



Year 6

Parent and Carer

Maths Strategy Booklet

Calculating

The maths learning your child is completing at school may look very different to the 'sums and calculations' you may remember. This is because children are encouraged to work mentally where possible and even use working out using an appropriate written method. This booklet will show you some of the strategies used in year 6 so you will feel more confident in supporting your child at home.

Addition - Column Method

Learning Objectives covered in y6:

6.1.5 Solve addition and subtraction multi step problems in contexts, deciding which operations and methods to use and why

Vocabulary used:

Calculate, written method, mentally, exchange, place value, operation, inverse, answer, sum, total, add, altogether, strategy, method

Examples:

$$635,369 + 589,362$$

$$\begin{array}{r} 635369 \\ 589362 + \\ \hline 1224731 \end{array}$$

Ensure all the numbers are lined up in the correct columns to match their value.

Always start adding with the ones column - then move from the right to the left by adding each column.

Where the answer is worth more than one digit, the tens digit needs to be carried into the next column and added to the total in that column.

A zero can be added at the end of a number as a 'place holder'.

$$\begin{array}{r} 247.36 \\ + 96.278 \\ \hline 343.638 \end{array}$$

Subtraction - Column Method

Learning Objectives covered in y6:

6.1.5 Solve addition and subtraction multi step problems in contexts, deciding which operations and methods to use and why

Vocabulary used:

Calculate, written method, mentally, exchange, place value, operation, inverse, answer, difference, minus, less than, take away, subtract, strategy, method

Examples:

$$867,362 - 549,273$$

$$\begin{array}{r} 867362 \\ 549273 - \\ \hline 318089 \end{array}$$

Ensure all the numbers are lined up in the correct columns to match their value.

Always start subtracting with the ones column - then move from the right to the left by subtracting each column.

Where it isn't possible to subtract because it will end up as a negative e.g. 5-9, we need to exchange from the next column. Zeros can also be added as a 'place holder'.

$$\begin{array}{r} 9 - 3.563 \\ 6.000 \\ - 3.563 \\ \hline 2.437 \end{array}$$

Multiplication - short and long multiplication

Learning Objectives covered in y6:

6.1.6 Multiply multi-digit numbers up to 4-digits by a 2-digit whole number using the formal written method of long multiplication.

Vocabulary used:

Calculate, written method, mentally, exchange, place value, operation, inverse, answer, multiply by, product, times, groups of, lots of, strategy, method

Examples:

Short Multiplication (multiplying by 1 digit)

$$65932 \times 6$$

$$65932$$

$$\times 6$$

$$395592$$

Ensure all the numbers are lined up in the correct columns to match their value.

Always start multiplying with the ones column - then move from the right to the left by multiplying each column.

Long Multiplication (multiplying by 2 digits)

$$5632 \times 64$$

$$5632$$

$$\times 64$$

$$311 \begin{array}{r} 2 \\ 2 \\ 2 \end{array}$$

$$22528$$

$$+ 337920$$

$$360448$$

With long multiplication, multiply all the numbers by the ones digit first then move onto the tens digit.

When multiplying by the tens digit, a zero must be put down first to show the numbers value as a power of 10. E.g. 60 not 6.

Once both digits have been multiplied, the totals can be added together to get the answer.

Division - bus stop method

Learning Objectives covered in y6:

6.1.7 Divide numbers up to 4-digits by a 2-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context.

Vocabulary used:

Calculate, written method, mentally, exchange, place value, operation, inverse, answer, divide by, division, share, divisible by, group divide into

Examples:

Dividing by 1 digit

$$5632 \div 7$$

$$804 \text{ r } 4$$

$$7 \overline{) 5632}$$

Write the number that is being divided in the bus stop with the other number at the start of the bus stop.

Place any remainders next to the following number so it can be accounted as a tens digit.

Remember to express any remainders at the end of an answer.

Set out the division in same way as dividing by one digit.

Write down the times tables at the side to save time.

Place any remainders next to the following number.

Remember to express any remainders at the end of an answer.

Dividing by 2 digits

$$63452 \div 24$$

$$2643 \text{ r } 20$$

$$24 \overline{) 63452}$$

$$\begin{array}{r} 24 \\ 48 \\ 72 \\ 96 \\ 120 \\ 144 \end{array}$$