

Fun activities to do at home

Mathletics

Your child has a login and password in the front of their reading journals. They can complete set weekly homework and play games against others in school or around the world.

99 Maths Club

Practice sheets to complete on the school website- under School Info tab- See if you and your child can increase your mental arithmetic by competing against each other.

Activities to try at home

- ◆ Play traditional games such as battleships or draughts and chess, it's a great way of exploring coordinates and movement across the coordinates grid.

TV addicts

Ask your child to keep a record of how long he / she watches TV each day for a week. Then ask him / her to do this.

- ◆ Work out the total watching time for the week.
- ◆ Work out the average watching time for a day (that is, the total time divided by 7).

Instead of watching TV, you could ask them to keep a record of time spent eating meals, or playing outdoors, or anything else they do each day. Then work out the daily average.

One million pounds **£1,000,000**

Assume you have £1 000 000 to spend or give away.

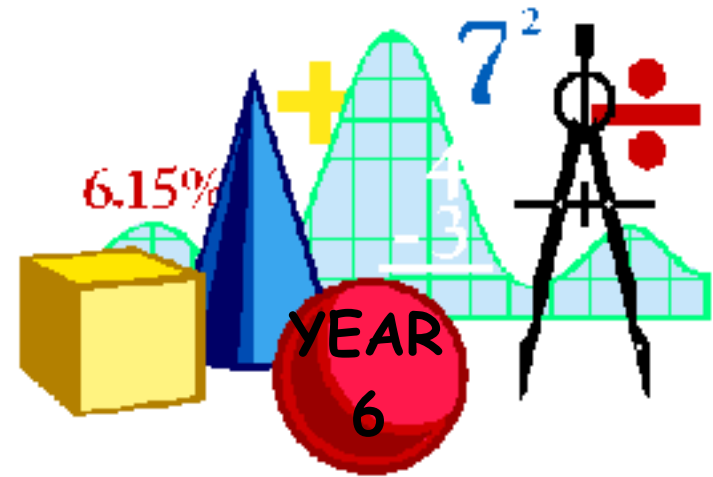
Plan with your child what to do with it, down to the last penny.

Remainders

Draw a 6×6 grid.

- ◆ Choose the 7, 8 or 9 times table.
- ◆ Take turns.
- ◆ Roll a dice.
- ◆ Choose a number on the board, e.g. 59. Divide it by the tables number; e.g. 7. If the remainder for $59 \div 7$ is the same as the dice number, you can cover the board number with a counter or coin.
- ◆ The first to get four of their counters in a straight line wins

Maths at Pensans in Year 6



A booklet for parents

This booklet provides information on the maths taught in Year 6 through mastery, including methods of calculation. It also includes End of Year expectations for children in Year 6, as well as ideas and activities to try at home.

End of Key Stage 2 Testing

In May of Year 6, children will take an arithmetic test of 30 minutes, and two broader maths tests of 40 minutes each. These will be sent away for marking with the results coming back at the end of the year. Your child's teacher will also make an assessment opt whether or not your child has reached the expected standard by the end of the Key Stage.

National Curriculum Expectations at the end of Year 6

The new National Curriculum is divided into different aspects of maths:
Number and Place Value, Calculations, Fractions, Measurements/
Geometry, Probability, Statistics and Algebra.

By the end of Year 6, children are expected to be confident with the use of all four standard methods for written calculations, and to have secured their knowledge of the key number facts. Their work will focus more on fractions, ratio, proportion and the introduction of algebra.

Number and Place Value:

- I can read and write numbers up to 10,000,000 and explain the value of each digit.
- I can order numbers to 10,000,000.
- I can compare numbers to 10,000,000.
- I can round any whole number to a required degree of accuracy.
- I can use negative numbers in context and calculate across zero.
- I can solve number and practical problems that involve all the above.
- I can read and write Roman numerals to 3000 (MMM) and recognise and write years in Roman.

Calculations

Addition and subtraction

- I can add and subtract numbers of any size and including decimals using written methods such as the column method.
- I can perform mental calculations quickly and efficiently including with mixed operations and decimal numbers.
- I can add and subtract using missing numbers or parts of calculations.
- I can solve multi-step addition and subtraction problems in a range of contexts, deciding which operations and methods to use and why.
- I can use estimation and rounding to check answers and determine an appropriate degree of accuracy.
- I can check answers using the inverse.
- I can use knowledge of the order of operations to carry out calculations.

Multiplication and division

- I can multiply numbers up to four digits by two digits and those with decimals using formal written methods including long multiplication.
- I can divide numbers up to four digits by two digits using formal written methods.
- I can interpret remainders as whole numbers, fractions or decimals or by rounding.
- I can perform mental calculations, including with mixed operations and large numbers.
- I can identify common factors and multiples and prime numbers.
- I can solve problems in context deciding which operations to use and why.

Fractions

- I can compare and order fractions (E.g. $3/5$, $3/6$) and those greater than 1.
- I can add and subtract fractions with different denominators and mixed numbers.
- I can multiply simple pairs of proper fractions writing the answer in simplest form. E.g. $1/2 \times 1/4 = 1/8$
- I can divide proper fractions by whole numbers.
- I can associate a fraction with division and calculate decimal-fraction equivalents.
- I can recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.
- I can use common factors to simplify fractions.
- I can use common multiples to express fractions in the same denomination.
- I can identify the value of each digit in numbers given to three decimal places.
- I can multiply and divide numbers by 10, 100 and 1000 giving answers to three decimal places.
- I can multiply one digit numbers with up to two decimal places by whole numbers.
- I can solve problems involving decimals, percentages and fractions which require answers to be rounded to

Measurements and Geometry

- I can solve problems involving the calculation and conversion of units of measure up to 3 decimal places.
- I can convert between miles and kilometres.
- I can calculate problems involving perimeter and area, recognising that shapes with the same area can have different perimeters and vice versa.
- I can use formulae for area and volume of shapes.
- I can calculate the area of parallelograms and triangles.
- I can calculate, estimate and compare volumes of cubes and cuboids.
- I can use, read, write and convert between standard units to three decimal places.
- I can draw and represent translations of shapes confidently.
- I can draw and represent reflections of shapes confidently.
- I can recognise angles where they meet at a point and on a straight line or are vertically opposite and find missing angles.
- I can draw 2D shapes using given dimensions and angles.
- I can recognise, describe and build simple 3D shapes using nets.
- I can illustrate and name parts of a circle including radius, diameter and circumference.
- I know the diameter is twice the radius.
- I can describe and write positions on the full coordinate grid (all four quadrants).

Probability

- I can solve problems with ratio and proportion which include missing values using multiplication and division facts.
- I can solve problems which include the calculation of percentages.
- I can solve problems involving similar shapes where the scale factor is known or can be found.
- I can solve problems using unequal amounts using knowledge of fractions and multiples.

Statistics

- I can calculate and interpret the mean as an average.
- I can construct and interpret a range of representations of data including pie charts and line graphs.

Algebra

- I can use simple formulae.
- I can generate and describe linear number sequences.
- I can find possibilities of combinations of two variables.
- I can express missing number problems algebraically.
- I can find pairs of numbers that satisfy an equation with two unknowns.
- I can enumerate possibilities of combinations of two variables.