

# Maths Targets     A Stage 6 Mathematician

TARGETS							
<b>Number and Place Value</b>							
E	I can round any whole number to a required degree of accuracy (10,100, 1000)						
E	I can count forwards and backwards and calculate intervals across zero						
D	I can read, write, order & compare numbers up to 10,000,000 & determine the value of each digit						
D	I can begin to solve number and practical problems involving the above						
S	I can round any whole number to a required degree of accuracy (10,100, 1000, 10,000, 100,000)						
S	I can use negative numbers in context, and calculate intervals across zero.						
S	I can solve number problems and practical problems with the above.						
Emerging		Developing			Secure		
<b>Multiplication and Division</b>							
E	I can multiply numbers up to 4 digits by a 1 digit whole number using the formal written method of long multiplication.						
E	I can divide numbers up to 4 digits by a 2 digit whole number using the formal written method of long division						
E	I can divide numbers up to 4 digits by a 2 digit number using the formal written method of short division where appropriate.						
E	I can identify common factors and am beginning to identify common multiples and prime numbers						
E	I can solve simple problems involving addition, subtraction, multiplication and division						
D	I can begin to multiply numbers up to 4 digits by a 2 digit whole number using the formal written method of long multiplication.						
D	I can divide numbers up to 4 digits by a 2 digit whole number using the formal written method of long division, and interpret remainders as whole number remainders						
D	I can perform mental calculations including with mixed operations						
D	I can identify common factors, common multiples, squared numbers (to 144) and primes (to 19).						
D	I can begin to use my knowledge of the order of operations to carry out calculations involving the four operations.						
D	I can use estimation to check answers to calculations and begin to determine in the context of a problem an appropriate degree of accuracy						
S	I can multiply numbers up to 4 digits by a 2 digit whole number using the formal written method of long multiplication.						
S	I can divide numbers up to 4 digits by a 2 digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context.						
S	I can divide numbers up to 4 digits by a 2 digit number using the formal written method of short division where appropriate, interpreting remainders according to context						
S	I can perform mental calculations, including with mixed operations and large numbers.						
S	I can use my knowledge of the order of operations to carry out calculations involving 4 operations.						
S	I can use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.						
S	I can solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.						
Emerging		Developing			Secure		
<b>Fractions</b>							
E	I can use common factors to simplify fractions						
E	I can add and subtract fractions with different denominators						
E	I can identify the value of each digit in numbers with up to three decimal places						

E	I can multiply 1 digit numbers with 1 decimal place by whole numbers						
E	I can multiply and divide numbers by 10 and 100 giving answers up to 3 decimal places.						
D	I can compare and order fractions less than 1, and am beginning to include fractions >1.						
D	I can multiply simple pairs of proper fractions, writing the answer in the simplest form.						
D	I can begin to associate a fraction with division to calculate decimal equivalents for a simple fraction.						
D	I can identify the value of each digit to 3 decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to 3 decimal places.						
D	I can recall and use equivalences between simple fractions, decimals and percentages, including in different contexts						
S	I can use common factors to simplify fractions and use common multiples to express fractions in the same denomination.						
S	I can compare and order fractions, including fractions >1.						
S	I can add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions.						
S	I can divide proper fractions by whole numbers.						
S	I can associate a fraction with division to calculate decimal equivalents for a simple fraction.						
S	I can multiply 1-digit numbers with up to 2 decimal places by whole numbers.						
S	I can use written division methods in cases where the answer has up to 2 decimal places.						
S	I can solve problems which require answers to be rounded to specified degrees of accuracy.						
Emerging		Developing			Secure		
<b>Measurement</b>							
E	I can use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa						
E	I can measure and calculate the perimeter of composite rectilinear shapes including finding unknown lengths in cm and m						
E	I recognise when it is possible to use the formulae for the area of shapes.						
E	I can estimate the area of irregular shapes						
D	I can use, read, write and convert between standard units, beginning to use decimal notation of up to 3 decimal places.						
D	I can calculate the area of triangles and use formulae more confidently						
D	I can convert between miles and kilometres.						
D	I can solve problems involving the calculation and conversion of units of measure, beginning to use decimal notation up to 3 decimal places where appropriate.						
S	I can use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation of up to 3 decimal places.						
S	I recognise that shapes with the same areas can have different perimeters and vice versa.						
S	I recognise when it is possible to use the formulae for the volume of shapes.						
S	I can calculate the area of parallelograms and triangles.						
S	I can calculate, estimate and compare volume of cubes and cuboids, using standard units.						
S	I can solve problems involving the calculation and conversion of units of measure, using decimal notation up to 3 decimal places where appropriate.						
Emerging		Developing			Secure		
<b>Shape and Geometry</b>							
E	I can draw simple 2D shapes given dimensions and angles.						
E	I recognise, describe and build simple 3D shapes, including making nets – cube, cuboid						
E	I can find unknown angles in any triangles, quadrilaterals and regular polygons.						

E	I recognise angles where they meet at a point or are on a straight line						
E	I can describe positions on the co-ordinate grid (two quadrants).						
D	I can draw 2D shapes given dimensions and angles.						
D	I recognise, describe and build simple 3D shapes, including making nets – square-based pyramid, triangular prism						
D	I can illustrate and name parts of circles, including radius, diameter and circumference.						
D	I recognise angles where they meet at a point or are on a straight line, and find missing angles.						
D	I can translate simple shapes on the co-ordinate plane, and reflect them in the axes.						
S	I can compare and classify geometric shapes based on the properties and sizes.						
S	I can recognise, describe and build simple 3D shapes including making nets						
S	I know the diameter is twice the radius.						
S	I recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.						
S	I can describe positions on the full co-ordinate grid (all four quadrants).						
S	I can draw and translate simple shapes on the co-ordinate plane, and reflect them in the axes.						
Emerging		Developing			Secure		
<b>Statistics</b>							
E	I can begin to calculate the mean as an average						
D	I can calculate and interpret the mean as an average.						
D	I can interpret and construct pie charts and line graphs						
S	I can interpret and construct pie charts and line graphs and use these to solve problems						
Emerging		Developing			Secure		
<b>Ratio and Proportion</b>							
E	I can solve simple problems involving the calculation of percentages eg 15% of 360						
D	I can begin to solve problems involving the relative sizes of two quantities, where missing values can be found using integer multiplication and division facts						
D	I can begin to solve problems involving the calculation of percentages and the use of percentage comparisons.						
S	I can solve problems involving the relative sizes of two quantities, where missing values can be found using integer multiplication and division facts						
S	I can solve problems involving the calculation of percentages and the use of percentage comparisons.						
S	I can solve problems involving similar shapes where the scale factor is known or can be found.						
S	I can solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.						
Emerging		Developing			Secure		
<b>Algebra</b>							
E	I can understand simple formulae.						
E	I can generate and describe linear number sequences at a simple level						
D	I can use simple formulae with increasing complexity						
D	I can generate and describe linear number sequences.						
D	I can find pairs of numbers that satisfy an equation with one unknowns.						
S	I can express missing number problems algebraically.						
S	I can find pairs of numbers that satisfy an equation with two unknowns.						
S	I can enumerate possibilities of combinations of two variables.						
Emerging		Developing			Secure		