

# Year 6 maths objectives

<p>I can multiply numbers such as 1.45 by a one-digit number - for example <math>1.45 \times 7</math>.</p>	<p>I always estimate my answer before I begin calculating - this helps me to check at the end to make sure I am correct.</p>	<p>I can multiply, divide, add and subtract large numbers in my head.</p>	<p>I identify common factors, common multiples and prime numbers.</p>	<p>I can use common factors to simplify fractions and use common multiples to express fractions in the same denomination.</p>	<p>I use written division methods in cases where the answer has up to two decimal places.</p>
<p>I can compare and order fractions, including fractions greater than 1.</p>	<p>I can use the four quadrants in a coordinate grid<sup>03</sup>.</p>	<p>I can solve number and practical problems that involve large numbers, rounding and negative numbers.</p>	<p>I can work with numbers up to 10 000 000 and know what each digit represents.</p>	<p>I can multiply 4 digit numbers by a two-digit number (for example <math>4307 \times 34</math>) using the written method of long multiplication.</p>	<p>I add and subtract fractions with different denominators and mixed numbers.</p>
<p>I can multiply fractions such as <math>\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}</math>.</p>	<p>I can divide 4 digit numbers by a two-digit number using the written method of long division - and tell you the remainder.</p>	<p>I can round a whole number as requested - for example to the nearest 10 or 1000 or 100000.</p>	<p>I understand and use negative numbers in my work, for example - working out how much is between -7 and +8.</p>	<p>I can choose to divide 4 digit numbers by a two-digit number using the written method of short division if this is possible.</p>	<p>I know how to divide proper fractions by whole numbers [for example, <math>\frac{1}{3} \div 2 = \frac{1}{6}</math>].</p>
<p>I can change a fraction into a decimal - for example, I can change <math>\frac{3}{8}</math> to 0.375 by dividing 1 by 8 and multiplying by 3.</p>	<p>I can solve addition and subtraction multi-step problems, deciding where to add or subtract.</p>	<p>I know that addition, subtraction, multiplication and division should be carried out in a specific order when looking at problems.</p>	<p>I can solve problems involving addition, subtraction, multiplication and division.</p>	<p>I can multiply and divide numbers by 10, 100 and 1000 and know what each digit means up to three decimal places.</p>	

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<p>I can classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons.</p>	<p>I can convert measurements of length, weight, volume and time up to three decimal places in length (for example <math>0.345\text{kg} = 345\text{g}</math>).</p>	<p>I can create a sequence of numbers that follow a rule.</p>	<p>I can use a letter (such as <math>n</math> or <math>x</math>) to show a missing number - such as <math>10 - x = 5</math>.</p>	<p>I can convert between miles and kilometres.</p>	<p>I know the parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius.</p>	
<p>I know that even though shapes may have the same area, the perimeter may be different - or a shapes with the same perimeter may have different areas.</p>	<p>I can calculate the mean as an average.</p>	<p>I can find the percentage of an amount - such as finding 15 per cent of 360.</p>	<p>I can solve problems which include rounding to a required accuracy such as the nearest 10, 100 or 10000.</p>	<p>I can solve similar shape problems.</p>	<p>I can use a formula for area and volume of shapes.</p>	<p>I can use and construct pie charts and line graphs and use these to solve problems.</p>
<p>I can calculate the area of parallelograms and triangles.</p>	<p>I can solve problems about unequal sharing - such as 'I need four eggs and for every egg I need three spoonfuls of flour. How much flour do I need?'</p>	<p>I know the decimal value, percentage and fraction of a range of values - such as 0.5, 50 per cent and <math>\frac{1}{2}</math>.</p>	<p>I can solve problems about relative sizes (ratio).</p>	<p>I know how to use simple formulae such as <math>n - 10 = 2</math>.</p>	<p>I can work with the volume of cubes and cuboids using cubic centimetres (<math>\text{cm}^3</math>) and cubic metres (<math>\text{m}^3</math>), and other units too such as <math>\text{mm}^3</math> and <math>\text{km}^3</math>.</p>	
<p>I accurately draw 2-D shapes using given dimensions and angles.</p>	<p>I can draw and translate shapes using coordinates or reflect a shape on the grid.</p>	<p>I can list possible answers to missing numbers such as listing the possible answers of <math>a</math> and <math>b</math> in <math>a + 6 = b - 10</math>.</p>	<p>I can find pairs of numbers that satisfy an equation with two unknowns.</p>	<p>I solve problems about different units of measure with three decimal places.</p>	<p>I can recognise, describe and build 3-D shapes, including making nets.</p>	<p>I can work with angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.</p>