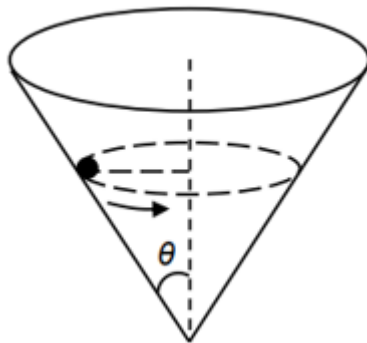


- 8 A small sphere is set into circular motion in a horizontal plane within a smooth cone as shown.



If the sphere is moving with a centripetal acceleration of  $0.8g$ , what is the angle  $\theta$ ?

- A**  $37^\circ$                       **B**  $39^\circ$                       **C**  $51^\circ$                       **D**  $53^\circ$