Year 11 Revision Schedule 2023_24

Subject/Course:	GCSE Maths Foundation (Edexcel)
Student Name:	GCSE Year 11 students

		Topic	Key knowledge/skills/questions	Resources/activities/links
Week 1	**Monday 15 January 2024**	1.1 Simple interest 1.2 Percentage increases and decreases 1.3 Calculating the original value 1.4 Using percentages 25.1 Powers (Indices) 25.2 Rules for multiplying and dividing powers 2.1 Multiplying out brackets 8.3 Expand and simplify 15.1 Solving linear equations involving brackets and unknowns on both sides. 2.3 Equations with brackets 2.4 Equations with fractions 3.1 Polygons 3.2 Angles in polygons 3.3 Angles in regular polygons 3.4 Regular polygons and tessellations	• To know what is meant by simple interest • To solve problems involving simple interest • To calculate the result of a percentage increase or decrease • To choose the most appropriate method to calculate percentage change • To calculate the original value, given a percentage change • To make links between fractions, decimals and percentages • To choose the correct calculation to work out a percentage • To use powers (also known as indices) • To multiply and divide by powers of 10 • To use rules for multiplying and dividing powers	Class notes and exam questions provided Past papers (all exam boards online) Tuesday after-school Maths Support 15.00 - 16.00 Websites: SPARX Maths Maths Genie Corbett Maths – 5 a day OnMaths Pixi Maths 1st Class Maths Boss Maths Access Maths BBC Bitesize

Week 2	**Monday 22 January 2024**		• To multiply out brackets • To expand expressions with two brackets and simplify them • To solve equations with one or more sets of brackets • To solve equations with fractions • To know the names of polygons • To know the difference between an irregular and a regular polygon • To work out the sizes of the interior angles of regular polygons • To work out the exterior and interior angles of a regular polygon • To work out which regular polygons tessellate	
Week 3	**Monday 29 January 2024**	3.1 Frequency tables 3.2 Statistical diagrams 4.2 Interpreting graphs and diagrams 4.3 Two-way tables 3.3 Line graphs 4.4 Comparing two or more sets of data 5.1 The formula for the circumference of a circle 5.2 The formula for the area of a circle 6.1 Pythagoras' theorem	• To use tally charts and frequency tables to collect and represent data • To use grouped frequency tables to collect and represent data • To draw pictograms to represent statistical data • To draw bar charts and vertical line charts to represent statistical data • To use and interpret a variety of graphs and diagrams • To interpret a variety of two-way tables • To draw a line graph to show trends in data • To compare two sets of data from statistical diagrams • To calculate the circumference of a circle • To calculate the area of a circle • To solve problems involving the circumference and area of a circle • To understand Pythagoras' theorem • To calculate the length of the hypotenuse in a right-angled triangle • To calculate the length of a shorter side in a right-angled triangle • To show that a triangle is right-angled	As above

Week 4	**Monday 5 February**	3.4 Statistical averages 8.1 Expanding brackets 2.2 Factorising algebraic expressions 8.2 Factorising expressions containing powers 2.5 Rearranging formulae 1.1 Place value and ordering numbers 1.2 Order of operations and BIDMAS 9.1 Multiplication of decimals 9.4 Dividing decimals 9.4 Mental calculations	• To work out the mode, median, mean and range of small sets of data • To decide which is the best average to use to represent a data set • To multiply out brackets with a variable or constant outside them • To factorise expressions • To take out a variable as a factor • To change the subject of a formula • To use a number line to represent negative numbers • To use inequalities with negative numbers • To compare and order positive and negative numbers. • To work out the answers to problems with more than one mathematical operation • To use the four rules of arithmetic with integers and decimals. • To multiply decimal numbers • To divide with decimals • To learn and understand some routines that can be used when calculating mentally • To solve real-life problems involving multiplication or division	As above
Week 5	**Half Term Monday 12 February**	7.1 Adding and subtracting fractions 7.2 Multiplying fractions 7.3 Multiplying mixed numbers 7.4 Dividing fractions and mixed numbers 11.1 Area of Rectangles, Triangles, Parallelogram, Trapezium 11.2 Area of Compound shapes 10.1 Volume and Surface areas of cubes and cuboids 10.1 Metric units for area and volume 10.2 Volume of a prism 10.3 Surface area of a prism 10.4 Volume of a cylinder 10.5 Surface area of a cylinder 21.1 Patterns in number	• To add or subtract any two fractions • To multiply two fractions • To multiply one mixed number by another • To divide one fraction or mixed number by another • To calculate the perimeter and area of a rectangle • To calculate the perimeter and area of a compound shape made from rectangles • To work out the surface areas of cubes or cuboids • To convert from one metric unit to another • To calculate the volume of a prism • To calculate the surface area of a prism • To calculate the volume of a cylinder	As above

		21.2 Number sequences 21.3 Finding the nth term of a linear sequence 21.4 Special sequences 2.5 General rules from given patterns	• To calculate the curved surface area of a cylinder • To calculate the total surface area of a cylinder • To recognise patterns in number sequences • To recognise how number sequences are built up • To generate sequences, given the nth term • To find the nth term of a linear sequence • To recognise and continue some special number sequences • To understand how prime, odd and even numbers interact in addition, subtraction and multiplication problems • To find the nth term from practical problems involving sequences	
Week 6	**Monday 19 February**	11.1 Graphs from equations in the form y = mx + c 11.2 Problems involving straight-line graphs 11.1 Graphs from equations in the form ay ± bx = c 12.1 Distance 12.2 Speed 12.3 Time 12.2 Compound Measures 12.3 Unit costs 13.1 Similar triangles	• To draw a linear graph from any linear equation • To solve a linear equation from a graph • To draw graphs to solve some problems • To draw any linear graph from any linear equation • To solve a linear equation from a graph • To work out the distance travelled in a certain time at a given speed • To use and interpret distance-time graphs • To work out the speed of an object, given the distance travelled and the time taken • To work out the time an object will take on its journey, given its speed and the distance travelled • To understand and use density and other compound measures • To understand and use unit pricing • To understand what similar triangles are • To use and recall facts about similar triangles • To know that triangles can be used to solve some real-life problems	As above

Week 7	**Monday 26 February**	13.1 Trigonometric ratios 13.3 Using trigonometric ratios to find angles 13.4 Using trigonometric ratios to find lengths 4.1 Scatter graphs and correlation 9.2 Powers of ten 9.2 Standard form 9.3 Rounding	• To understand what trigonometric ratios are • To understand what the trigonometric ratios sine, cosine and tangent are • To find the angle identified from a trigonometric ratio • To find an unknown length of a right-angled triangle, give one side and another angle • To infer a correlation from two related variables • To understand and work with both positive and negative powers of ten • To understand and work with standard form, using both positive and negative powers of ten • To round numbers to a suitable or appropriate degree of accuracy	As above
Week 8	**Monday 4 March**	4.1 Angle facts - Line, point, opposite 4.3 Angles in a polygon 4.5 Angles in parallel lines 4.6 Special quadrilaterals 4.7 Bearings 6.1 Rounding whole numbers 6.2 Rounding decimals 6.3 Approximating calculations 5.1 Multiples and factors of whole numbers 5.3 Prime, square and rooted numbers 5.4 Prime factors, LCM and HCF 2.1 Systems of measurement 2.3 Scale drawings 14.1 3D shapes 2.4 Nets	• To calculate angles on a straight line • Interior and exterior angles in a polygon • To calculate angles in parallel lines • To use angle properties in quadrilaterals • To use a bearing to specify a direction • round a whole number. • round decimal numbers to a given accuracy. • identify significant figures • round numbers to a given number of significant figures • use approximation to estimate answers and check calculations • round a calculation at the end of a problem, to give what is considered to be a sensible answer. • To identify prime factors • To identify the lowest common multiple (LCM) of two numbers • To identify the highest common factor (HCF) of two numbers	As above

			• To convert from one metric unit to another • To read and draw scale drawings • To use a scale drawing to make estimates • To use the correct terms when working with 3D shapes • To draw nets of some 3D shapes • To identify a 3D shape from its net	
Week 9	**Monday 11 March**	5.1 Step graphs 4.2 Time-series graphs 5.3 Exponential growth graphs 7.4 Four operations with fractions 7.2 Fractions and reciprocals 7.3 Writing one quantity as a fraction of another 8.2 Drawing linear graphs by finding points 8.3 Gradient of a line 8.4 $y = mx + c$ 8.5 Finding the equation of a line from its graph 8.6 The equation of a parallel line	• To interpret step graphs • To use and interpret a variety of time-series graphs • To interpret and draw exponential growth graphs • To add and subtract fractions with different denominators • To recognise different types of fraction, reciprocal, terminating decimal and recurring decimal • To convert terminating decimals to fractions • To convert fractions to decimals • To find reciprocals of numbers or fractions • To work out a fraction of a quantity • To find one quantity as a fraction of another • To draw linear graphs without using flow diagrams • To work out the gradient of a straight line • To draw a line with a certain gradient • To draw graphs using the gradient-intercept method • To draw graphs using the cover-up method • To work out the equation of a line, using its gradient and y-intercept • To work out the equation of a line given two points on the line	As above

			• To work out the equation of a linear graph that is parallel to another line and passes through a specific point	
Week 10	**Monday 18 March**	11.2 Graphs from quadratic equations 27.6 Cubic and reciprocal graphs 11.3 Solving quadratic equations by drawing graphs 11.4 Problems involving quadratic graphs 11.4 Solving simultaneous equations by graphs 27.5 The significant points of a quadratic curve 8.7 Real-life uses of graphs 9.5 Quadratic expansion 9.6 Quadratic factorisation 27.4 Solving quadratic equations by factorisation	• To draw graphs from quadratic equations • To recognise and plot cubic and reciprocal graphs • To solve a quadratic equation by drawing a graph • To solve problems that use quadratic graphs • To solve a pair of simultaneous equations graphically • To identify the significant points of a quadratic function graphically • To convert from one unit to another unit by using a conversion graph • To use straight-line graphs to work out formulae • To expand two linear brackets to obtain a quadratic expression • To factorise a quadratic expression of the form x2 + ax + b into two linear brackets • To solve a quadratic equation by factorisation • To identify the roots of a quadratic function by solving a quadratic equation • To identify the turning point of a quadratic function	As above
Week 11	**Monday 25 March**	10.1 Ratio 10.3 Direct proportion problems 10.4 Best buys 9.7 Changing the subject of a formula	• To simplify a ratio • To express a ratio as a fraction • To divide amounts into given ratios • To complete calculations from a given ratio and partial information • To recognise and solve problems that involve direct proportion • To find the cost per unit mass • To find the mass per unit cost	As above

			• To use the above to find which product is better value. • To change the subject of a formula	
Week 12	**Easter Monday 1 April**	23.1 Congruent triangles 23.2 Similarity 12.1 Rotational symmetry 12.2 Translation 12.3 Reflections 12.4 Rotations 12.5 Enlargements 12.6 Using more than one transformation 12.7 Vectors	• To demonstrate that two triangles are congruent • To recognise similarity in any two shapes • To show that two shapes are similar • To work out the scale factor between similar shapes • To work out the order of rotational symmetry for a 2D shape • To recognise shapes with rotational symmetry • To translate a 2D shape • To reflect a 2D shape in a mirror line • To rotate a 2D shape about a point • To enlarge a 2D shape by a scale factor • To use more than one transformation • To represent vectors • To add and subtract vectors	As above
Week 13	**Easter Monday 8 April**	13.1 Calculating probabilities 13.2 Probability that an outcome will not happen 13.3 Mutually exclusive and exhaustive outcomes 13.4 Experimental probability 13.5 Expectation 13.6 Choices and outcomes 24.1 Combined events 24.2 Two-way tables 24.3 Probability and Venn diagrams 24.2 Tree diagrams	• To use the probability scale and the language of probability • To calculate the probability of an outcome of an event • To calculate the probability of an outcome not happening when you know the probability of that outcome happening • To recognise mutually exclusive and exhaustive outcomes • To calculate experimental probabilities and relative frequencies from experiments • To recognise different methods for estimating probabilities. • To predict the likely number of successful outcomes, given the number of trials and the probability of any one outcome.	As above

			• To apply systematic listing and counting strategies to identify all outcomes for a variety of problems • To work out the probabilities when two or more events occur at the same time • To read two-way tables and use them to work out probabilities • To use Venn diagrams to solve probability questions • To understand frequency tree diagrams and probability tree diagrams • To use probability tree diagrams to work out the probabilities involved in combined events	
Week 14	**Monday 15 April**	17.1 Compound interest and repeated percentage change 17.2 Reverse percentage (working out the original value) 17.3 Direct proportion 17.4 Inverse proportion 18.1 Sampling 18.2 Pie charts 18.3 Scatter diagrams 18.4 Grouped data and averages	• To calculate simple interest • To calculate compound interest • To solve problems involving repeated percentage change • To calculate the original amount, given the final amount, after a known percentage increase or decrease • To solve problems in which two variables have a directly proportional relationship (direct variation) • To work out the constant of proportionality • To recognise graphs that show direct variation • To solve problems in which two variables have an inversely proportional relationship (inverse variation) • To work out the constant of proportionality • To obtain a random sample from a population • To collect unbiased and reliable data for a sample • To draw and interpret pie charts • To draw, interpret and use scatter diagrams	As above

			• To draw and use a line of best fit • To identify the modal group • To calculate an estimate of the mean from a grouped table	
Week 15	**Monday 22 April**	19.1 Constructing triangles 19.2 Bisectors 19.3 Defining a locus 19.4 Loci problems 20.1 Sectors 20.2 Pyramids 20.3 Cones 20.4 Spheres	• To construct accurate drawings of triangles, using a pair of compasses, a protractor and a straight edge • To construct the bisectors of lines and angles • To construct angles of 60° and 90° • To draw a locus for a given rule • To solve practical problems using loci • To calculate the length of an arc • To calculate the area and angle of a sector • To calculate the volume and surface area of a pyramid • To calculate the volume and surface area of a cone • To calculate the volume and surface area of a sphere	As above
Week 16	**Monday 29 April**	26.1 Elimination method for simultaneous equations 26.2 Substitution method for simultaneous equations 26.3 Balancing coefficients to solve simultaneous equations 26.4 Using simultaneous equations to solve problems 26.5 Linear inequalities	• To solve simultaneous linear equations in two variables using the elimination method • To solve simultaneous linear equations in two variables using the substitution method • To solve simultaneous linear equations by balancing coefficients • To solve problems using simultaneous linear equations • To solve a simple linear inequality and represent it on a number line	As above
Week 17	**Monday 6 May**	Exam Practice		As above

Week 18	**Monday 13 May**	Exam Practice		As above
Week 19	**Monday 20 May**	Exam Practice		As above
Week 20	**Half Term Monday 27 May**	Exam Practice		As above
Week 21	**Monday 3 June**	Exam Practice		As above
Week 22	**Monday 10 June**	Exam Practice		As above