

Topic 22: Exercises on Uniform Circular Motion
Level 2

1. At ground level, where $g = 9.81 \text{ ms}^{-2}$, a simple pendulum beats exact seconds. If it is taken up a mountain to a place where it loses 30 seconds per day, find the value of g at the new location.

9.803 ms^{-2}

2. A particle of mass m kg is travelling at constant speed v ms^{-1} round a circle of radius r m. If $v = 3$, $r = 6$, and the force acting towards the centre of the circle is of constant magnitude 6 N, find the value of m .