

Maths in Year 5



How to help your child at home and have fun!

The National curriculum maths objectives for children in Year 5 are on the back of this leaflet. Some targets are harder than they seem. For example, a child may be able to subtract 3994 from 9007 by writing it in columns without realising it is quicker and more efficient to count on from 3994 up to 4000 and then to 9000 and finally to 9007 in their head.

Y 5

Year 5	Number Place Value	+ and -	x and +	Fractions
Maths - Year 5 (expected)	Count forwards and backwards in steps of 1,000 and 100,000 from any number up to 1,000,000. Round any number up to 1,000,000 to the nearest 100,000, 10,000, 1,000, 100 and 10. Read Roman numerals to 1000(M) and recognise years written in Roman numerals. Solve number problems and practical problems that involve all these aspects.	Mentally add and subtract any 2 and 3-digit numbers. Add and subtract any 1000s number from any 5-digit number. Identify multiples and be able to find all factor pairs. Recognise and use squared and cubed numbers and the correct notation. Use the square root sign $\sqrt{\quad}$. Solve problems where larger numbers are used by decomposing them into their factors. Multiply numbers up to 4-digits by a 1-digit and 2-digit number using an efficient written method. Divide numbers up to 4-digits by a 1-digit number using short division written method. Solve problems including scaling by simple fractions and problems involving simple rates.	Solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{3}{5}$ and those with a denominator of a multiple of 10 or 25. Mentally add and subtract tenths and mixed numbers with tenths. Add and subtract decimals up to 3 decimal places. Compare and order fractions whose denominators are all multiples of the same number.	

Year 5	Fractions	Measures	Shape	Data
Maths - Year 5 (expected)	Add and subtract fractions with the same denominator and related fractions: write mathematical statements $\times 1$ as a mixed number. Multiply proper fractions and mixed numbers by whole numbers up to 10, supported by materials and diagrams. Convert metric to common imperial units and imperial to metric. Measure and calculate the perimeter of composite rectilinear shapes in cm and m. Calculate and compare the areas of squares and rectangles using square centimetres and square metres and estimate the area of irregular shapes. Draw squares, rectangles and all triangles using given dimensions (to the nearest millimetre) and angles with a protractor. State and use the properties of a rectangle (including squares) to deduce related facts. Distinguish between regular and irregular polygons based on reasoning about equal sides and angles. Identify multiples of 90° ; angles at a point on a straight line and $\frac{1}{2}$ a turn (total 180°); angles at a point and one whole turn (total 360°); reflex angles and compare different angles. Identify, describe and represent the position of a shape following a reflection or translation in all four quadrants, using the appropriate language, and know that the shape has not changed. Solve problems using information presented in line graphs. Interpret information stored in a pie chart.			



Maths in Year 5—Games to play:

How much

- ♦ Whilst out shopping, point out an item and ask your child how much 3 items would cost—they should estimate first then calculate to see how close their guess was. Check for any deals like 2 for £3.50 and ask them to calculate how much 1 is.

Times tables

- ♦ Continue practicing ALL times tables up to 12×12 ; forwards backwards and with the associated division facts.

$$5 \times 7 = 35 \quad 7 \times 5 = 35 \quad 35 \div 5 = 7 \quad 35 \div 7 = 5$$

Areas and perimeters

- ♦ Collect a selection of used envelopes. Estimate the perimeter of each one to the nearest **cm** and record it on the envelope. Now measure and calculate accurately—*How close was the estimate?* Do the same for estimating and calculating the area. Which was hardest to estimate? Why?



Dice subtractions

- ♦ Roll the dice and fill in the missing boxes $400\boxed{} - 399\boxed{}$. Count on from the smaller to larger number eg: $4002 - 3994 = 8$, so you score 8 points. Keep a running total and whoever reaches 50 points first wins.

Target 1000

- ♦ Roll 6 numbers. Use them to make two 3 digit numbers. Add them together. How close to 1000 can you get?



Maths in Year 5—Games to play:

Line it up

- ♦ Use a ruler to draw 10 different straight lines on a piece of paper. Ask the child to estimate and write the estimate on each line. Give them the ruler to accurately measure each line to the nearest **mm**. Record the exact measurement under each line. Now ask the child to calculate the difference between the estimate and the actual measure. A difference of **5mm** or less earns 10 points. A difference of between **5mm** and **1cm** earns 5 points. The child can then draw lines for you. Whoever reaches 100 first wins.



Guess my number

- ♦ Choose a number between 0 and 1 with 1 decimal place—eg: 0.7 Challenge the child to ask you questions in order to guess your number... Is your number smaller than a half? You can only answer Yes or No. Can they guess using less than 5 questions? Swap over and they choose a number. Extend the game by choosing numbers between 0 and 10... but you will need more questions.

Times tables challenges

- ♦ Choose a times tables fact each day and work out other sums that can be calculated from it. Eg: What is 6×8 How can you use that knowledge to work out 12×8 etc?

$$\begin{array}{l} \times 2 \quad \left\{ \begin{array}{l} 6 \times 8 = 48 \\ 12 \times 8 = 96 \end{array} \right. \quad \times 2 \end{array} \quad \begin{array}{l} +2 \quad \left\{ \begin{array}{l} 6 \times 8 = 48 \\ 3 \times 8 = 24 \end{array} \right. \quad +2 \end{array}$$