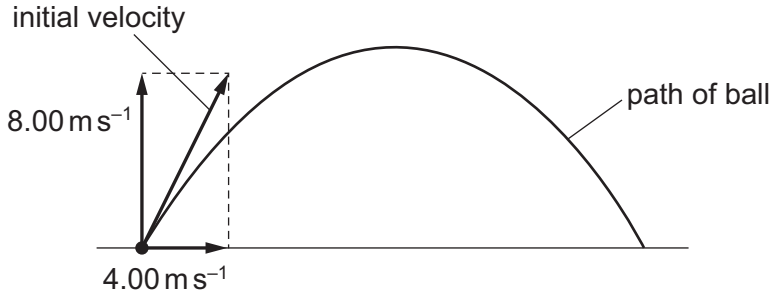
6 An astronaut on the Moon, where there is no air resistance, throws a ball. The ball's initial velocity has a vertical component of $8.00\,m\,s^{-1}$ and a horizontal component of $4.00\,m\,s^{-1}$, as shown.



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

What is the speed of the ball 9.00 s after being thrown?

A $6.58\,m\,s^{-1}$ **B** $7.70\,m\,s^{-1}$ **C** $10.6\,m\,s^{-1}$ **D** $14.6\,m\,s^{-1}$