

TYPES OF NUMBER	P1	P2	P3
Learning Objective			
Understand place value in large numbers			
Add and subtract large numbers (up to 3 digits)			
Multiply and divide large numbers (up to 3 by 2)			
Understand positive and negative integers			
Find the factors of a number			
Multiply and divide whole numbers by 10,100,1000 ...			
Multiply large numbers			
Add and subtract negative numbers			
Use inverse operations to check answers			
BIDMAS			
Add and subtract positive and negative numbers.			
Multiply and divide positive and negative numbers			
Recognise prime numbers			
Find the LCM of two numbers			
Find the HCF of two numbers			
Write a number as a product of prime factors			
SEQUENCES			
Learning Objective			
Continue a sequence of diagrams or numbers			
Write the terms of a simple sequence			
Find a term in a sequence with positive numbers			
Write the term-to-term rule in a sequence with positive numbers			
Find a term in a sequence with negative or fractional numbers			
Write the term-to-term rule in a sequence with negative or fractional numbers			
Write the terms of a sequence or a series of diagrams given the nth term			
Write the nth term of a linear sequence or a series of diagrams			
FRACTIONS			
Learning Objective			
Find the fraction of a shape shaded			
Put simple fractions in order			
Express simple decimals and percentages as fractions			
Calculate fractions of quantities			
Simplify fractions			
Arrange fractions in order			
Express fractions as decimals and percentages			
Add and subtract fractions			
Find one quantity as a fraction of another			
Solve problems involving fractions			
Add and subtract mixed numbers			
Multiply and divide mixed numbers			
DECIMALS			
Learning Objective			
Round to the nearest integer			
Write down the place value of a decimal digit			
Order decimals to find the biggest and the smallest			
Round numbers to given powers of 10 and up to 3 decimal places			
Round a number to 1 significant figure			
Add and subtract decimals			
Estimate answers to calculations involving decimals			
Multiply decimals			
Convert simple fractions to decimals and decimals to fractions			

Divide a number by a decimal			
Recognise that recurring decimals are exact fractions and that some exact fractions are recurring decimals			
WORKING WITH SYMBOLS			
Learning Objective			
Simplify an expression			
Work out the value of an expression using substitution			
Simplify a harder expression			
Work out the value of an expression using negative numbers			
Expand simple brackets			
Factorise a simple expression			
Expand and simplify an expression			
COORDINATES			
Learning Objective			
Use coordinates in the first quadrant			
Use coordinates in all four quadrants			
Draw lines such as $X=3$ and $Y=X$			
Find the coordinates of the midpoint of a line or segment			
EQUATIONS AND INEQUALITIES			
Learning Objective			
Solve a simple linear equation			
Solve an equation involving fractions			
Solve more complicated equations			
Represent and interpret inequalities on a number line			
Solve a harder equation			
Solve an inequality			
Find the integer solutions of an inequality			
PERCENTAGES			
Learning Objective			
Understand that % means parts of 100			
Change a % to a fraction or decimal			
Compare fractions, decimals and %			
Work out a percentage of a given quantity			
Increase or decrease by a given %			
Express one quantity as a % of another			
Work out a % increase or decrease			
GRAPHS OF LINEAR FUNCTIONS			
Learning Objective			
Produce a table of values for a linear equation and draw the graph			
Solve problems such as where two linear lines cross			
Find the gradient of straight line graphs			
FORMULAE			
Learning Objective			
Use a formula in words			
Substitute positive numbers into a simple formula			
Derive simple expressions			
Use simple letter formulae			
Substitute negative numbers in to simple formulae			
Derive expressions and formulae			
Substitute into more complicated formulae			
Derive more complex expressions and formulae			
Distinguish between an expression, equation and formula			
Rearrange linear formulae			
RATIO AND PROPORTION			

Learning Objective			
Use ratio notation including reducing to simplest form			
Divide a quantity in a given ratio			
Solve simple ratio and proportion problems			
Solve more complex ratio and proportion problems			
Solve R&P problems using unitary method			
REAL LIFE GRAPHS			
Learning Objective			
Plot points on conversion graphs			
Read values from conversion graphs			
Read a negative value from a conversion graph			
Interpret horizontal lines on a distance/time graph			
Carry out simple interpretation of graphs			
More advanced interpretation of graphs			
Construct linear functions from real-life situations and plot them			
Find the average speed from a distance/time graph in minutes			
COLLECTING DATA			
Learning Objective			
Design and use tally charts for discrete and grouped data			
Understand and name different types of data			
Design and use data collection sheets, surveys and questionnaires			
Design and use two way tables for discrete and grouped data			
Understand and name other types of data collection methods			
Identify possible sources of bias			
Understand the data handling cycle			
Understand that increasing sample size generally leads to better estimates			
STATISTICAL MEASURES			
Learning Objective			
Find the mode for a set of numbers			
Find the median for an odd set of numbers			
Work out the range			
Calculate the mean			
Find the median for an even set of numbers			
Calculate the 'fx' column for a frequency distribution			
Compare the mean and range of two distributions			
Calculate the mean for a frequency distribution			
Find the modal class for grouped data			
Find the mean for grouped data			
Find the median class for grouped data			
REPRESENTING DATA			
Learning Objective			
Construct and interpret a pictogram			
Construct and interpret a bar chart			
Construct and interpret a dual bar chart			
Interpret a pie chart			
Construct a pie chart			
Interpret a stem and leaf diagram			
Construct an ordered stem and leaf diagram			
Construct a histogram for data with equal class intervals			
Interpret a line graph			
Construct a frequency polygon			
SCATTER GRAPHS			
Learning Objective			
Draw a scatter graph by plotting points			

Interpret the scatter graph			
Draw a line of best fit on the scatter graph			
Interpret the line of best fit			
Identify the type and strength of the correlation			
PROBABILITY			
Learning Objective			
Understand and use the vocabulary of probability			
Understand and use a probability scale			
Express a probability as a fraction			
Display outcomes systematically			
Experimental vs theoretical probability			
Use a two way table to find a probability			
Understand mutually exclusive events			
Identify all mutually exclusive events and show equal to 1			
Use probability to estimate outcomes for a population			
Understand and use relative frequency			
ANGLES			
Learning Objective			
Recognise acute, obtuse and right angles			
Understand perpendicular and parallel			
Identify scalene, isosceles, equilateral and right angle triangles			
Recognise reflex angles			
Estimate angles and measure them accurately			
Use properties of angles at a point and on a straight line			
Use angle properties of triangles including sum to 180			
Show that the exterior angle of a triangle is equal to the sum of the interior oppo angles			
Recognise corresponding, alternate and interior angles in parallel lines			
Understand and use three figure bearings			
PERIMETER AND AREA			
Learning Objective			
Find the perimeter of a shape by counting squares			
Find the area of a shape by counting squares			
Estimate the area of an irregular shape by counting squares and parts			
Name the parts of a circle			
Work out the perimeter and area of a simple rectangle			
Work out the perimeter and area of a harder rectangle			
Find the area of a triangle and parallelogram			
Find the area and perimeter of compound shapes			
Calculate the circumference and area of a circle			
Work out the perimeter and area of a semi circle			
PROPERTIES OF POLYGONS			
Learning Objective			
Recognise and name shapes			
Calculate interior and exterior angles of quadrilaterals			
Classify a quadrilateral using geometric properties			
Calculate exterior and interior angles of a regular polygon			
REFLECTION, ROTATION AND TRANSLATION			
Learning Objective			
Draw a line of symmetry on a 2D shape			
Draw the reflection of a shape in a mirror line			
Draw all the lines of symmetry on a 2D shape			
Give the order of rotational symmetry of a 2D shape			
Name, draw or complete 2D shapes from information about symmetry			

Reflect shapes in the axes of a graph			
Reflect shapes in lines parallel to the axes			
Rotate shapes about the origin			
Describe fully reflections in a line and rotations about the origin			
Translate a shape using a description (up, down, left, right)			
Reflect shapes in lines $x=y$, $x=-y$			
Rotate shapes about any point			
Describe fully any reflections in lines parallel to axes and rotations about any point			
Find the centre of a rotation and describe it fully			
Translate a shape by a vector			
AREA AND VOLUME			
Learning Objective			
Find the volume of a shape by counting cubes			
Find the volume of a cuboid			
Convert between square units			
Convert between cube units			
Find the volume of prisms including cylinders			
Find the surface area of prisms			
MEASURES			
Learning Objective			
Decide on the most appropriate unit of measurement			
Convert between metric units			
Measure the length of a line			
Convert between metric and imperial			
Measure and scale a line			
Make sensible estimates of lengths			
Convert between metric and imperial units e.g. speed			
Calculate average speeds			
Use compound measures			
Recognise that rounding can cause units to be out up to 0.5 units			
TRIAL AND IMPROVEMENT			
Learning Objective			
Solve equations using systematic trial and improvement			
ENLARGEMENTS			
Learning Objective			
State the scale factor of an enlargement			
Enlarge a shape by a positive scale			
Find the measurements of an enlarged shape			
Enlarge a shape by a positive amount from a given centre			
Find the ratio of corresponding sides in similar shapes, scale factor			
Using ratios in similar shapes to find missing sides			
CONSTRUCTION			
Learning Objective			
Select congruent shapes			
Measure a line accurately			
Use simple scale drawings			
Measure and draw an angle to the nearest degree			
Understand congruence and similarity			
Use scales e.g on maps			
Draw scale drawings			
Draw a triangle – sss, sas, aas			
Draw a quadrilateral			
Understand ssa may not give a unique triangle			

Construct perpendicular bisectors and angle bisectors			
LOCI			
Learning Objective			
Measure and draw lines accurately			
Measure and draw angles accurately			
Use map scales to find a distance			
Understand the idea of a locus			
Construct the locus of two points equidistant from two fixed points			
Construct the locus of points equidistant from two fixed lines			
Solve loci problems			
QUADRATICS			
Learning Objective			
Draw graphs of simple quadratics			
Draw graphs of harder quadratics			
Use a quadratic graph to estimate x and y values			
PYTHAGORAS' THEOREM			
Learning Objective			
Use Pythagoras' theorem to find the 3 rd side of a right angled triangle			
Use the theorem to prove a triangle in right angled			

