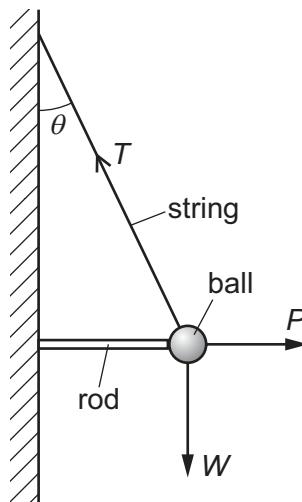


- 17 The diagram shows a ball of weight W hanging in equilibrium from a string.



The string is at an angle θ to the vertical. The tension in the string is T . The ball is held away from the wall by a horizontal force P from a metal rod.

What is the relationship between the magnitudes of T , P and W ?

A $P = T \cos \theta$ and $W = T \sin \theta$

B $T = P + W$

C $T^2 = P^2 + W^2$

D $W = P \tan \theta$ and $W = T \cos \theta$

- 18 A steel sphere is dropped vertically onto a horizontal metal plate. The sphere hits the plate with