CORE MATHS TRANSITION WORK

WATCH……

Martin Lewis – Student loans decoded
https://www.youtube.com/watch?v=mO_rAsMuAlM

Credit card APR explained
https://www.youtube.com/watch?v=Fr4rNJ1GR04

What is an AER interest rate?
https://www.youtube.com/watch?v=Xd_fL9Y04F8

READ…

Biosci – Statistics 101
http://www.biosci.global/customer-stories-en/statistics-in-daily-life/

Course Mentor - 15 most important uses of statistics in daily life
https://coursementor.com/blog/uses-of-statistics-in-daily-life/

Rift – The beginners guide to UK tax
https://www.riftrefunds.co.uk/tax-rebates/uk-tax-refund-advice/the-beginners-guide-to-uk-tax/

Forbes – National insurance explained
https://www.forbes.com/uk/advisor/personal-finance/national-insurance-explained/

COURSE DETAILS…

https://www.aqa.org.uk/subjects/mathematics/aqa-certificate/mathematical-studies-1350/specification-at-a-glance

The course specification can be found at the link above. The optional component is 2A: Statistical techniques.

There are also past papers and helpful resources which will be useful whilst you are studying core maths.

GET AHEAD……

The following websites will help you to get ahead before September.

Core maths subject support
https://www.cimt.org.uk/projects/mepres/core-maths/

Core maths videos
https://www.youtube.com/playlist?list=PLg2tfDG3Ww4uF9Fc9imsxcApO2_9wPxVz

GET ORGANISED…..

Come prepared at the beginning of term, this will help you to keep your notes and any handouts organised. You will need a ring binder folder, plastic wallets, file dividers, pen, pencil, highlighters, lined paper and a calculator.

CORE MATHS TRANSITION WORK

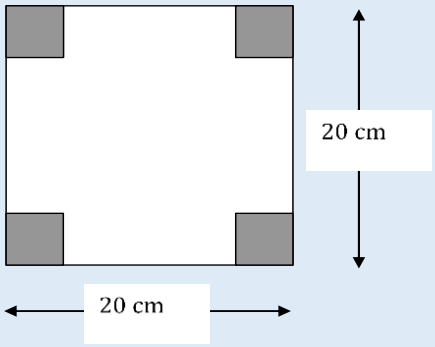
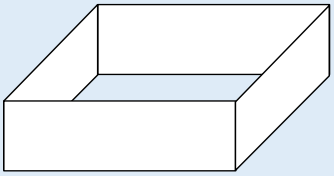
TASK……

THE BOX PROBLEM

In this task you are going to investigate how to make a box of maximum volume from a given rectangle of card.

Your ultimate objective is a method that enables you to work out a box of maximum volume for any size of rectangle.

However, we will start with a 20cm by 20cm square.

The basic approach is to cut square pieces (e.g. 4cm) from each corner:	The sides are then folded to form an open box.
	

- ✓ Why do the cut-outs have to be square?
- ✓ If the cut-outs are 4cm squares, how deep is the box?
- ✓ What are the other dimensions of the box?
- ✓ What is the volume of the box?

Main tasks

1. Investigate further to find the size of cut-out that produces the box of greatest volume from a 20cm by 20cm square of card.

2. Extend your method to cope with any size rectangle of card.

You may wish to present your solution in the form of a spreadsheet or by using graphing software.

QUESTIONS, QUERIES AND COMMENTS…..

Use this section to make a note of anything you would like to ask your teacher about when the course starts in September.