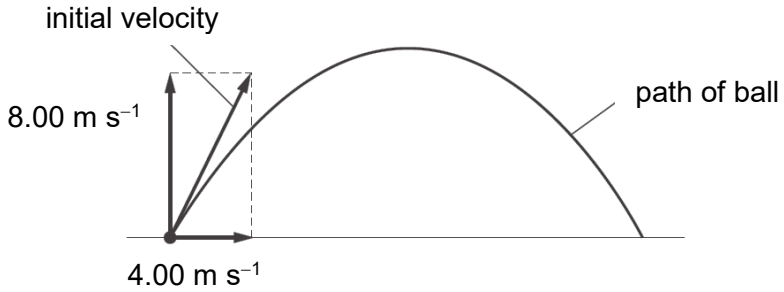
3 An astronaut on the Moon, where there is no air resistance, throws a ball. The ball's initial velocity has a vertical component of 8.00 m s^{-1} and a horizontal component of 4.00 m s^{-1}, as shown.



The acceleration of free fall on the Moon is 1.62 m s^{-2}.

What will be the speed of the ball 9.00 s after being thrown?

A 6.60 m s^{-1} **B** 7.70 m s^{-1} **C** 10.6 m s^{-1} **D** 14.6 m s^{-1}