

## 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.

### Finding areas and perimeters

Perimeter = distance around the edge of a shape

Area of a rectangle = length x breadth (width)

- ◆ Collect 5 or 6 used envelopes of different sizes.
- ◆ Ask your child to estimate the perimeter of each one to the nearest centimetre. Write the estimate on the back.
- ◆ Now measure. Write the estimate next to the measurement.
- ◆ How close did your child get?
- ◆ Now estimate then work out the area of each envelope.
- ◆ Were perimeters or areas easier to estimate? Why?

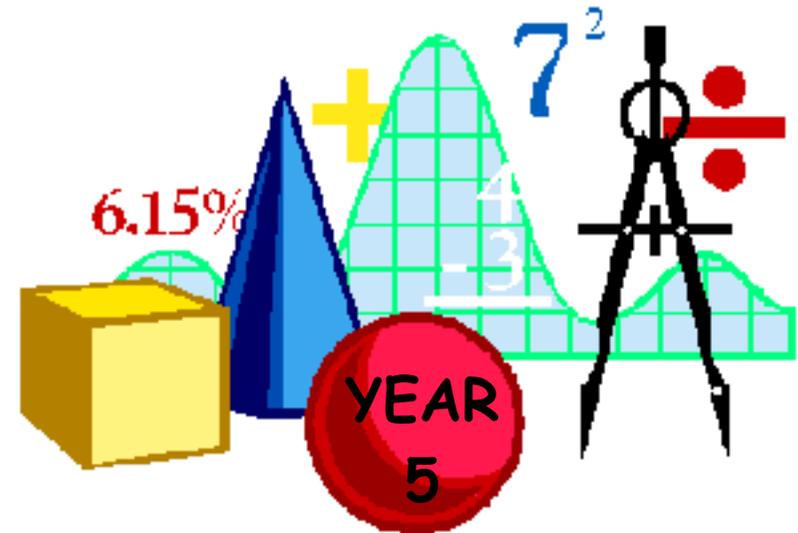
You could do something similar using an old newspaper, e.g.

- ◆ Work out which page has the biggest area used for photographs.
- ◆ Choose a page and work out the total area of news stories or adverts on that page.

### Car numbers

- ◆ Choose a car number.
- ◆ You may add or subtract 10, 20, 30, 40, 50, 60, 70, 80 or 90.
- ◆ Try to get as close as possible to 555.
- ◆ Who can get closest during a week?
- ◆

# Maths at Pensans in Year 5



## A booklet for parents

This booklet provides information on the maths taught in Year 5 through mastery, including methods of calculation. It also includes End of Year expectations for children in Year 5, as well as ideas and activities to try at home.

# National Curriculum Expectations at the end of Year 5

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

During Year 5 and 6, children to use their knowledge of number bonds and times tables to tackle more complex problems, including larger  $\times$  and  $\div$ , and meeting new material. In Year 5, this includes more work on calculations with fractions and decimals, and using considerably larger numbers.

## Number and Place Value:

- I can read and write, numbers to 1,000,000 and explain the value of each digit.
- I can order numbers to 1,000,000.
- I can compare numbers to 1,000,000.
- I can count forwards or backwards in steps of powers of ten for any given number up to 1,000,000.
- I can round any whole number up to 1,000,000 accurately to the nearest 1, 10, 100, 1000, 10,000 and 100,000.
- I can use negative numbers in context, and calculate across zero.
- I can count forwards and backwards with positive and negative whole numbers.

## Calculations

### Addition and subtraction

- I can add and subtract numbers with more than four digits using written methods such as the column method.
- I can add and subtract increasingly large numbers mentally.
- 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 the answers to calculations.
- I can check answers using the inverse.
- I can solve problems involving addition and subtraction including understanding of the meaning of the equals sign.

### Multiplication and division

- I can multiply numbers up to four digits by one or two digits using formal written methods.
- I can divide numbers up to four digits by one digit using formal written methods and interpret remainders in context.
- I can multiply and divide numbers mentally using known facts.
- I can recognise and use square and cube numbers.
- I know the language of prime numbers, prime factors and composite numbers.
- I can identify prime numbers to 19 and establish whether a number up to 100 is prime.
- I can multiply and divide whole numbers and some involving decimals by 10, 100 and 1000.
- I can identify common multiples and factors including finding factor pairs and common factors.
- I can solve problems involving multiplication and division including using knowledge of factors and multiples, squares and cubes.
- I can solve problems involving multiplication and division including understanding the meaning of the equals sign.
- I can solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.

## Fractions

- I can compare and order fractions whose denominators are multiples of the same number using  $<$ ,  $>$ .
- I can identify and find equivalent fractions including tenths and hundredths.
- I can add and subtract fractions with the same and multiple denominators.
- I can solve problems which require knowing percentage and decimal equivalents of  $1/2$ ,  $1/4$ , fifths and denominator multiples of 10, 25
- I can read and write decimal numbers as fractions including hundredths. E.g.  $0.71 = 71/100$ .
- I can multiply proper fractions and mixed numbers by whole numbers.
- I can read, write and order numbers up to three decimal places.
- I can write percentages as decimals and fractions e.g. 25%,  $1/4$ , 0.25 10%,  $1/10$ , 0.1
- I can recognise mixed numbers and improper fractions and convert from one to the other.
- I can recognise the percentage symbol and understand it relates to number of parts per hundred.
- I can write mathematical statements  $>1$  as a mixed number. E.g.  $2/5 + 4/5 = 6/5 = 1$  and  $1/5$ .
- I can recognise and use thousandths and relate to tenths and hundredths.
- I can relate thousandths, hundredths and tenths as decimal equivalents.

## Measurements and Geometry

- I can solve problems involving converting measurements. E.g. km to m, cm to mm, g to kg and l and ml.
- I can solve problems involving converting between units of time in a range of contexts.
- I can convert between metric and imperial units including; inches, pounds and pints.
- I can measure and calculate the perimeter of composite rectilinear shapes in cm and m.
- I can calculate and compare areas of rectangles and estimate the area of irregular shapes.
- I can estimate volume and capacity using knowledge of cube numbers.
- I can use the four operations to solve problems involving measure.
- I can identify 3D shapes including cubes and cuboids from 2D representations.
- I know angles are measured in degrees and can recognise, estimate and compare acute, obtuse, reflex and right angles.
- I can draw given angles and measure in degrees.
- I can identify angles at a point and one whole turn.
- I can identify angles at a point on a straight line, and  $1/2$  a turn and other multiples of 90 degrees.
- I can find missing angles in rectangles.
- I can draw 2D shapes using simple angles.
- I can distinguish between regular and irregular polygons.
- I can begin to represent the position of a shape following a reflection or translation including using coordinates.

## Probability

- I can begin to use the language of probability. E.g. more/less likely, certain, probable

## Statistics

- I can read and interpret information in a range of tables and representations including timetables.
- I can solve comparison, sum and difference problems using information presented in a line graph.

## Algebra

- I can begin to use simple formulae in algebra.
- I can begin to express missing number problems.

## About the targets

Much of the knowledge in Y5 relies on number facts being easily recalled. Any practise to home to keep these skills sharp will help and certainly be appreciated by your child and their teacher!