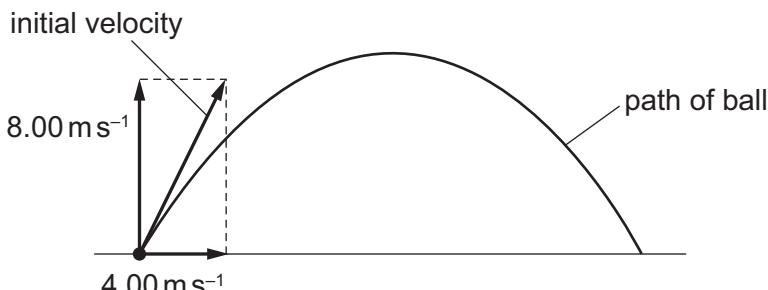


- 7 An astronaut on the Moon, where there is no air resistance, throws a ball. The ball's initial velocity has a vertical component of  $8.00\text{ ms}^{-1}$  and a horizontal component of  $4.00\text{ ms}^{-1}$ , as shown.



The acceleration of free fall on the Moon is  $1.62\text{ ms}^{-2}$ .

What will be the speed of the ball  $9.00\text{ s}$  after being thrown?

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