

$$\begin{split} \langle v \rangle &= \frac{S}{t} = \frac{\pi R}{\tau} = \frac{3.14 \cdot 1.6}{10} = 0.5 \text{ m/s} \\ |\langle \vec{v} \rangle| &= |\frac{\Delta \vec{r}}{\Delta t}| = \frac{2R}{\tau} = \frac{2 \cdot 1.6}{10} = 0.32 \text{ m/s} \\ |\langle \vec{a} \rangle| &= |\frac{\Delta \vec{v}}{\Delta t}| = \frac{v_{\text{II}\tau}}{\tau} \end{split}$$

$$\begin{split} v_{\tau} &= a_{\tau} \cdot t \\ S &= \pi R = \int_{0}^{\tau} a_{\tau} t \, dt = \frac{a\tau^2}{2} \\ a_{\tau} &= \frac{2\pi R}{\tau^2} \\ v_{\text{II}_{\tau}} &= a_{\tau} \cdot \tau = \frac{2\pi R}{\tau} \\ |\langle \vec{a} \rangle| &= \frac{v_{\text{II}_{\tau}}}{\tau} = \frac{2\pi R}{\tau^2} = \frac{2 \cdot 3.14 \cdot 1.6}{100} = 0.1 \text{ m/s}^2 \end{split}$$