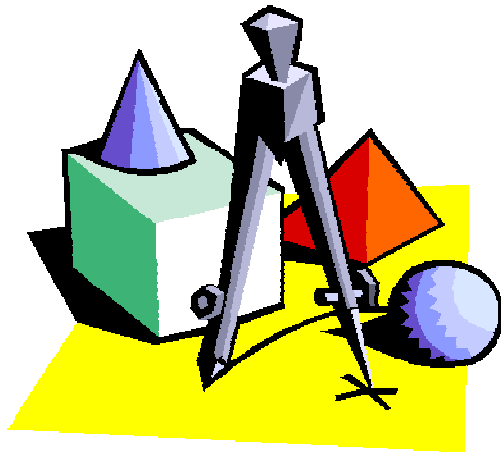


Year 6

Mathematics

Parent Booklet

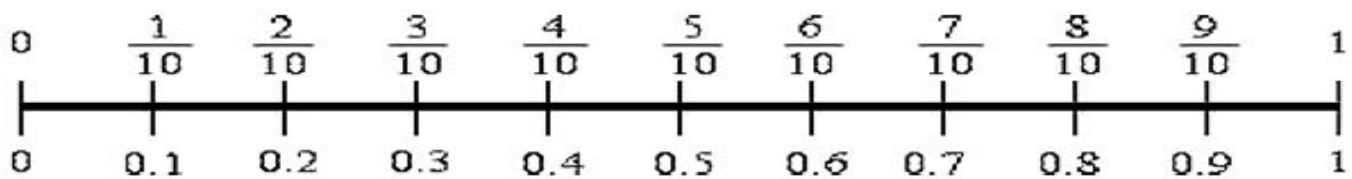


**Supporting your child at
home.**

Learning

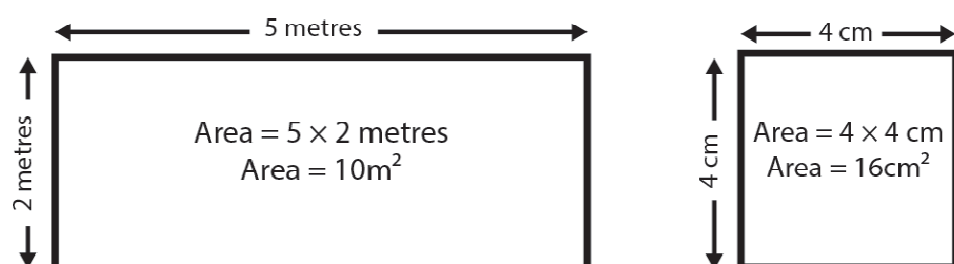
Counting

Counting with your child on a daily basis can dramatically support their understanding of the number system and place value. By the end of year 6, children are expected to know all multiplication facts, including corresponding division facts, using these to count in fraction and decimals.



Shapes and measure

By the end of year 6, most children will be able to find missing angles on straight lines, right angles and reflex angles. They will be able to accurately draw angles, using a protractor, measure and estimate the size of angles in a range of positions and orientations. By the end of year 6, most children will be able to convert between units of measure for length, distance, capacity, volume and mass. Using their knowledge of multiplying and dividing by 10, 100 and 1000 will be essential to be able to convert accurately. Children will be expected to calculate the area and perimeter of quadrilaterals and triangles beginning to use formulas to calculate these.



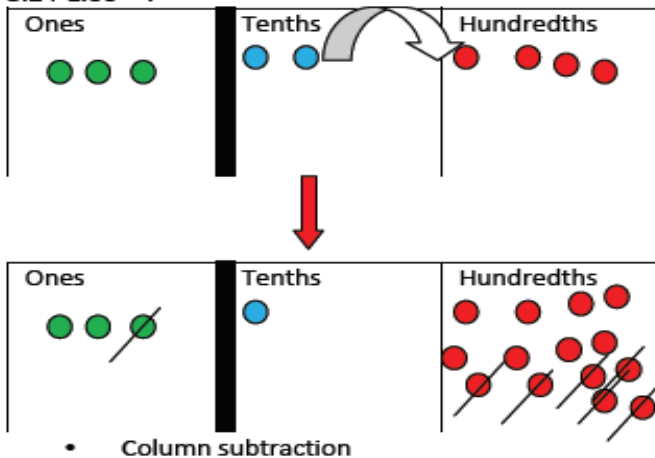
Learning

Addition and Subtraction

By the end of year 6, most children will be adding and subtracting numbers beyond 7 digit numbers, including decimals to 2 decimal places, continuing to use their knowledge and understanding of mental strategies. Your child will be using the formal column method to add and subtract, including using the regrouping strategy when calculating decimals. At home, practising the number bonds to 1000 and decimals to 1 will significantly support your child, reinforcing the learning from school. Practising using the formal column method for addition and subtraction will reinforce learning. Your child will also be expected to solve more complex addition and subtraction questions mentally, encouraging them to use partitioning strategies and their knowledge of the number system to solve them.

Each week, your child will be given a few 'Learn it' facts to learn and memorise at home. Saying these facts, chanting or even singing will encourage your child to memorise and recall the facts.

$$3.24 - 1.06 = ?$$



$$\begin{array}{r} \text{£}4.85 \\ + \text{£}3.38 \\ \hline \text{£}8.23 \\ \text{1 1} \end{array}$$

$$\begin{array}{r} {}^2 3. {}^1 79\text{ml} \\ - 2.86\text{ml} \\ \hline 0.93\text{ml} \end{array}$$

$$\begin{array}{r} 528 + 288 \\ 500 + 200 = 700 \\ 20 + 80 = 100 \\ 8 + 8 = 16 \\ = 816 \end{array}$$



Learning

Multiplication and Division

By the end of year 6, children are expected to be able to recall all multiplication tables, to 12 x, and all the corresponding division facts. Using knowledge of multiplication calculations, children will be using the formal column method to solve multiplication calculations up to 6 digits, including decimals. At home, you can support your child by practising reciting multiplication tables, ensuring your child can recall them and the corresponding division facts, will significantly increase your child's speed and efficiency to when using the column method.

By the end of year 6, most children will be able to recognise factors, multiples, squared numbers and prime numbers, using this knowledge to apply to other areas of mathematics.

By the end of year 6, most children will be expected to divide up to 5 digits, using both long and short division methods, including calculating remainders. At home, encourage your child to use multiplication facts to think about the corresponding division facts.

$$\begin{array}{r} 56 \\ \times 27 \\ \hline 1120 \quad (56 \times 20) \\ 392 \quad (56 \times 7) \\ \hline 1512 \\ 1 \end{array}$$

Understand that ...

$$24 \times 20 = 24 \times 2 \times 10$$

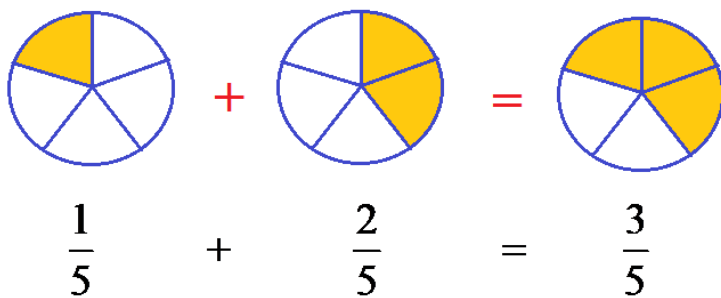
$$24 \times 50 = 24 \times 5 \times 10$$

$$\begin{array}{r} 560 \div 24 \\ \hline 25 \text{ r } 8 \\ 24 \overline{) 560} \\ \underline{480} \\ 80 \\ \underline{80} \\ 0 \\ 8 \end{array}$$

Learning

Fractions, decimals and percentages.

By the end of year 6, children are expected to add, subtract and multiply fractions, including those with different dominators. Children will be expected to convert decimals to fractions and be able to identify equivalents and give remainders of division as a fraction answer. Children will be expected to convert between mixed number and improper fractions, using this information to find fractions of amounts. By the end of year 6, children are expected to be able to calculate percentage of amounts, including percentage increase and decrease.



$$2\frac{1}{4}$$
$$2\frac{2}{3} + 4\frac{1}{9}$$

.....

Problem solving

By the end of year 6, most children will be able to two or more step word problems involving all four operations within the different contexts. These problems will include topics like money, measure, fractions and puzzles. Some problems will require children to use inverse operation to solve the problems, working backwards. All the Mathematic topics taught throughout year 6, will be embedded through problem solving. Children are expected to use and apply skills across different contexts, showing a deepened understanding of Mathematics.

Key vocabulary

New maths vocabulary for year 6

| Number and place value | Addition and subtraction | Multiplication and division | Geometry (position and direction) | Geometry (properties of shape) | Fractions, decimals and percentages | Algebra | Data/statistics |
|------------------------|--------------------------|---|-----------------------------------|---|-------------------------------------|---|--------------------------------|
| Numbers to ten million | Order of operations | Order of operations Common factors, common multiples | Four quadrants (for coordinates) | Vertically opposite (angles) Circumference, radius, diameter | Degree of accuracy Simplify | Linear number sequence Substitute Variables Symbol Known values | Mean Pie chart Construct |