



$$\langle v \rangle = \frac{S}{t} = \frac{\pi R}{\tau} = \frac{3.14 \cdot 1.6}{10} = 0.5 \text{ m/s}$$

$$|\langle \vec{v} \rangle| = \left| \frac{\Delta \vec{r}}{\Delta t} \right| = \frac{2R}{\tau} = \frac{2 \cdot 1.6}{10} = 0.32 \text{ m/s}$$

$$|\langle \vec{a} \rangle| = \left| \frac{\Delta \vec{v}}{\Delta t} \right| = \frac{v_{\text{II}\tau}}{\tau}$$

$$v_{\tau} = a_{\tau} \cdot t$$

$$S = \pi R = \int_0^{\tau} a_{\tau} t \, dt = \frac{a_{\tau}^2}{2}$$

$$a_{\tau} = \frac{2\pi R}{\tau^2}$$

$$v_{\text{II}\tau} = a_{\tau} \cdot \tau = \frac{2\pi R}{\tau}$$

$$|\langle \vec{a} \rangle| = \frac{v_{\text{II}\tau}}{\tau} = \frac{2\pi R}{\tau^2} = \frac{2 \cdot 3.14 \cdot 1.6}{100} = 0.1 \text{ m/s}^2$$