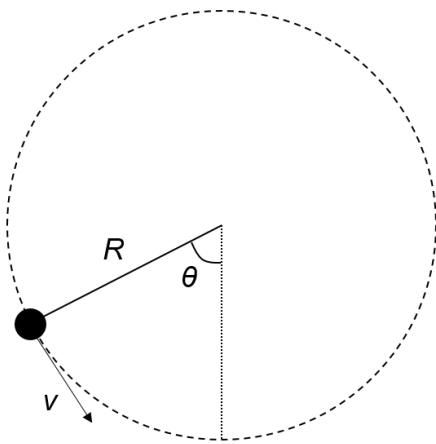


- 8** A pendulum with mass m is being attached to a string with length R and is being whirl in a vertical circle.

At the instant shown in the diagram, the pendulum is travelling with a linear velocity v and the string makes an angle θ with the vertical.



What is the tension T in the string?

A $T = \frac{mv^2}{R}$

B $T = mg + \frac{mv^2}{R}$

C $T = mg \cos \theta + \frac{mv^2}{R}$

D $T = mg \sin \theta + \frac{mv^2}{R}$