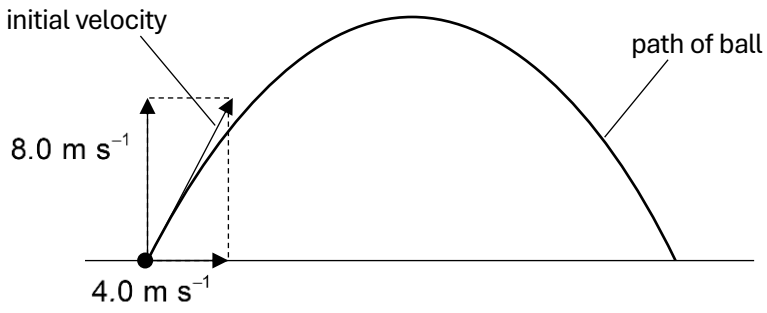
4 An astronaut on the Moon, where there is no air resistance, throws a ball. The ball's initial velocity has a vertical component of $8.0\ \text{m s}^{-1}$ and a horizontal component of $4.0\ \text{m s}^{-1}$, as shown.



The acceleration of free fall on the Moon is $1.62\ \text{m s}^{-2}$.
What will be the speed of the ball 9.00 s after being thrown?

A $6.6\ \text{m s}^{-1}$
B $7.7\ \text{m s}^{-1}$
C $10.6\ \text{m s}^{-1}$
D $14.6\ \text{m s}^{-1}$