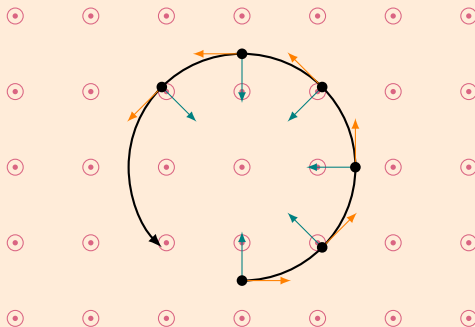


work done in a constant magnetic field



$$W = \int \vec{F}_m \cdot d\vec{r} = \int q(\vec{v} \times \vec{B}) \cdot \vec{v} dt = 0$$