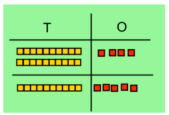
Year 2 calculation guidance

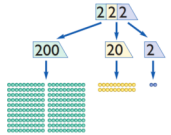
+ Addition +

More Sum Altogether Add Plus Total

Addition can be done in any order (commutative) 34 + 56 or 56 + 34

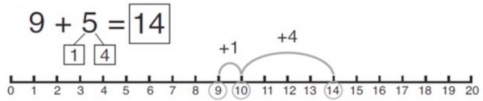
Understand place value – can partition numbers & recombine numbers





37= 30 + 7 30+7 = 37

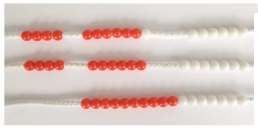
Use partitioning to add numbers, first with concrete apparatus, then as a possible mental method. Have a range of mental methods for calculating first with numbers to 20, then with numbers to 100 e.g. breaking numbers apart to use them flexibly, this may be with a bridging strategy (e.g. 7+5 could be thought of as 7+3+2 or 5+5+2), a compensating strategy (e.g. 7+9 could be thought of as 7+10 then -1) or by using a near double (e.g.

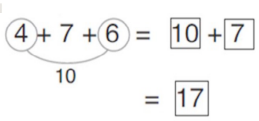


7+8 =14+1).

Learn to add three numbers 4 + 7 + 6= 17

Put 4 and 6 together to make 10. Add on 7.





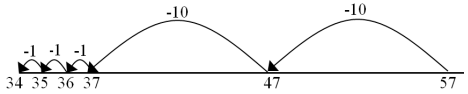
Use number bonds e.g. 4+6=10 to work out 40+60=100

- Subtraction -

minus Subtract take away less than difference between

Subtract using concrete objects such as Numcion, make the whole and take away the correct amount. Then progress to pictorial representations and mental methods.

Start at the bigger number and count back the smaller number showing the jumps on the number line.

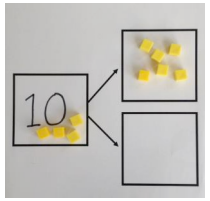


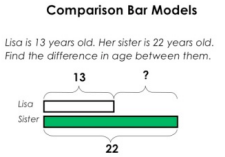
This can progress all the way to counting back using two 2 digit numbers. Know bonds to 100 (at least with multiples of 10). Understand the number line as a continuum.

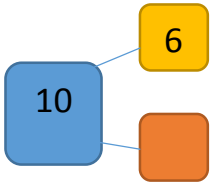
Understand that subtraction is the inverse of addition

10	
6	4

(Numicon is a particularly useful image) and bar model.

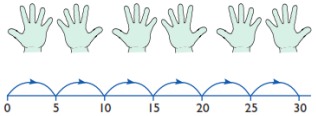






× Multiplication ×

Multiply times lots of groups of multiple of product

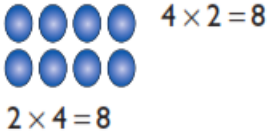


By the end of the year pupils should recall all multiplication facts for the 2, 5 and 10 times tables.

Understand multiplication as scaling.

The giant is twice as big as a boy.

Understand that multiplication is commutative (arrays eg. Numicon and Cuisenaire particularly useful).



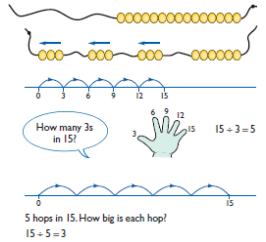
Understand that multiplication and division are the inverse of each other.

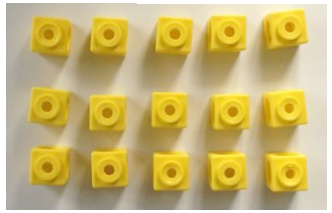
4x10=40
10x4=40
40÷4=10
40÷10=4

÷ Division ÷

Share equally group equally divide remainder factor

By the end of the year pupils should recall all division facts for the 2, 5 and 10 times tables.





Link division to multiplication by creating an array and thinking about the number sentences that can be created.

Eg 15 ÷ 3 = 5 5 x 3 = 15
15 ÷ 5 = 3 3 x 5 = 15

Finding remainers: Divide objects between groups and see how much is left over 14 ÷ 3 =