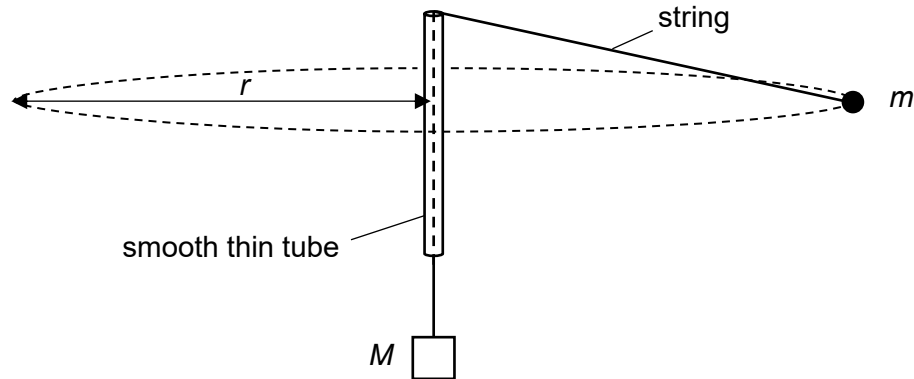


- 13 A string passes through a smooth thin tube, with objects of masses m and M attached to its ends. The tube is swung so that the object with mass m travels in a horizontal circle of constant radius r at constant speed v as shown.



Which of the following expressions is equal to M ?

A $m\sqrt{1+\left(\frac{v^2}{rg}\right)^2}$

B $\frac{mv^2r}{g}$

C $\frac{mv^2g}{r}$

D $\frac{mv^2}{rg}$