

Centripetal Acceleration at the Bottom of the Swing

Recall that an object undergoing circular motion at tangential speed v in a circular path of radius r feels a centripetal force, and hence, a centripetal acceleration given by $a_c = (v^2/r)$. Since the bob moves in a circle of radius given by the length of the pendulum, it has a centripetal acceleration:

- a.) mg b.) $\sqrt{\frac{rg}{m}}$
c.) $2g$ d.) mgr e.) 0