Welcome to your Single Mathematics summer task!

You will have a Statistics task and a Pure task.

Statistics Task – To analyse the large data set

Look at the PowerPoint (with voice over) for an introduction to the large data set and a walk through with guidance of what is expected of you when analysing the Large Data set. This will be found on Bloodle in a folder called 'Large Data Set – Cars'

- Do 2 pie charts to show
- the proportion of each make of car
- The proportion of each type of propulsion

(This is not to test the skill of drawing pie charts it's because you must be fully familiar with the proportions)

- Do a box plot diagram for each of the 5 emissions (excluding any zero's/Blank) for all the cars, as a whole, as a minimum. It would be useful to repeat this for Petrol, Diesel and Electric/Petrol ie for these 3 propulsion types do 5 box plots diagrams, one for each type of emission.

This is not to test you can draw box plot diagrams it's because you must be able to interpret this and know what is defined as a high and low value

Compare the following:

- Propulsion type Vs average C02, CO, NOX, part, HC
- Year of register Vs average CO2, CO, NOX, part, HC
- Year of register and Propulsion type Vs average C02, CO, NOX, part, HC
- Brand of car Vs average C02, CO, NOX, part, HC
- Propulsion Type Vs Registered region

This is the minimum your teacher will expect to see. This is your chance to do as much analysis as possible, write it up and consider WHY you are noticing certain trends.

Pure Task – To consolidate your knowledge of differentiation in preparation for the end of topic assessment in the first lesson back in year 13

- Using the CGP textbook (The appropriate pages are attached) consolidate your knowledge of Chain Rule, Differentiation of e^x and lnx, differentiating trig functions, the product rule and the quotient rule
- Learn how to differentiate a^x from the textbook on page 317 – this is independent learning
- Learn about Points of Inflection on page 310-312 this is also independent learning
- Mark your work using the answers provided at the back of the document
- Complete the online differentiation assessment by clicking this link
- You will need to bring this revision to your first maths lesson to be checked by your teacher, whilst you are sitting the assessment.