



### **Core Maths Transition Work Y11 & Y12**

To be successful in Core Maths next year you need to start thinking about how maths is used more in everyday life as an adult.

This booklet is designed to prepare you for studying Core Maths by improving your understanding on some key aspects of the syllabus.

This work is important and needs to be completed – bring your completed workbook, on paper to your first lesson.

All questions can be done with a calculator.

Good luck!

## Task 1 – Bake a cake

1. Baking a cake. What maths is involved in this activity?

2. Write a 1 page plan, including detailed calculations, on how much money you could fundraise from making and selling this cake. You'll need to consider:

- The cost of the ingredients per cake
- How many cakes you can make, so how many slices you sell
- How much money you make, so how much profit
- Is this a good profit percentage, so the baking is worth doing?
- Consider the time, set-up, energy and other costs.

Chosen cake:	
Ingredients:	Approximate cost of each ingredient:
How many does this recipe serve?	
How much does the cake cost per serving?	
How many can you make?	
What will you charge?	
Other costs involved (time, set-up, energy etc.)	
Estimated profit	
Is it worth it?	

## Task 2 – New Car

A rich uncle I going to give you a second-hand car for your 17<sup>th</sup> birthday. Estimate the running costs for a year. Use online research to find the costs of road tax and car insurance. Can you afford to run a car? Would it be cheaper to use public transport?

Make and model of imaginary car	
Car tax (per month)	
Insurance (per month)	
Expected petrol consumption (per month)	
Expected cost of petrol (per month)	
Overall monthly cost	
What other costs might you need to consider when owning a car?	
Estimated monthly cost of public transport	
What's the better option?	

Task 3 - Watch and make some notes underneath on:

Martin Lewis – student loans decoded

[https://www.youtube.com/watch?v=mO\\_rAsMuAIM](https://www.youtube.com/watch?v=mO_rAsMuAIM)

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Credit card APR explained

<https://www.youtube.com/watch?v=Fr4rNJ1GR04>

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What is an AER interest rate?

[https://www.youtube.com/watch?v=Xd\\_fL9Y04F8](https://www.youtube.com/watch?v=Xd_fL9Y04F8)

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Task 4 - Read and make some notes underneath on:

Biosci – Statistics 101

<http://www.biosci.global/customer-stories/statistics-in-daily-life/>

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Course mentor – 15 most important uses of statistics in daily life

<https://coursementor.com/blog/uses-ofstatistics-in-daily-life/>

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Rift – The beginners guide to UK tax

<https://www.riftrefunds.co.uk/taxrebates/uk-tax-refund-advice/thebeginners-guide-to-uk-tax/>

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Forbes – National Insurance explained

<https://www.forbes.com/uk/advisor/personal-finance/national-insurance-explained/>

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