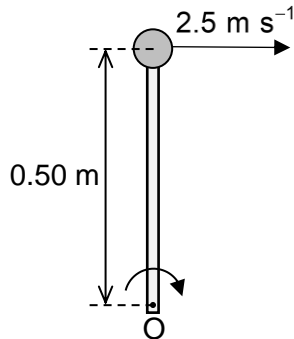10 A sphere of mass 0.40 kg is attached to a light, rigid rod of length 0.50 m that is hinged at point O. The sphere is projected with a horizontal speed of 2.5 m s^{-1} when it is vertically above point O and rotates freely about point O.

What is the magnitude of the force exerted on the sphere by the rod at the instant when the sphere is vertically below point O?

A 3.9 N **B** 8.9 N **C** 17 N **D** 25 N