Year 1

Addition and Subtraction

- Read, write and interpret mathematical statements involving addition, subtraction and equals signs
- Represent and use number bonds and related subtraction facts within 20
- Add and subtract one digit and two digit numbers to 20, including 0
- Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = ? - 9
- Children understand the effect of adding and subtracting zero. This establishes the relationship between the two operations.
- Understand that addition can be done in any order but subtraction cannot.

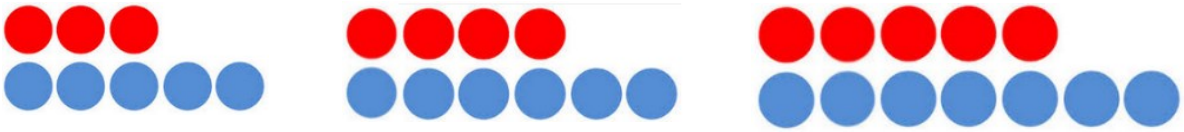
Mental Strategies

Teachers and/or pupils may demonstrate these strategies on a numbered number line supported by a variety of materials.

Children know by heart and reason with number bonds to 10 and 20 in several forms.

9+7 = 16 16—7= 9 7 = 16 — 9

9—6 = ☐ -4



Same diff: 5-3 equals 6-4 equals 7-5

Balancing: 5 add 5 equals 6 add 4 equals 7 add 3

Addition

Reorder numbers when adding, e.g put the larger number first

4 + 9 becomes 9+4

Count on or back in ones, twos, fives or tens

Partition small numbers

8 + 3 = 8 +2 +1

Partition and combine tens and ones

13 + 12 = 10 + 10 + 3 + 2 = 20 + 5 = 25

Partition smaller number only

14 + 12 = 14 + 10 = 24 + 2 = 26

Partition, double and adjust

5 + 6 = 5 + 5+ 1 = 11

Subtraction

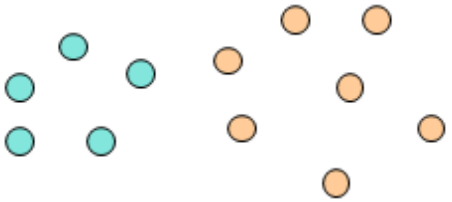
Partition smaller number and subtract.

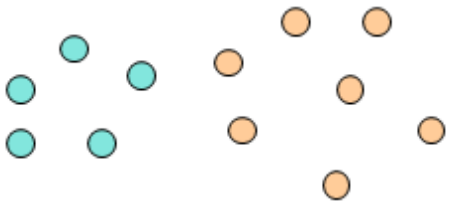
Year 1 Addition and subtraction

One digit and two digit numbers to 20.

Models and representations—To support the learning of number facts use a variety of manipulatives.

Combining two sets and counting all, progress to putting larger number first and

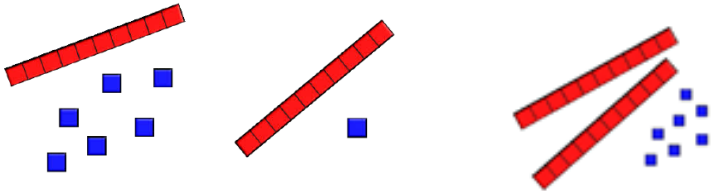




Counting all; 1,2,3,4,5,6,7 etc **Counting on; 5,6,7, 8, 9, 10 etc**

Larger number first and count on

Using partitioning for teen number + teen

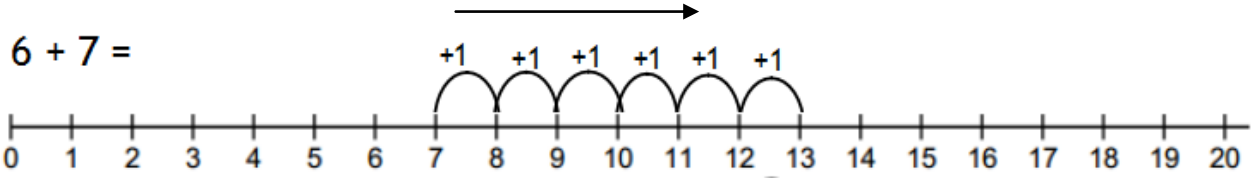


Tens	Ones
●	●●● ●●●
●	●

Children need to be given experiences which enable them to see the relationship between addition and subtraction.

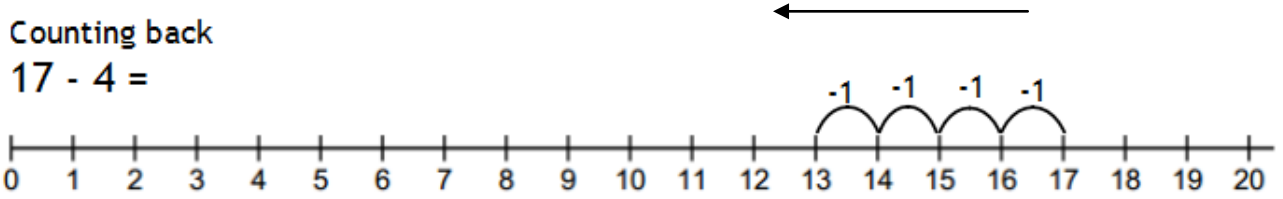
Addition

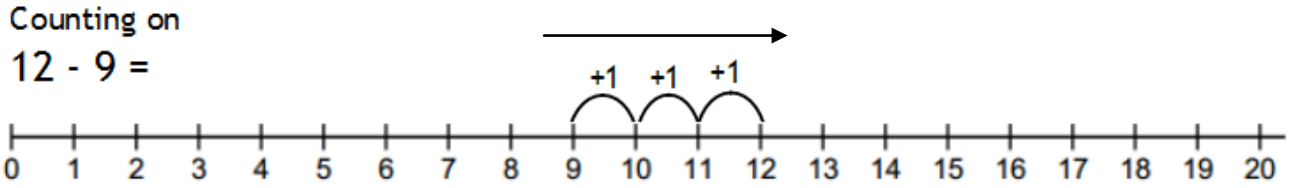
Encourage use of number bonds when children are fluent with these.



Subtraction

In the first instance, children should be introduced to subtraction as counting back. Counting on is a progression from this and teachers should use vocabulary such as, '*How many more? What is the difference between?*'



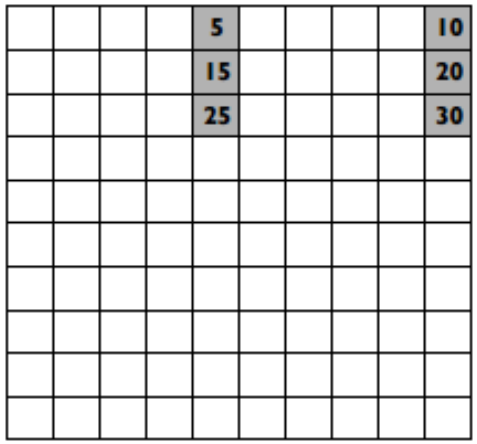


Year 1	Multiplication and Division

- Solve one- step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.
- *Through grouping and sharing small quantities, pupils begin to understand :multiplication and division; doubling numbers and quantities; and finding simple fractions of objects, numbers and quantities.*
- *They make connections between arrays, number patterns and counting in twos, fives and tens.*

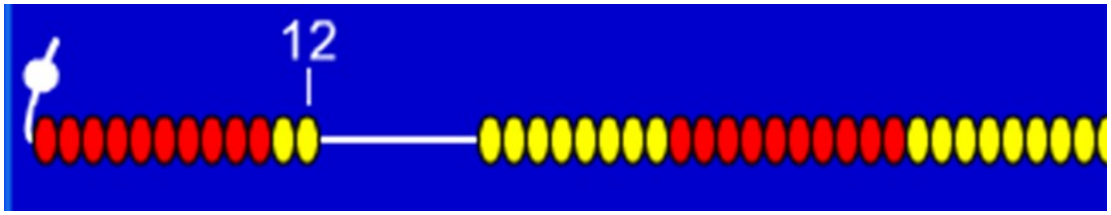
Mental Strategies -

Teachers and/or pupils may demonstrate these strategies on a numbered number line supported by a variety of materials.

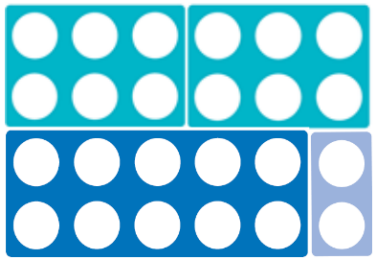


Use 100 grid to discuss patterns counting in 2s, 5s and

Laying foundations for multiplying and dividing by maximising opportunities when counting



Counting on and back ITP

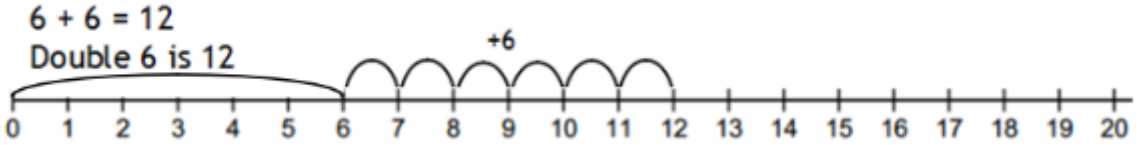


Using Numicon or Cuisenaire for doubles.

Counting in twos

Counting on fingers

Doubling (Numbers and quantities)



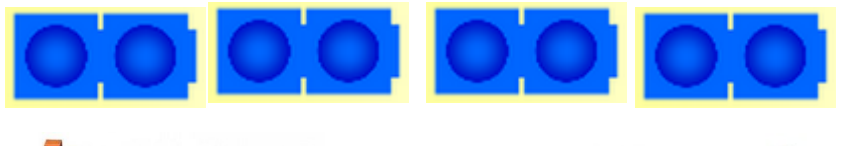
Year 1 Multiplication and Division

Calculating the answer using **concrete objects, pictorial representations and arrays with the support of the teacher.**

Models

Lots of and groups of the same thing.

Unitising—Children need to understand that one object can represent more than one item. E.g. a

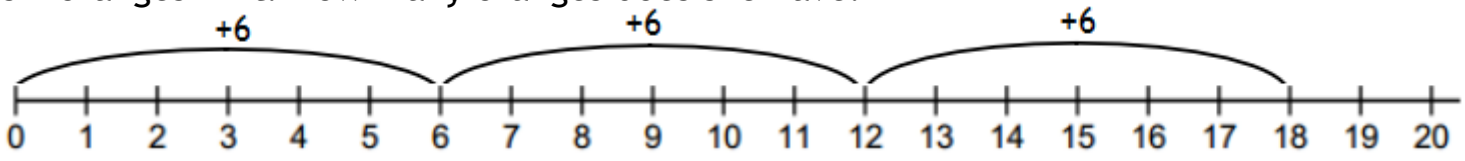


Arrays

Arrays can be used to support children in their understanding the structure of multiplication **and** division.

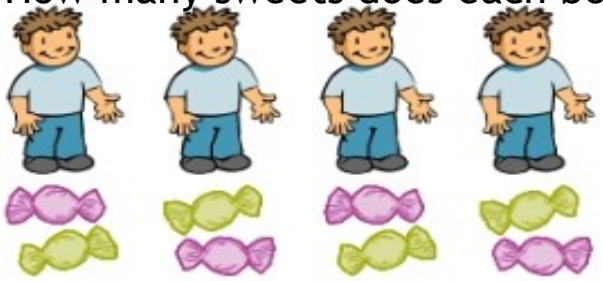
One step problems involving multiplication and division

Jill has 3 bags of oranges and each has six oranges in it. How many oranges does she have?



Sharing

There are eight sweets and four boys. How many sweets does each boy get?



Grouping

24 eggs are packed into boxes of 6. Put 6 eggs in the first box and continue until there are none left. How many boxes are needed? (repeated subtraction)