Year 11 GCSE Revision - Maths Foundation		
Week beginning	**Topics for revision**	**Re-visit work**
4th March	Ratio	☐ Write a ratio in its simplest form ☐ Divide a quantity in a given ratio ☐ Solve problems using ratios
11th March	BIDMAS and Calculator Use	☐ Understand multiplying and dividing, and that one is the inverse of the other ☐ Use inverse operations ☐ Understand the use of brackets in calculations ☐ Understand the hierarchy of operations (BIDMAS) ☐ Solve word problems ☐ Understand and find reciprocals ☐ Understand and use 1 over a number is the inverse of multiplying by that number ☐ Simple and complex calculations, including involving time or money ☐ Use the following functions ☐ +, -, x, ÷ ☐ x^2 and $\sqrt{x}$ ☐ x^3 and $\sqrt[3]{x}$ ☐ memory functions ☐ brackets ☐ Understand that rounding too early can causes inaccuracy
18th March	Algebra, Simplifying	☐ Simplify by collecting like terms ☐ Multiply out a single bracket ☐ Factorise a single bracket by taking out a common factor ☐ Write expressions involving squares or cubes ☐ Use algebraic expressions to solve problems
25th March	Linear Equations and Formula	☐ Set up simple equations for a problem ☐ Rearrange simple equations ☐ Solve simple equations ☐ Solve equations with the unknown on either side ☐ Solve equations with the unknown on both sides ☐ Solve equations that include brackets ☐ Solve equations with negatives, including negative answers ☐ Solve equations involving fractions · Derive formulae · Substitute numbers (positive or negative) into a formula, including formulae with x^2 or x^3 terms

		▪ Change the subject of a simple formula
1st April	Inequalities Measures	☐ Use inequality signs correctly (<,>,≤,≥) ☐ Solve a simple linear inequality with one variable ☐ Show the solution to a linear inequality on a number line ▪ Know conversion factors between different metric units ▪ Convert between metric units ▪ Convert between imperial units (conversion factors will be given in questions) ▪ Know imperial/metric equivalents as follows ▪ 1 kg = 2.2 pounds ▪ 1 litre = 1¾ pints ▪ 4.5 litres = 1 gallon ▪ 8 km = 5 miles ▪ 30 cm = 1 foot ▪ Convert between imperial and metric measures using the above conversion factors ▪ Convert between metric measurements of area ▪ Convert between metric measurements of volume ▪ Convert between different metric units of speed, eg. metres per second and km per hour ▪ Convert between metric units of volume and metric units of capacity, eg. 1 cm^3 = 1 ml
8th April **Easter**	Sequences	☐ Understand odd and even numbers ☐ Generate number sequences from diagrams ☐ Describe the rule for a number sequence (eg. subtract 3) ☐ Find a particular term in a sequence, or explain why a particular number is not in a sequence ☐ Find the nth term expression for a sequence ☐ Use the nth term expression to find a particular number in the sequence (eg. the 20th term)
15th April **Easter**	Co-ordinates and Graphs	☐ Use axes and coordinates, both positive and negative ☐ Understand and plot points in four quadrants ☐ Find the coordinates of a point ☐ Plot a point given the coordinates ☐ Find the coordinates of the mid-point of a line ☐ Calculate the length of a line using coordinates ☐ Draw, label and add a scale to axes ☐ Understand that an equation of the form y = mx + c corresponds to a straight-line graph

		☐ Plot straight line graphs from their equations ☐ Plot and draw a graph of an equation in the form ☐ y = mx + c ☐ Find the gradient of a straight line graph
22nd April	Angles	☐ Understand acute, obtuse, reflex and right angles ☐ Angles round a point add up to 360° ☐ Angles on a straight line add up to 180° ☐ Know the properties of scalene, isosceles, equilateral and right-angled triangles ☐ Angles in a triangle add up to 180° ☐ Vertically opposite angles are equal ☐ Be able to mark parallel lines on a diagram ☐ Be able to identify perpendicular lines on a diagram ☐ Be able to use letters to name lines, eg. XY or AB ☐ Be able to use letters to name angles, eg. angle ACD ☐ Corresponding angles (in parallel lines) ☐ Alternate angles (in parallel lines) ☐ Calculate angles and give reasons ☐ Use the angles a quadrilateral add up to 360° to find missing angles ☐ Use the angles in a triangle add up to 180° to find missing angles ☐ Understand that the exterior angle of a triangle of a triangle is equal to the sum of the interior angles at the other two vertices
29th April	Polygons	☐ Calculate the sum of interior angles in a polygon ☐ Understand the polygon names; pentagon, hexagon, heptagon, octagon and decagon ☐ Use the angle sum of an irregular polygon in a problem ☐ Calculate and use the sum of the interior angles of a regular polygon ☐ Understand and use fact that the exterior angles of a polygon add up to 360° ☐ Understand and use the fact that an interior and exterior angle at one vertex of a polygon add up to 180° ☐ Be able to calculate the exterior angle of a regular polygon ☐ Be able to calculate the interior angle of a regular polygon ☐ Be able to deduce the number of sides of a regular polygon, given one of its angles ☐ Understand tessellations of regular and irregular polygons ☐ Tessellate combinations of polygons ☐ Explain why some shapes tessellate and some do not
6th May	Congruence and Similarity	☐ Understand what congruent means ☐ Identify shapes that are congruent

	Perimeter and Area with Circles	☐ Understand what similar means ☐ Understand that two shapes that are similar have the same angles ☐ Measure shapes to find perimeter or area ☐ Find the perimeter of a rectangle or triangle ☐ Use a formula to find the area of a rectangle ☐ Use a formula to find the area of a triangle ☐ Use a formula to find the area of a parallelogram ☐ Use a formula to find the area of a trapezium ☐ Calculate the perimeter and area of compound shapes made from triangles, rectangles and other shapes ☐ Find the surface area of shapes such as prisms or pyramids by using the formulae for triangles, rectangles and other shapes ☐ Find circumference of a circle using $C = \pi d$ or $C = 2\pi r$ ☐ Find the area of a circle using $A = \pi r^2$ ☐ Use $\pi = 3.142$ or the π button on a calculator ☐ Find the perimeter and area of semcircles and quarter circles ☐ Find the surface area of a cylinder
13th May	Pythagoras and Loci	▪ Understand and use Pythagoras' theorem in triangles ▪ Construct a given triangle ▪ Construct an equilateral triangle ▪ Understand that SSS, SAS, ASA and RHS triangles are unique but ASS ones are not ▪ Construct a perpendicular bisector of a line ▪ Construct a perpendicular from a point to a line ▪ Construct a perpendicular from a point on a line ▪ Bisect an angle ▪ Construct angles of 60°, 90°, 30° and 45° ▪ Construct parallel lines ▪ Draw circles and arcs of a given radius ▪ Construct a regular hexagon inside a circle ▪ Construct diagrams involving any of the above ▪ Construct diagrams from given information
20th May	Transformations	☐ Rotations ☐ Rotate a 2D shape around the origin or other point ☐ Understand that a rotation is defined by an angle, direction and a centre of rotation ☐ Find the centre of rotation ☐ Understand that a rotation produces a shape congruent to the original ☐ Reflections ☐ Understand and describe reflections

		☐ Identify the mirror line for a reflection, and find its equation ☐ Understand that a reflection produces a shape congruent to the original ☐ Translations ☐ Understand and use translations ☐ Understand that translations are defined by a distance and a direction using a vector ☐ Translate a shape by a given vector ☐ Understand that a translation produces a shape congruent to the original ☐ Enlargements ☐ Understand that an enlargement is defined by a centre of enlargement and a scale factor ☐ Understand that angles remain the same in an enlargement ☐ Enlarge a shape by a scale factor, using (0, 0) or any other point as the centre ☐ Find the centre of a given enlargement ☐ Identify the scale factor of a given enlargement ☐ General transformations ☐ Describe a transformation ☐

Suggested activities:

- Look through your exercise books to find any information on the topic.
- Make revision notes/mind map/prompt cards on all you know about the topic.
- Find any information you have about the topic from your revision guide, maths watch CD or mymaths website and any other resources your teacher has guided you to.
- Do some practice questions from revision guide, maths watch CD or mymaths website.
- Look back through mock papers or other exam papers you have. Find any questions you have done on the topic. Did you get them correct? If not try to correct them. Do you understand the method you used?

Exam Dates

Tuesday 21st May Paper 1 Non Calculator
Thursday 6th June Paper 2 Calculator
Tuesday 11th June Paper 3 Calculator