COURSE START: GCSE Maths Post 16

In order to prepare you for your new course starting on 9th September we have put together a small pack for you to work on over the next week.

We have included some short, Functional Maths exercises which are very basic but necessary to move forward. You can print them out or if you use loose paper make sure you label the exercises properly. This is your first assignment, complete it, showing all workings and **bring it along to your second lesson of your first week.**

In addition, you need to ensure you have the correct equipment at the start of the course. You will need the following **every lesson.**

- Paper
- Pen
- Pencil
- Ruler
- Calculator
- Protractor
- Compass

A minimum grade 4 at GCSE Maths is compulsory if you want to further your education to a higher level.

Our maths department has been, over the years, very successful and has given the opportunity to achieve this progression to many students who were committed to the course.

To record this commitment we will ask you to sign your “Maths GCSE Post 16 contract” that you will access by clicking here!

Good Luck. We look forward to seeing you next week.

Course Start

Complete all exercises, if there is something you find difficult, use the links and watch the videos to refresh your memory and try again. You do not have to print this, but if you use loose paper, make sure to label your answers clearly. Seek further help if needed.

1. **Operations**: you must be familiar with the four common operations - addition, subtraction, multiplication and division - but also powers.
   Try these without a calculator, show your workings (use your calculator to check)

   a) $543 + 698 =$
   b) $475 - 219 =$
   c) $24 \times 6 =$
   d) $29 \times 42 =$
   e) $245 \div 7 =$

Help: addition and subtraction - scan this QR code or use https://www.mathsgenie.co.uk/addition-and-subtraction.html	

Help: multiplication and division - scan this QR code or use https://www.mathsgenie.co.uk/multiplication-and-division.html	

2. **Negative numbers:** we will be using the 4 operations with negative numbers

   a) $3 - 7 =$
   b) $-9 + 4 =$
   c) $4 \times -3 =$
   d) $-6 - -2 =$
   e) $-24 \div -6 =$
   f) $3(2+4) =$
   g) $14-(3\times 4) =$

Help: Negative numbers - scan this QR code or use https://www.mathsgenie.co.uk/negativenumbers.html	

3. Rounding

We will be rounding numbers using different techniques

Write 6.47 correct to 1 decimal place.

Write 7518 to the nearest hundred.

Write 3.84761 correct to 3 decimal places.

Write 193.28 correct to one significant figure.

Write 90437 correct to two significant figures.

Help: Rounding - scan this QR code or use https://www.mathsgenie.co.uk/rounding.html	

4. Fractions

We will be doing more interesting work on fractions so let's make sure that the basics are right. Writing, Simplifying and Ordering Fractions:

Write $\frac{12}{60}$ as a fraction in its simplest form.

Write $\frac{28}{35}$ as a fraction in its simplest form.

Here is a list of fractions.

$$\frac{15}{20} \quad \frac{33}{44} \quad \frac{12}{16} \quad \frac{26}{32} \quad \frac{21}{28}$$

One of these fractions is not equivalent to $\frac{3}{4}$

Write down this fraction.

Write the following fractions in order of size.
Start with the smallest fraction.

$\frac{11}{20}$ $\frac{5}{8}$ $\frac{3}{4}$ $\frac{3}{5}$ $\frac{7}{10}$

Here are two fractions.

$\frac{7}{6}$ $\frac{6}{7}$

Work out which of the fractions is closer to 1
You must show your working.

Help: Fractions - scan this QR code or use https://www.mathsgenie.co.uk/writing-fractions.html	

5. Factors and Multiples

Write down a multiple of 7 that is between 20 and 30

Write down the first even multiple of 9

Write down all the factors of 20

Here is a list of numbers.

2 9 11 15 18 31 32

From the numbers on the list,

(a) write down a factor of 8
(b) write down a multiple of 6
(c) write down all of the prime numbers on the list.

Help: Factors and multiples - scan this QR code or use https://www.mathsgenie.co.uk/factors-multiples-and-primes.html	