

Core Maths: Summer Work and Reading List

As part of the course, there are some areas of mathematics that you are expected to already be proficient in. These include:

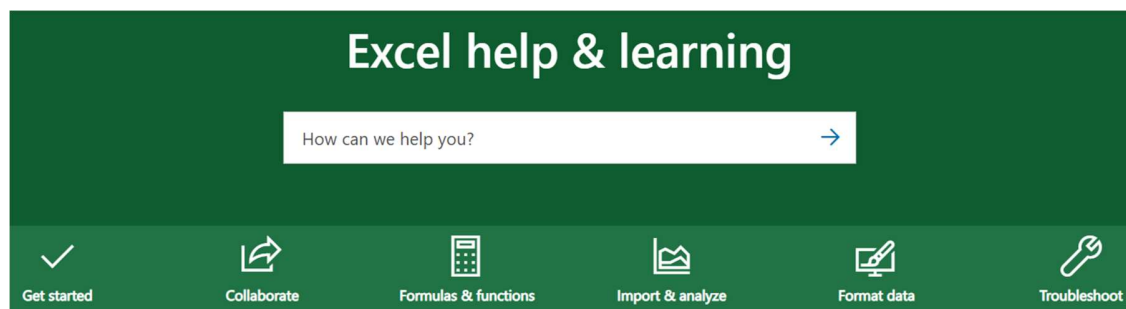
- Percentages and percentage change using a multiplier
- Cumulative frequency and box plots (creating and comparing)
- Histograms
- Pythagoras
- Scatter graphs and drawing a line of best fit

Task 1: Estimation Questions

- What is the population of the UK?
- How many people in the UK are aged 20–30?
- What is the approximate length of the UK?
- How many houses are there in the UK?
- How many flights leave Birmingham Airport in one day?

Before searching for answers, write down your own estimates. Then use reliable sources to check how close you were.

Task 2: Excel Skills



- Visit: <https://support.microsoft.com/en-gb/office/excel-video-training-9bc05390-e94c-46af-a5b3-d7c22f6990bb>
- If you are new to Excel, begin with 'Take a tour'.
- If you have prior experience, complete the 'Formulas' tutorial.
- Download the templates and work through them. Remember to click 'Enable Editing'.

Recommended Podcasts

- Risky Talk – <https://open.spotify.com/show/52dlHqFMsCSuOPpYy3aGGG>



- More or Less (BBC) – <https://www.bbc.co.uk/programmes/b006qshd>



Recommended Reading

Maths on the Back of an Envelope by Rob Eastaway – an introduction to Fermi estimation and practical problem solving.