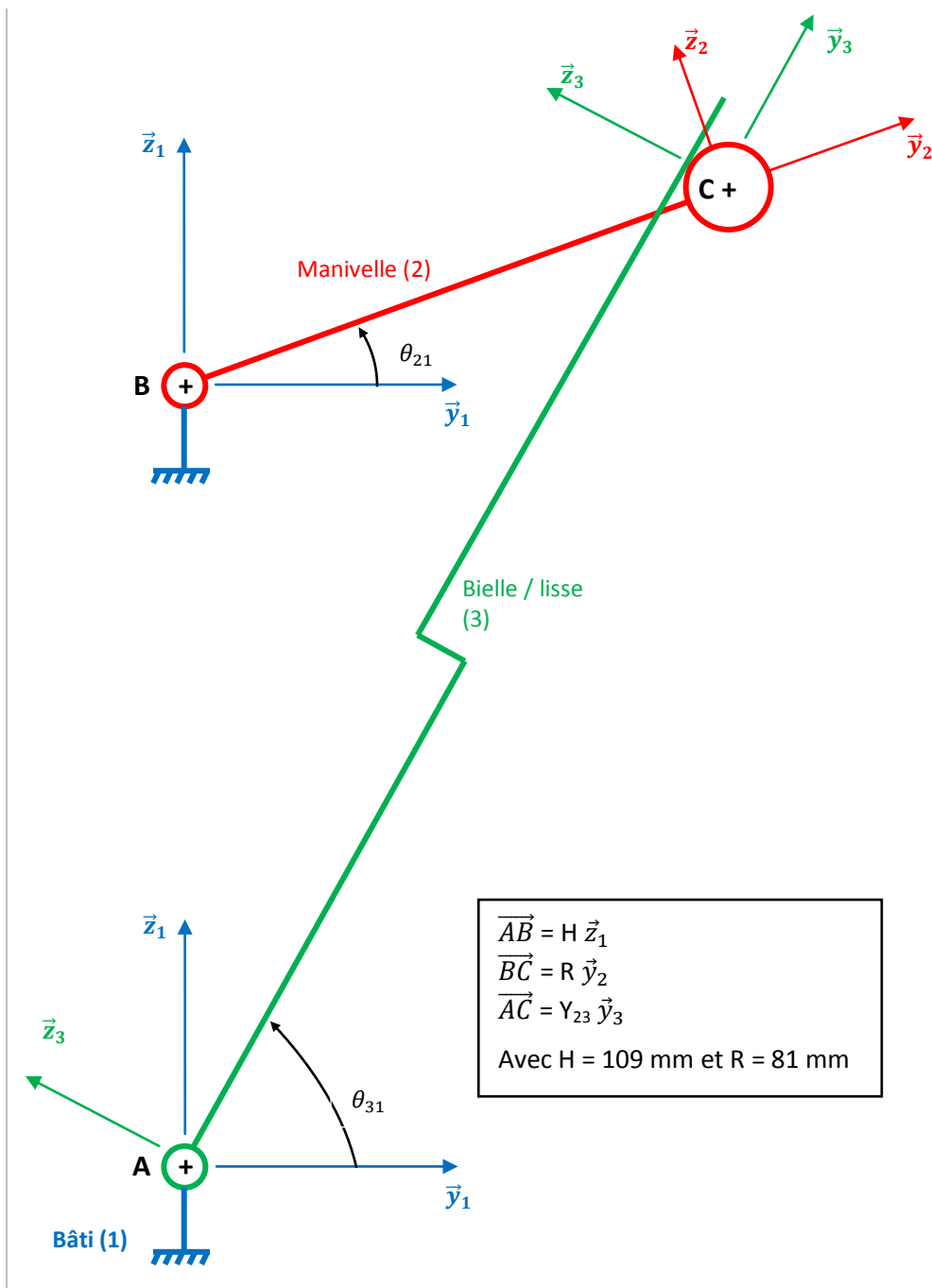
• **Figures de changement de base**



• **Fermeture géométrique**

$$\vec{AB} + \vec{BC} + \vec{CA} = \vec{0}$$

$$H \cdot \vec{z}_1 + R \cdot \vec{y}_2 - Y_{23} \cdot \vec{y}_3 = \vec{0}$$



$$\begin{aligned} \vec{AB} &= H \vec{z}_1 \\ \vec{BC} &= R \vec{y}_2 \\ \vec{AC} &= Y_{23} \vec{y}_3 \end{aligned}$$

Avec $H = 109 \text{ mm}$ et $R = 81 \text{ mm}$

• **Projections**

Projection sur \vec{y}_1 $0 + R \cdot \cos \theta_{21} - Y_{23} \cdot \cos \theta_{31} = 0$

Projection sur \vec{z}_1 $H + R \cdot \sin \theta_{21} - Y_{23} \cdot \sin \theta_{31} = 0$

• **Résolution : On cherche une relation entre θ_{21} et θ_{31}**

$$\frac{R \cdot \cos \theta_{21}}{\cos \theta_{31}} = Y_{23} = \frac{H + R \cdot \sin \theta_{21}}{\sin \theta_{31}}$$

$$\tan \theta_{31} = \frac{H + R \cdot \sin \theta_{21}}{R \cdot \cos \theta_{21}}$$

$$\theta_{31} = \tan^{-1} \left(\frac{H + R \cdot \sin \theta_{21}}{R \cdot \cos \theta_{21}} \right)$$