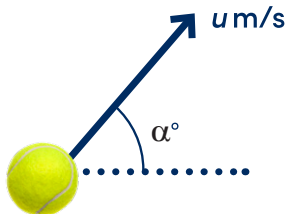




## AS/A level Mathematics



The path, or trajectory, taken by a tennis ball is affected by the initial speed  $u \text{ m/s}$  at which the racket hits the ball and the angle of projection  $\alpha^\circ$ .

- What other factors will affect the trajectory of the tennis ball?
- What is the mathematical shape of the trajectory of the ball?
- Which value of  $\alpha$  will maximise the distance the ball travels across the tennis court?
- Is it possible to find a formula for the maximum horizontal distance travelled?

# AS/A level Mathematics

If you're predicted grade 5 or higher in GCSE Mathematics, consider taking AS or A level Mathematics.

Continuing to study maths at this level helps to keep your options open and provides you with really useful skills to support your future study and career. It can also help you to achieve better results in other A levels, such as the

STEM subjects (Science, Technology, Engineering and Mathematics) and Economics, all of which have mathematical content.

Some degree courses and apprenticeships require A level Mathematics, and many others recommend it. It can also give you the edge when applying for jobs.



For more information on your options for studying maths beyond GCSE, visit [amsp.org.uk/students/gcse/what-next](https://amsp.org.uk/students/gcse/what-next)

