Chapter 6

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- If a body does not slide, the frictional force is a static frictional force $\vec{F_s}$. If there is sliding, the frictional force is a kinetic frictional force $\vec{F_k}$.
- If a body does not move, the static frictional force $\vec{F_s}$ and the component of $\vec{F}$ parallel to the surface are equal in magnitude, and $\vec{F_s}$ is directed opposite that component.
- The magnitude of $\vec{f_s}$ has a maximum value $f_{s,max}\mu f_N$.
- If a particle moves in a circle or circular arc of radius R at constant speed v, the particle is said to be in uniform circular motion. It then has a centripetal acceleration $\vec{a}$ with magnitude given by $a = \frac{v^2}{R}$, which is directed inwards towards the center of the circle. **mnemonic: "ForMoV^{2}eR"**