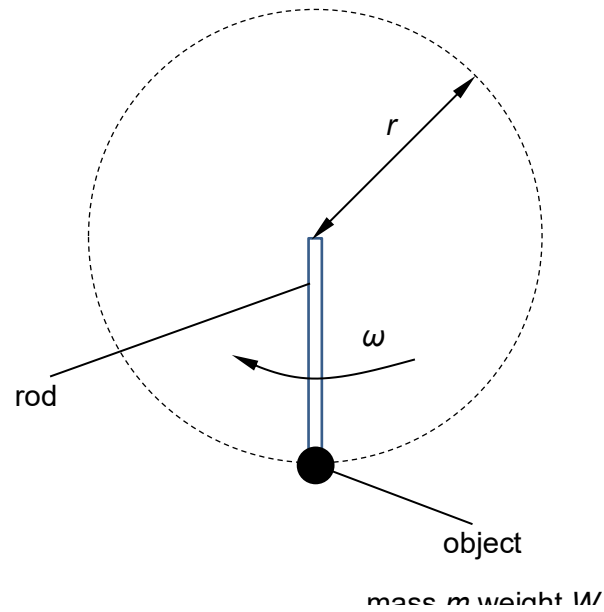


- 9 An object of mass  $m$  and weight  $W$  is fixed to one end of a light rod which rotates in a vertical circle of radius  $r$ . The object has an angular velocity  $\omega$  when it is vertically below the centre of the circle.



What is the tension in the rod acting upwards on the object when the object is vertically below the centre of the circle?

- A**  $W + mr\omega^2$       **B**  $W - mr\omega^2$       **C**  $mr\omega^2 - W$       **D**  $mr\omega^2$