

## A level Further Mathematics

This course is run by the **AQA** exam board and we look at the following areas within the course:

- Pure Mathematics
- Statistics
- Decision Mathematics

You will be examined on all 3 areas of mathematics at the end of the course.

Please complete the tasks below and bring them along to your first lesson

### Task 1

Click on the link below and watch the video

[Introduction to complex numbers](#)

Please bring your solutions to the following questions

- What are the roots of the equation  $x^2 + 6x + 18 = 0$  ?
- What is  $(5 + 2i) - (4 - 3i)$  ?
- Solve the equation  $x - (4 + 2i) = -5 - 11i$
- Solve the equation  $x + (7 - 12i) = -8 + 12i$

### Task 2

Research into how to multiply 2 complex numbers and use this research to answer the questions below

- $(6 + 2i)(7 + 8i)$
- $(5 - 2i)^2$
- $(2 + \sqrt{2}i)(3 - \sqrt{5}i)$