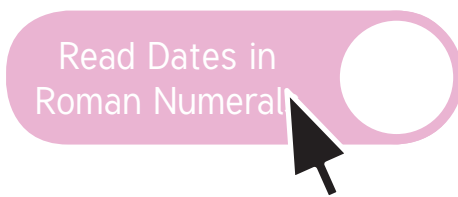


# Parent and Carer Information: Year 6 Maths

This guide helps you to track the progress of your year 6 child as they develop through the subject of maths. In year 6, children learn the key skills that form the basis of their maths education, including place value, counting, money and problem solving. Practising these skills at home can be a great way to your boost child's confidence and complement what they learn in the classroom. This guide outlines how you, as parents and carers, can best support your child's year 6 maths journey, with an easy-to-follow flowchart of what they will learn and clear goals for you to work on together.


Click on each topic to head to the relevant category on the Twinkl website to find super resources to support your child. Alternatively, you can follow the web url [www.twinkl.co.uk/resources/parents](http://www.twinkl.co.uk/resources/parents) to get to the Twinkl Parents Hub.

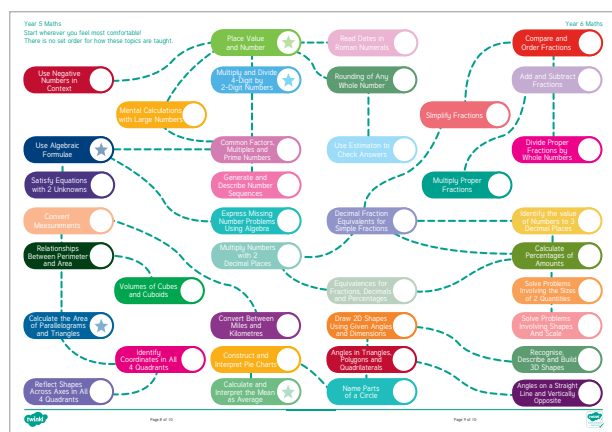


We have also included handy tick boxes, so you can easily check off when you have covered each topic, and you can keep on track with your child's studies. You can also use the 'traffic light' system to record your child's confidence, and how they feel about the topic you have covered together.

Stick the other pages together to create a display poster for both you and your child to fill in. Complete with handy tick boxes, this chart is ideal for helping to support your child's studies from home.

Don't forget to look out for the stars on select topics! You and your child can revisit these topics to gain greater understanding and really go the extra mile to push learning and understanding further.

-  I feel unsure about this.
-  I feel okay about this.
-  I feel confident about this!



We hope you find the information on our website and resources useful. The contents of this resource are for general, informational purposes only. This guide is intended to offer parents general guidance on what subject areas tend to be covered in their child's year group and where they could support their children at home. However, please be aware that every child is different and information can quickly become out of date. There are some subject areas that we have intentionally not covered due to the nature of how they are taught or because a trained professional needs to teach these areas. We try to ensure that the information in our resources is correct but every school teaches the national curriculum in its own way. If you would like further guidance or are unsure in any way, we recommend that you speak to your child's teacher or another suitably qualified professional.

## Place Value and Number



Your child can read numbers up to 10 000 000 and identify the value of each digit in the number. They can also use knowledge of place value to compare and order large numbers. In addition, they can write 8-digit numbers in both figures and words.

## Read Dates in Roman Numerals



Your child can read and write numbers in Roman numerals up to 1000 and can read years written in Roman numerals, such as MCMLXXXII (1982).

## Compare and Order Fractions



Your child can identify the sizes of different fractions. They can then use this information to put fractions in order. They are also able to use knowledge of fractions larger than 1 (mixed numbers and improper fractions) to compare and order fractions.

## Use Negative Numbers in Context



Your child understands negative numbers and how they are used in context, such as for temperature. They can count backwards and forwards through negative numbers including when crossing zero.

## Multiply and Divide 4-Digit by 2-Digit Numbers



Your child can multiply and divide a 4-digit number by a 2-digit number. They can use a variety of methods, including long multiplication and division. They can do this accurately and apply this method to other problems.

## Rounding of Any Whole Number



Your child can use their knowledge of place value to round any numbers. For example, to round to the nearest thousand they look in the 'hundreds' column and round up or down accordingly.

## Add and Subtract Fractions



Your child can add and subtract fractions with different denominators (bottom number). They can also add and subtract mixed numbers (fractions with more than one whole number, for example  $1\frac{2}{3}$ ;  $3\frac{2}{5}$ ). They can do both these things by using their knowledge of equivalent fractions. For example,  $1\frac{2}{5} + \frac{3}{10} = \frac{7}{5} + \frac{3}{10} = \frac{14}{10} + \frac{3}{10} = \frac{17}{10}$ .

## Mental Calculations with Large Numbers



Your child can work out the answer to addition, subtraction, multiplication and division questions involving larger numbers, mentally, choosing the most efficient and accurate method. They can recognise when it is most suitable to use a mental or written method to solve a question.

## Simplify Fractions



Your child can simplify fractions. This means they can represent fractions in their smallest possible image. For example,  $\frac{4}{12}$  can be represented as  $\frac{2}{6}$  or even  $\frac{1}{3}$ .

## Use Algebraic Formulae



Your child can understand and use algebraic formulae. They understand that symbols and letters can be used to represent numbers and amounts. For example,  $4 + 5 = x$ , so the value of  $x$  is 9.

## Common Factors, Multiples and Prime Numbers



Your child can name the common factors and multiples for a given number. For example, the common factors of 12 and 16 are 2 and 4 because both 2 and 4 can be multiplied in some way to make both 12 and 16. They can also recall prime numbers and work out if a larger number is a prime number.

## Use Estimation to Check Answers



Your child can make sensible estimations to the answer of a question by using rounding and related number facts. They can use this information to check their own answers and decide if it is an accurate one.

## Divide Proper Fractions by Whole Numbers



Your child can divide proper fractions (fractions where the top number is smaller than the bottom number) by whole numbers. For example,  $\frac{1}{3}$  divided by 2 =  $\frac{1}{6}$ .

## Satisfy Equations with Two Unknowns



Your child can find the answers to problems involving two unknowns. For example,  $x + 6 = y$ ,  $y + x = 14$ ,  $y + y = 20$ , so  $x = ?$  and  $y = ?$

## Generate and Describe Number Sequences



Your child can describe the pattern within a number sequence. For example, this number sequence doubles each time, 2, 4, 8, 16, 32. They can then use this information to create their own number sequences with a repeating pattern.

## Multiply Proper Fractions



Your child can multiply proper fractions (fractions where the top number is smaller than the bottom number). For example,  $\frac{1}{4} \times \frac{2}{6} = \frac{2}{24}$ .

## Convert Measurements



Your child can convert between different units of measurement that require the use of decimal places. This can include converting between mm and m, g and kg or ml and l. For example, 25 mm = 2.5 cm = 0.025 m.

## Express Missing Number Problems Using Algebra



Your child can represent missing number problems using algebra. They replace the gap in the number sentence with an algebraic symbol. For example,  $15 + x = 29$ , so  $x = 14$ .

## Decimal Fraction Equivalents for Simple Fractions



Your child can work out the decimal value of a simple fraction by dividing the numerator (top number) by the denominator (bottom number). For example,  $\frac{3}{8} = 0.375$  because 3 divided by 8 = 0.375.

## Identifying the Value of Numbers to 3 Decimal Places



Your child can identify tenths, hundredths and thousandths within a number given to 3 decimal places. For example, 1.256 = 2 tenths, 5 hundredths and 6 thousandths. They can use this information to multiply and divide numbers by 10, 100 and 1000, including decimal numbers.

## Relationships Between Perimeter and Area



Your child can identify that shapes with the same area can look different and have different perimeters. They can also recognise that shapes can have the same perimeter and have different areas.

## Multiply Numbers with 2 Decimal Places



Your child can multiply a number with 2 decimal places by a whole number. For example,  $1.45 \times 3 = 4.35$ .

## Calculate Percentages of Amounts



Your child can work out percentages of amounts. For example, 15% of 60 = 9. To do this, they can use knowledge of division and multiplication to work out 10% (divide by 10), 1% (divide by 100) and 5% (divide 10% by 2).

## Volumes of Cubes and Cuboids



Your child can work out the volume of different cubes and cuboids. They understand that volume is the measure of how much space is inside a 3D shape. They can make sensible estimates as to the volume of a shape.

## Equivalences for Fractions, Decimals and Percentages



Your child can recognise the patterns and relationships between fractions, decimals and percentages. They can use this information to convert between the different representations and solve problems. For example,  $\frac{1}{2} = 0.5 = 50\%$ .

## Solve Problems Involving the Sizes of 2 Quantities



Your child can solve problems that involve using ratio and proportion to find the relative size of 2 quantities. For example, this could involve working out how much of an ingredient is needed in a recipe, if you were making the recipe for 4 instead of 2 people.

## Calculate the Area of Parallelograms and Triangles



Your child can work out the area of parallelograms and triangles. They understand that area is the space that a 2D shape occupies.

## Convert Between Miles and Kilometres



Your child can convert between miles and kilometres. 1 mile = 1.61 kilometre. They recognise that both units of measure are used to represent distance. For example, 3 miles = 4.83 kilometres.

## Draw 2D Shapes Using Given Angles and Dimensions



Your child can draw a 2D shape using dimensions, measurements and angle sizes they have been given. They can use a combination of rulers and protractors accurately to create a precise drawing of a shape.

## Solve Problems Using Shape and Scale



Your child can increase the size of a shape by using the scale factor (the amount that the shape increases in size). For example, if a square is 2cm by 2cm in size, and the scale factor is 1:2, then the new shape will measure 4cm by 4cm.

## Identify Coordinates in All Four Quadrants



Your child can recognise coordinates for all four quadrants of a grid. They can place shapes on the grid at any position and identify the coordinates. They can use knowledge of negative numbers to identify positions in the 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> quadrant.

## Construct and Interpret Pie Charts



Your child can use a piece of information to create a pie chart. They can answer questions about pie charts and use them to solve problems.

## Angles in Triangles, Polygons and Quadrilaterals



Your child can find missing angles in any triangle, quadrilateral (four-sided shape) and regular polygon. They understand that angles in a triangle add up to 180 degrees, angles in a quadrilateral add up to 360 degrees and all the angles in a regular polygon will be the same size.

## Recognise, Describe and Build 3D Shapes



Your child can use flat, 2D nets to build and construct 3D shapes. They can identify the names of 3D shapes in different positions and orientations and can also describe the shape using its properties (edges, faces, vertices).

## Reflect Shapes Across Axes in All Four Quadrants



Your child can reflect shapes on a coordinates grid. They can reflect the shape across all the axes, reflecting into the 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> quadrant.

## Calculate and Interpret the Mean as Average



Your child can work out the mean (average) for a set of data. They can add together the total of the data, then divide it by the number of pieces of information. For example, for 4, 5, 5, 6, 8, 8, 10, the mean would be 46 divided by 7.

## Name Parts of a Circle



Your child can identify the different parts of a circle. They can show the radius (half the width of the circle), diameter (the entire width of the circle) and circumference (the distance around the edge of the circle).

## Angles on a Straight Line and Vertically Opposite



Your child can work out angles that meet at a point using a protractor. They can identify that all angles on a straight line add up to 180 degrees and use this information to find missing angles. They are also able to demonstrate that angles which are found opposite one another, around a point are equal.

# Above and Beyond

If you really want to go the extra mile, you and your child can review these sections, to gain a greater understanding of each topic and push their learning further.

## ★ Place Value and Number



Your child can use knowledge of squaring numbers to work out the root number. For example, the square root of 9 = 3 because  $3 \times 3 = 9$ .

Your child can make statements about rules and patterns found in maths, then test these statements and give evidence for them being true or false. For example, testing the statement 'adding together 2 numbers will always result in a larger answer'.

Your child can explain and describe that numbers are infinite. If you count up from 0, you can continue on and on to an infinite amount.

## ★ Multiply and Divide 4-Digit by 2-Digit Numbers



Your child can make use of a calculator to accurately check their answers and working out. They recognise what the symbols on a calculator do and realise that all calculations done on a calculator need to be checked too.

## ★ Use Algebraic Formulae



Your child can use algebra to demonstrate mathematical rules. For example, the rule for doubling would always be  $2x$ . This means that whatever number you have ( $x$ ), you would times by 2.

## ★ Calculate the Area of Parallelograms and Triangles



Your child can work out the area of a circle.

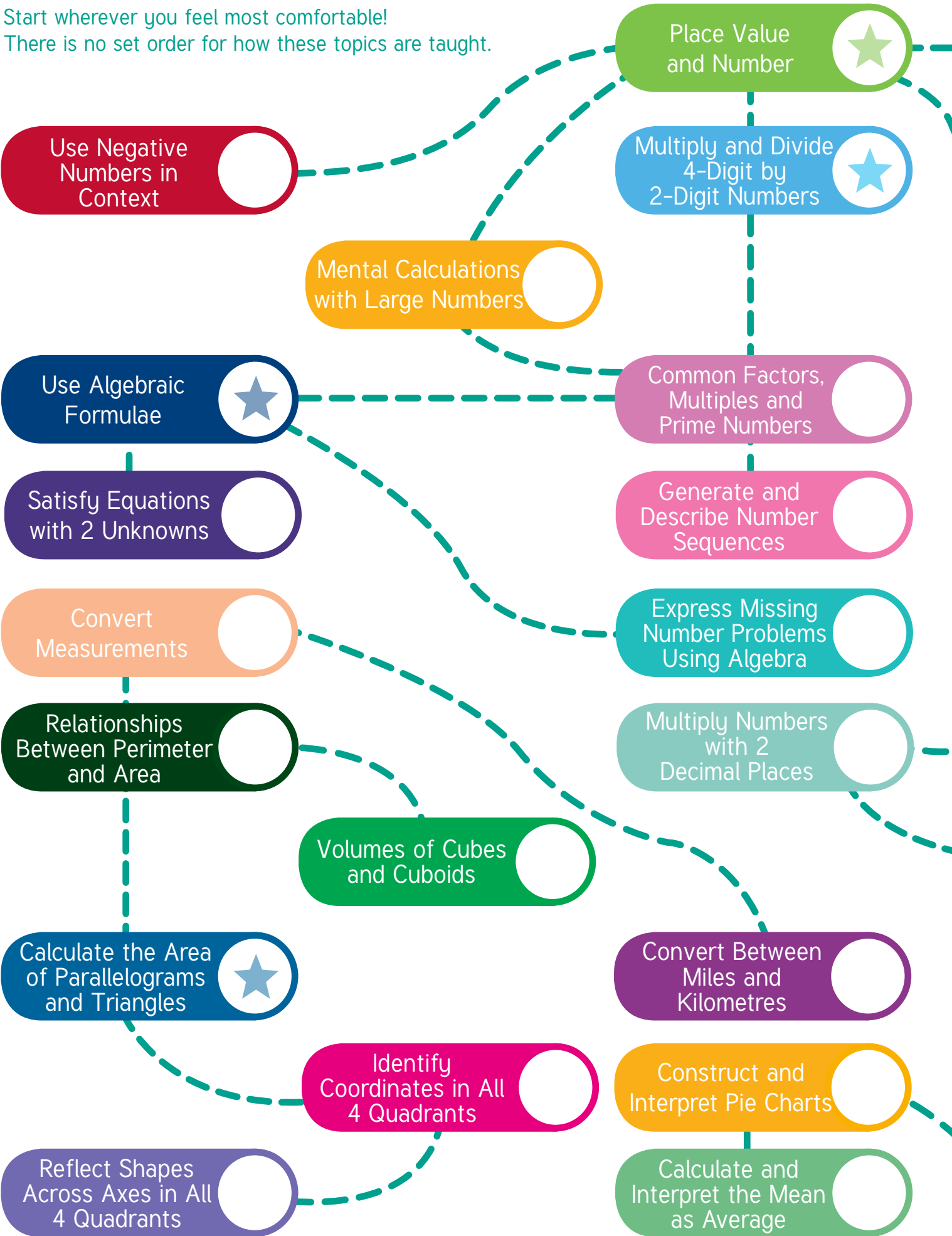
## ★ Compare and Order Fractions



Your child can identify and use the vocabulary of probability. They can state whether an event is likely, unlikely, impossible or certain to happen.

Start wherever you feel most comfortable!

There is no set order for how these topics are taught.







# Explore and Discover More

Unsure of how to use this resource? Simply scan this QR code using your mobile device or tablet to watch a quick video explanation showing you how to use this resource with your child.



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Boost



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Twinkl Kids' TV is our wonderful YouTube channel dedicated to fun and informative video style resources full of new and creative activities you can try at home!