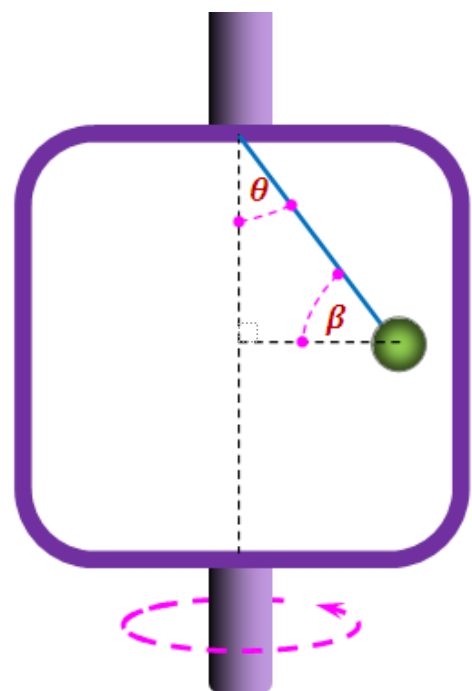
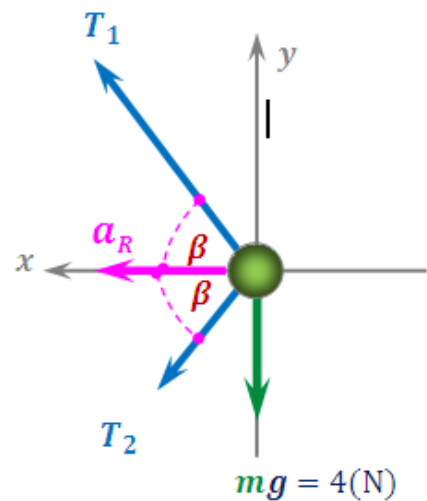


$$\begin{aligned}\cos\theta &= 0.8 = \sin\beta \\ \sin\theta &= 0.6 = \cos\beta \\ \omega &= 4\pi \quad R = 0.3(m)\end{aligned}$$

$$\begin{aligned}\Sigma \vec{F}_x &= m\vec{a}_R \\ (T_1 + T_2)\cos\beta &= m\omega^2 R \\ (T_1 + T_2)0.6 &= 0.4 \cdot (4\pi)^2 \cdot 0.3\end{aligned}$$

$$\begin{aligned}\Sigma \vec{F}_y &= 0 \\ (T_1 - T_2)\sin\beta - mg &= 0 \\ (T_1 - T_2)0.8 - 4 &= 0\end{aligned}$$



$$\begin{aligned}\cos\theta &= 0.8 = \sin\beta \\ \sin\theta &= 0.6 = \cos\beta \\ \omega &= ?? \quad R = 0.3(m)\end{aligned}$$

$$\begin{aligned}\Sigma \vec{F}_x &= m\vec{a}_R \\ T_1\cos\beta &= m\omega^2 R \\ T_1 \cdot 0.6 &= 0.4 \cdot \omega^2 \cdot 0.3\end{aligned}$$

$$\begin{aligned}\Sigma \vec{F}_y &= 0 \\ T_1\sin\beta - mg &= 0 \\ T_1 \cdot 0.8 - 4 &= 0\end{aligned}$$

