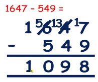
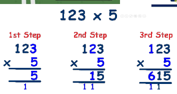
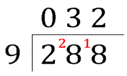
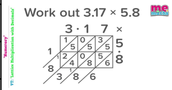
GCSE Foundation Maths - Learning Journey

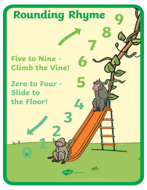
Topic	Remember this!
Four operations	Show full workings
Ordering Values	Use place value columns to compare
Powers of ten	The decimal points appears to move left or right
Comparing and Ordering decimals	use place value columns to compare (write them one on top fo the other)
Rounding	Know the difference between decimal places and significant figures
Calculating and estimating with decimals	Estimating means that you do nto work it out exactly
Squares and Cubes	Squaring does nto mean x 2…it means times by itself!
Roots	Square root does not mean divid by 2
Powers	don't just multiply by the power!
Laws of Indices	When multiplying, you add the powers
Factors Multiples and Primes	Know the difference. Remember to list ALL of the factors
Product of prime factors	Draw the tree
HCF and LCM - Identification	List and look…what do they have in common?
HCF and LCM - Venn diagrams	Draw the trees and then put it in a Venn diagram. Middle = HCF
Gathering like terms	Think of it like a shopping list (2 appes + 3 apples = 5 apples)
Simplifying expressions	Remember that a x a = a²
Algebraic laws of indices	When multiplying, you add the powers (the numbers at the front however you do normally)
Expanding brackets	Multiply verythign inside by the value at the front
Expanding and simplifying	Do what it says…expand and then simplify
Factorising lienar expressions	The opposite of expanding - put it into brackets
Substitution	swap the numbers in and then use BIDMAS
Writing expressions and formulae	remember that 4 x a is written 4a

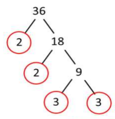












Factors of 16: 1 2 4 8 16

The highest common factor is 8

Factors of 24: 1 2 3 4 6 8 12 24

Let us find the L.C.M. of 28 and 12

Multiples of 28 are 28, 56, 84, 112, …….

Multiples of 12 are 12, 24, 36, 48, 60, 72, 84, 96, …….

The least common multiple (L.C.M.) of 28 and 12 is 84.

$230000000000 = 2.3 \times 10^{11}$

$0.0000000000002 = 2 \times 10^{-13}$

2 x a = 2a	2a x 3b = 6ab
3 x q = 3q	a ÷ 2 = $\frac{a}{2}$
2a x 3 = 6a	a + a = 2a
a x b = ab	a x a = a²

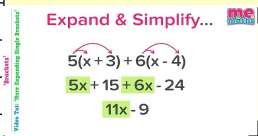
WHITEBOARD MATHS

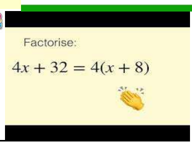
Laws of indices

$a^m \times a^n = a^{m+n}$

$a^m \div a^n = a^{m-n}$

$(a^m)^n = a^{m \times n}$





$5(3x+2)-2=-2(1-7x)$ *Distribute.*

$15x+10-2=-2+14x$ *Combine same-side like terms.*

$15x+8=-2+14x$

$15x+8-14x=-2+14x-14x$ *Combine opposite-side like terms.*

$x+8=-2$ *Solve.*

$x+8-8=-2-8$

$x=-10$