“Early achievement and mastery in maths is a strong predictor for later academic success in all subjects.”

An Overview of the Numeracy Curriculum for KS2

To include:

- Curriculum objectives
- Breakdown of formal methods of calculation
- Reasoning with mathematics
- Great websites and helpful links

The Curriculum

The curriculum is broken down in to 3 main areas of numeracy and teaching:

- Fluency
- Reasoning
- Problem Solving

What do these mean?

Fluency

Children to fluently remember number facts with ease and confidence.

This takes practice and patience.

100 - 42

32 + 54

40 divided by 5

6 x 8

1/5 of 35

£3.00 – 1.43

Reasoning

Children to explain their thinking about a problem and show how they know.

What do you think?

Prove it?

1 A football and toy train together weigh 360g.

Three footballs and two toy trains weigh 810g.

Find the weight of a toy train.

Problem Solving

Children to use a variety of numeracy skills to solve open ended and more challenging problems.

How many solutions can you find to these two alphanumeric?

Each of the different letters stands for a different number.

ONE	TWO
+ONE	+TWO
TWO	FOUR

Curriculum Objectives

By the end of Year 6, it is our hope that the children feel confident in applying all of these skills.

SATS

- Arithmetic Paper: testing formal methods and fluency
- Reasoning papers 1 & 2: testing the children's ability to work through word problems and use their knowledge to explain their thinking.

Formal Methods of Calculation

There are four methods that curriculum dictates the children must learn to use and apply.

Column Addition

Starting at the end of Year 2, children will learn to progressively add larger numbers together using a column.

E.g. 7948 + 1223

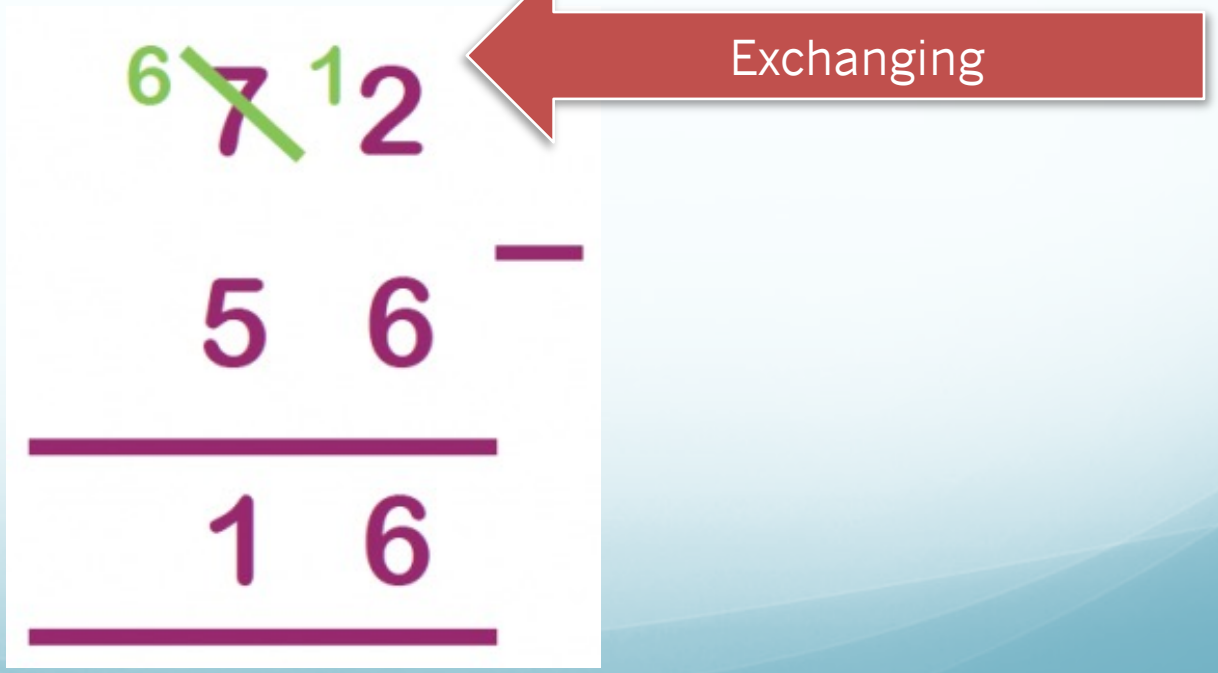
Th	H	T	U	
7	9	4	8	
1	2	2	3	+
9	1	7	1	
1		1		

Carrying

Column Subtraction

From Year 3, similarly to column addition, the children will use a column to take numbers away.

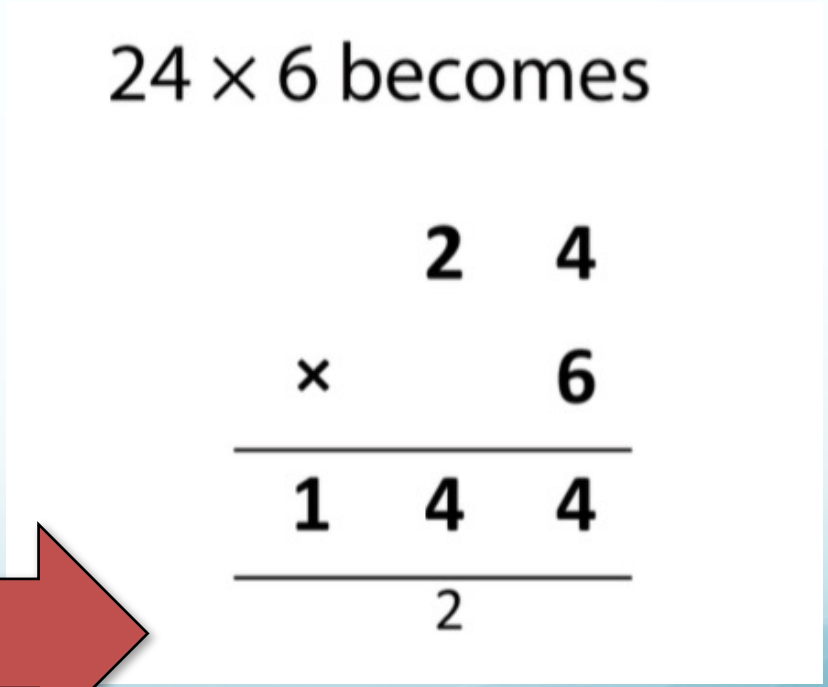
E.g. 72 - 16



Short & Long Multiplication

Short multiplication is where you are multiplying by a one digit number.

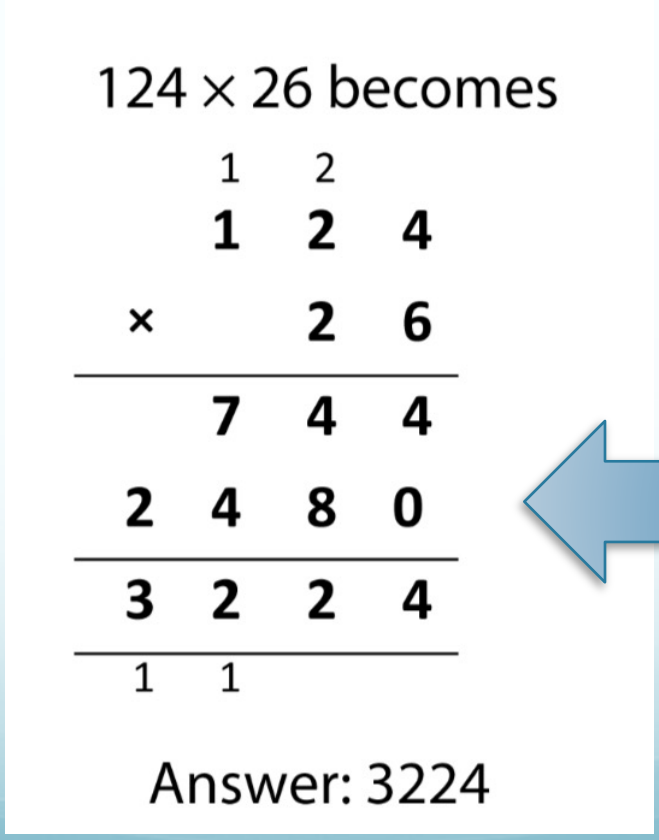
E.g. 24 x 6



Short & Long Multiplication

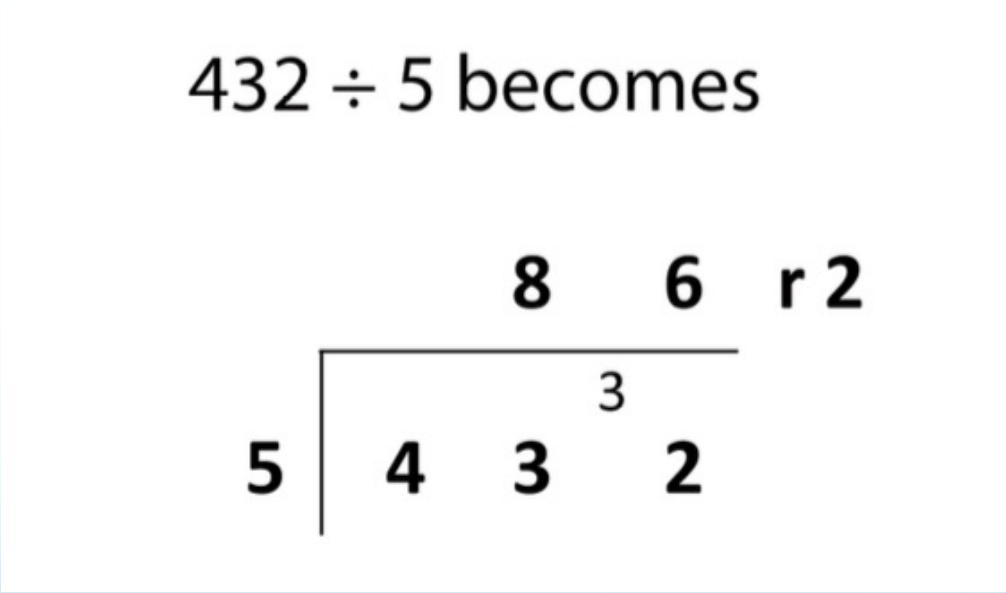
Long Multiplication is where you are multiplying by more than a one digit number.

E.g. 124 x 26



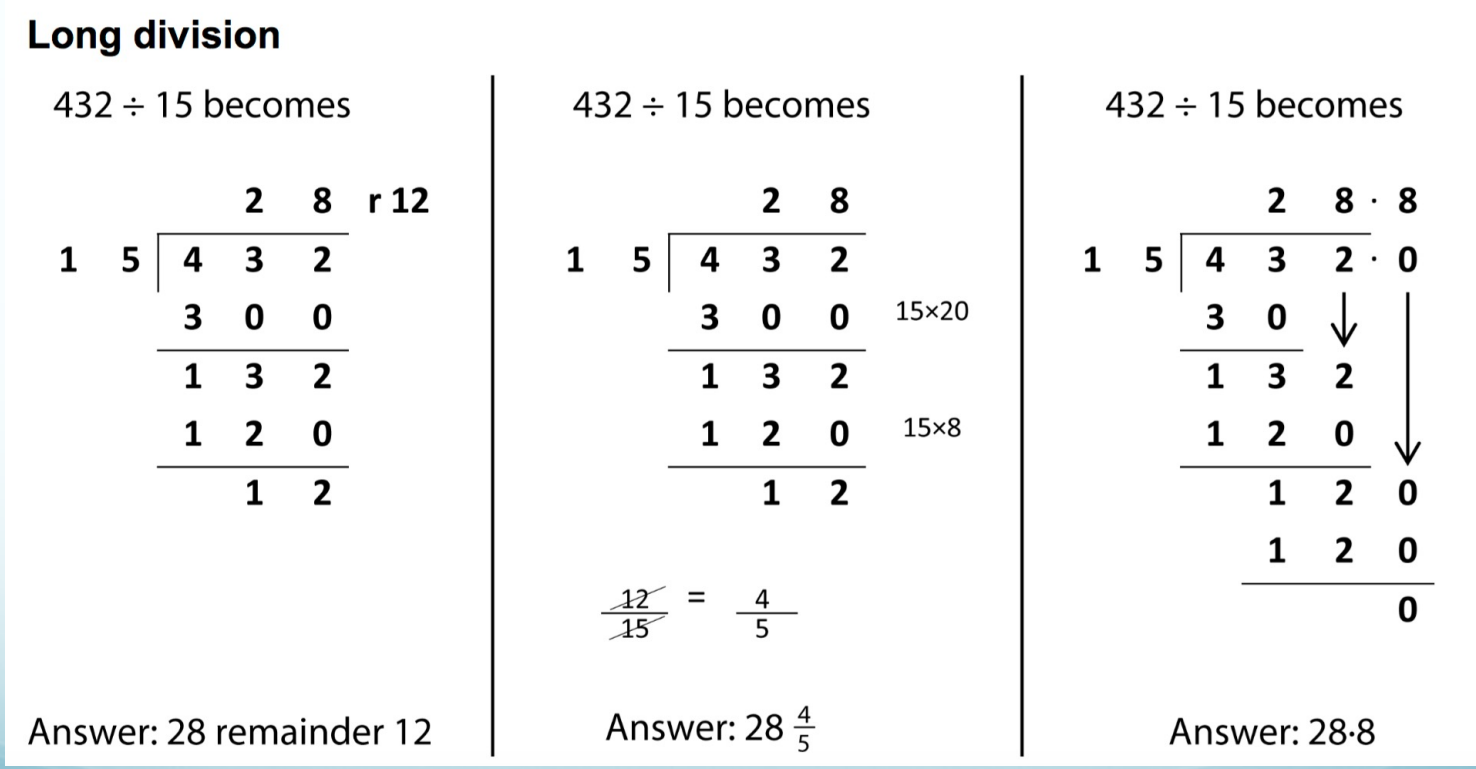
Short and Long Division

Short division is when you divide a number by a single digit number.



Short and Long Division

Long division is when you divide a number and write down the page to show



Recap of the formal methods

Column Addition

Th	H	T	U	
7	9	4	8	
1	2	2	3	+
9	1	7	1	
1		1		

Column Subtraction

$$\begin{array}{r} {}^{6}\cancel{7}\,{}^{1}2 \\ 5\ 6 \\ \hline 1\ 6 \end{array}$$

Long & Short Division

Long & Short Multipl.

432 ÷ 15 becomes

$$\begin{array}{rr|l} & 2\ 8 & \\ 1\ 5 & 4\ 3\ 2 & \\ & 3\ 0\ 0 & 15\times 20 \\ \hline & 1\ 3\ 2 & \\ & 1\ 2\ 0 & 15\times 8 \\ \hline & 1\ 2 & \end{array}$$

24 × 16 becomes

$$\begin{array}{r} {\scriptstyle 2} \\ 2\ 4 \\ \times\ 1\ 6 \\ \hline 2\ 4\ 0 \\ 1\ 4\ 4 \\ \hline 3\ 8\ 4 \end{array}$$

What can you do at home?

Basic skills – telling the time, talking about money and change, playing with measurements (height, mass, volume), on the spot times tables, number bonds to 10/20/100.

Homework – opportunity to talk with your children and challenge them. How do you know that? Explain. Teach me!

Importance – discuss the importance, share and encourage.

Useful Websites/links/help

Education City: https://ec1.educationcity.com

Nrich: http://nrich.maths.org/

My Maths: https://www.mymaths.co.uk

Apps: Maths Splat; Maths Sumo; Puffin Academy; Logic Squares; Telling Time.

OUR website! Check out our videos for the formal methods.

Any questions?

Thank you for listening!

If you did have any questions then please come and see me at the end.