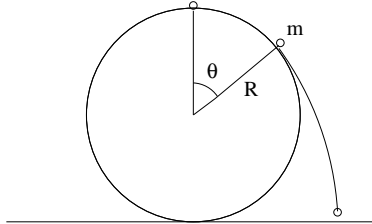


[mex1] Particle sliding down sphere

A tiny particle of mass m slides without friction down a spherical surface of radius R . The particle starts at the top with negligible speed.

- (a) Identify all forces that act on the particle as it slides along the surface of the sphere.
- (b) Calculate the polar angle θ at which the path of the particle leaves the sphere.



Solution: