

Foundation GCSE Revision Lists

Number and Ratio

Round to nearest power of 10 and decimal places	
Order decimals, fractions and percentages	
Find a fraction of an amount	
Find a percentage of an amount	
Understand factors, multiples and prime numbers	
Order negative numbers	
Understand equivalent fractions	
Write improper fractions as mixed numbers and vice versa	
Express one quantity as a fraction or percentage of another.	
Solve percentage problems involving increase and decrease including using a multiplier.	
Round to any number of significant figures	
Estimate calculations	
Use 4 operations with decimals	
Understand and use recurring decimals	
Find upper and lower bounds for calculations	
Use 4 operations with negative numbers	
Use BODMAS	
Write ratios in their simplest form	
Solve problems using ratio	
Find squares, cube roots and reciprocals	
Find LCM, HCF and the product of prime factors	
Use a calculator efficiently	
Use the 4 operations with fractions including mixed numbers	
Use standard form	
Solve problems involving percentage change and reverse percentages	
Use direct and inverse proportion graphically and algebraically	
Solve problems involving compound interest	
Calculate compound measures including pressure in numerical and algebraic contexts	
Express a multiplicative relationship between two quantities as a ratio or a fraction	
Write a ratio as a linear function	
Set up, solve and interpret growth and decay problems	

Shape and Measures

Draw and measure angles	
Recall types of angle	
Use rules for angles on straight line, full turn, vertically opposite and angles in a triangle	
Find the perimeter of simple shapes	
Use and recognise line and rotational symmetry	
Construct and interpret maps and scales	
Understand and use bearings	
Understand and use the angle properties of parallel and intersecting lines	
Calculate and use the sums of interior and exterior angles of regular and irregular polygons	
Recall properties of quadrilaterals	
Use isometric paper	
Find volumes of cubes, cuboids and composites 3D shapes	
Construct, triangles polygons and nets using ruler, pencil and compasses	
Recall and use formulae for area of rectangles, parallelograms, triangles and trapezium including compound shapes made from these.	
Use distance time graphs and use the formulae connecting distance, time and speed	
Use compound formulae involving density, population and rate of flow	
Use Pythagoras theorem	
Use the area and circumference of a circle rules	
Calculate exactly with multiples of π	
Use standard Loci and constructions to solve problems	
Find the volume and surface area of prisms	
Enlarge shapes using positive and fractional scale factors	
Transformations-translations, rotations and reflections	
Recognise and draw plans and elevations	
Convert between measures of area and volume e.g. mm^2 to cm^2	
Find corresponding lengths in similar shapes	
Use the congruence criteria for triangles (SSS, SAS, ASA, RHS)	
Find the areas and perimeters of compound shapes involving circles, and calculate arc lengths and areas of sectors	
Use the sin, cos and tan trigonometric ratios for right-angled triangles	
Use the standard convention for labelling sides and angles of polygons	
Derive the sum of angles in a triangle	
Know the exact values of sin, cos and tan at key angles (0, 30, 45, 60, 90 degrees)	

Data

Use a probability scale	
Listing outcomes of successive events and derive related probabilities	
Know that the sum of the probabilities of all these outcomes is one.	
Use equally likely outcomes for simple probability	
Use and interpret mode, median, mean and range for discrete and continuous data	
Calculate the mean from a grouped table	
Draw and interpret bar charts	
Draw and interpret pictograms	
Construct and interpret pie charts	
Draw and interpret scatter graphs and understand correlation	
Design and use two way tables	
Solve problems involving relative frequency	
Draw and use frequency trees	
Use tree diagrams to solve probability questions	
Infer properties of a population from a sample, while knowing the limitations of sampling	
Use Venn diagrams	
Know that correlation does not imply causation	
Consider outliers when calculating the range of a distribution	

Algebra

Use coordinates in 4 quadrants	
Use simple graphs such as conversion graphs	
Derive simple formulae	
Continue and describe simple sequences	
Change the subject of simple formulae	
Form and solve equations	
Use formulae in context and substitute in positive and negative numbers	
Manipulate algebraic expressions by collecting like terms.	
Multiply a single term over a bracket	
Factorise using common factors	
Solve equations with brackets or an unknown on both sides	
Plot linear graphs given the equation	
Understand and use $y=mx+c$ where m =gradient and c is y intercept	
Solve equations with fractions	
Draw and use quadratic graphs	
Interpret real life graphs	
Find and use the n th term if linear sequences	
Use index laws with algebraic expressions and numbers	
Solve inequalities and represent solution on a number line	
Use inequality notation to specify error intervals due to rounding	
Understand the \neq symbol (not equal)	
Expand double brackets	
Factorise quadratics including the difference of two squares	
Solve quadratic equations by factorising	
Know the difference between an equation and identity	
Use $y = mx + c$ to identify parallel lines	
Sketch quadratic, cubic and reciprocal functions	
Derive simultaneous equations from real-life situations	
Solve linear simultaneous equations algebraically and graphically	
Find the equation of a line through two points or through one point with given gradient	
Recognise and use sequences of triangular, square and cube numbers, Fibonacci type sequences, quadratic sequences and geometric sequences	