

3 A ball is thrown with an initial horizontal component of velocity  $u$  and an initial vertical component of velocity  $v$ . The effects of air resistance are negligible.

Which of the following statements about the motion of the ball is **not** correct?

- ☐ **A** The magnitude of the acceleration in the vertical plane is  $g$ .
- ☐ **B** The horizontal component of velocity is constant.
- ☐ **C** The time taken for the ball to reach its maximum height is equal to  $\frac{v}{g}$ .
- ☐ **D** The maximum height of the ball depends on the values of  $u$  and  $v$ .

**(Total for Question 3 = 1 mark)**