

A

B

C

1. In the pendulum above, assume the initial angle made with the vertical rod is 60° and the length of the string is 1m.
   1. Find the change in potential energy from point A (maximum distance from the rod/maximum height) to point B (x=0) if the mass is 100g.
   2. Find the maximum velocity of the mass
2. In the pendulum above, assume the maximum observed velocity of the mass is 6m/s and the length of the string is 3m.
   1. Find the maximum height the mass will attain
   2. Find the angle the string will make with the vertical rod at its maximum displacement.
3. In the pendulum above, assume the maximum observed velocity of the mass is 2m/s and the angle the string creates with the vertical rod at maximum displacement is 40°.
   1. Find the maximum change in height the pendulum attains
   2. Find the length of the string.