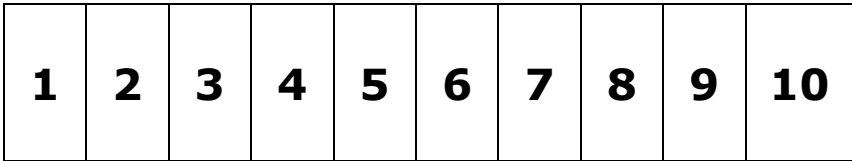




## **Numeracy parents evening**

- Methods taught in the classroom.
- Ideas for improving numeracy skills at home.

## Counting, adding and subtracting on a number track

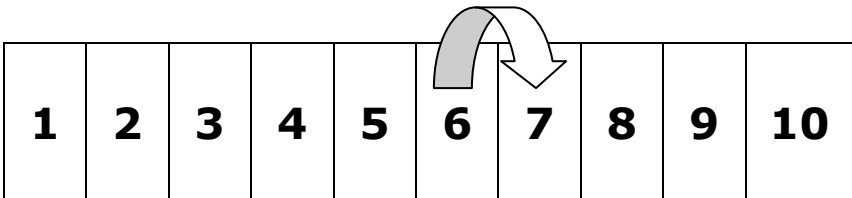


When children count objects they can find it difficult to remember which objects they have counted. By placing the objects in a line their counting will be more reliable.

Placing objects along a number track helps children with one to one correspondence and will help reinforce the number order and the recognition of numbers.

A number track can be used to help children to find numbers and to see where they come in the number sequence.

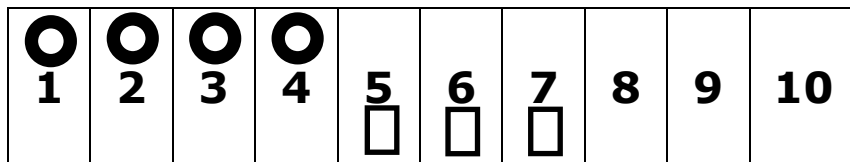
When using a number track to find one more than 6, for example, encourage your child to put their finger or a counter on number 6 and make a clear 'jump' onto 7.



A number track can be used to help children to add objects or numbers. Children need to use objects first when doing addition.

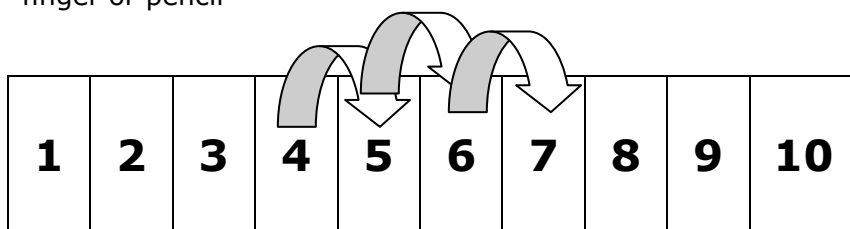
To find out what  $4 + 3 =$

4 objects can be placed on the number track followed by another 3 objects, and the child will be able to see clearly that they have 7 altogether



As children become more confident with numbers they will begin to be able to jump along the number track with their finger or pencil. Again it is important that the children make a clear 'jump' onto the next number.

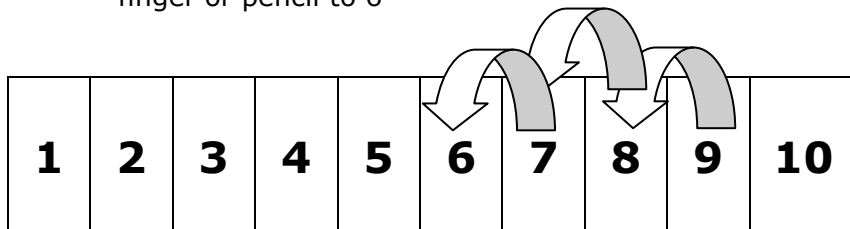
To do the same sum:  $4 + 3 = 7$   
 children will start at 4 and make 3 clear jumps with their finger or pencil



A number track can also be used to find one less or to do subtraction.

To work out  $9 - 3 =$   
 9 counters are placed on a number track and then 3 are removed. This leaves 6

Children will then progress onto:  
 Starting at 9 and jumping back 3 places, with their finger or pencil to 6

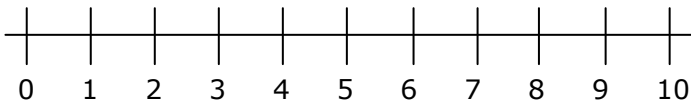


## Progression from number tracks to number lines

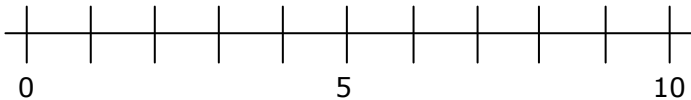
When children are confident with working on a number track they will begin to use number lines.

There are different number lines that the children will use throughout the school.

**Numbered number line** has numbers marked at regular intervals along the line:



**Part-numbered number line** has key landmarks such as the multiples of 5:



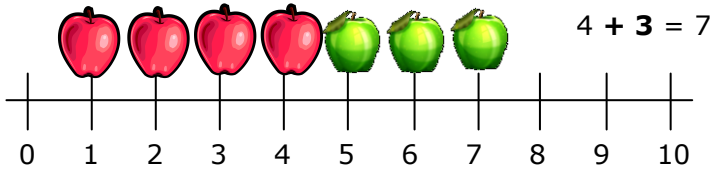
**Empty number line** is a line on which the children record their own intervals, jumps and numbers. The line is an informal way of recording and usually drawn by the child as he/she is working.



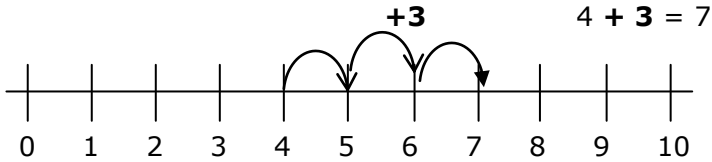
**All** of these number lines are used to help children with addition, subtraction, multiplication and division.

## Addition on the number line

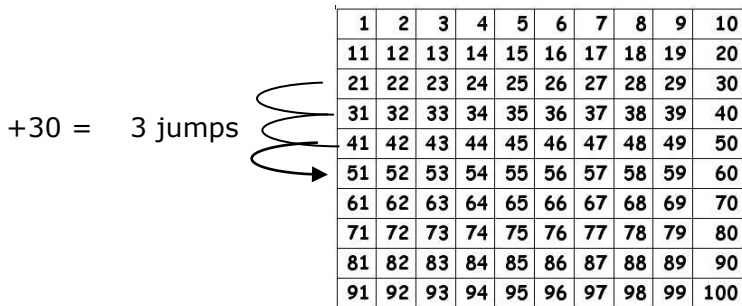
When children move to using a number line they may use pictures and jumps to show their working.



They will then move to just using jumps on from one number.



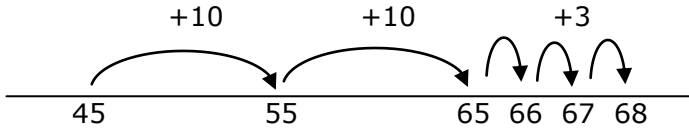
With the help of a 100 square, children begin counting in tens starting with a multiple of ten. They can then learn to count in tens starting with any 2 digit number. They will be helped to recognise that counting in tens repeats the unit digit, that only the 'tens' change, and that this is the same as adding in tens. Then they will move on to adding multiples of 10 (eg.  $21+30$  is 3 jumps down the 100 square).



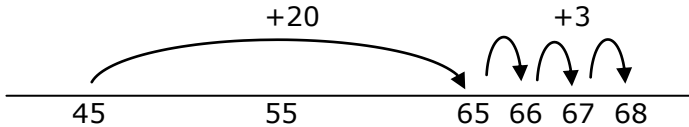
## Jump 10's first

When the children are adding 2 digit numbers they will use their knowledge of tens and units and jump the tens first.

$$45 + 23 =$$



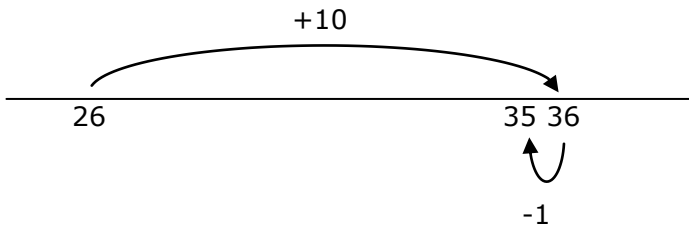
and moving on to:



## Jump and adjust

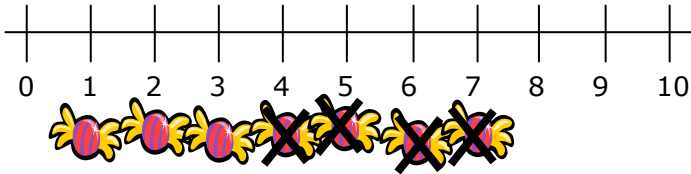
When adding 9 (or 19, 29 etc) children can add 10 and take off 1, all using a 100 square. They can then move on to a number line and be able to show the following:

$$26 + 9 = 26 + (10-1) = 35$$



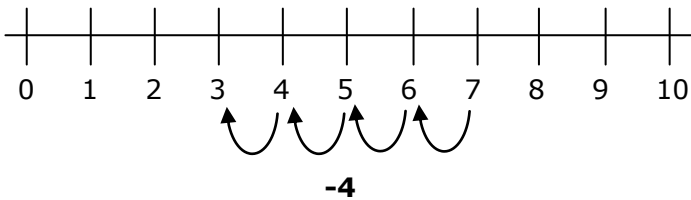
## Subtraction on the number line

When subtracting on a number line children may use pictures and jumps to show their working.



$$7 - 4 = 3$$

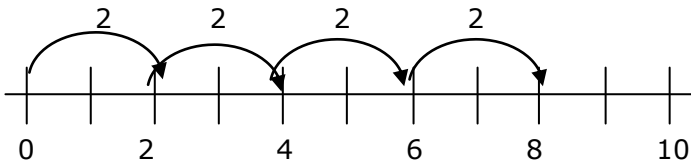
They will then move to just using jumps back to show subtraction.



## Multiplication and division

Multiplication is first introduced as 'lots of' or 'groups of' and will be pictorial. Later we introduce as repeated addition, where the children will jump along a number line in equal jumps.

If I eat 2 apples a day, then how many apples would I eat in 4 days?



$$2 + 2 + 2 + 2 = 8$$

$$4 \text{ groups of } 2 = 8$$

$$2 \times 4 = 8$$

$$2 \text{ multiplied by } 4 = 8$$

## Division - sharing

Children are introduced to both aspects of division, that of sharing and of grouping, so that they begin to recognise that the number sentence is the same in both cases.

When sharing there is sometimes a remainder. When sweets are shared at home any remainder can be easily dealt with (by giving to mum!).

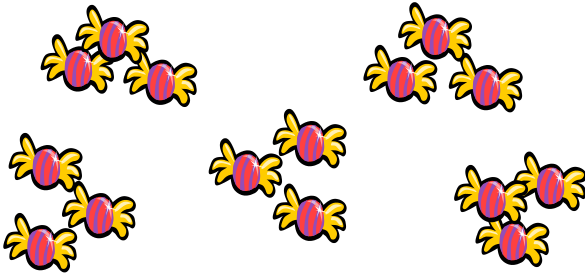
In class sharing is all taught using real objects such as sweets or maths cubes, as it is difficult to teach pictorially (on paper).



## Division - grouping

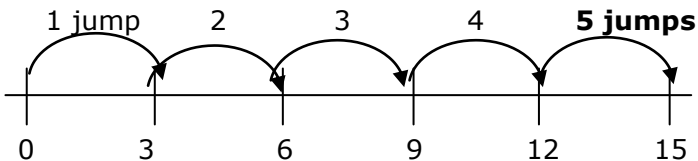
For grouping, children will subtract in equal jumps.

There are 15 sweets. How many groups of 3 are there?



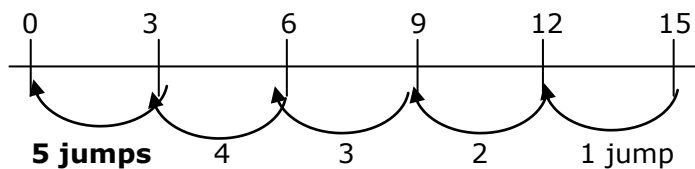
After a good deal of practical and then pictorial representation the children can move on to working with a number line.

The children will start at 0 and make jumps of 3 going along the number line until they reach 15.



OR

The children will start at 15 and make jumps of 3 going back along the number line.



15 sweets divided into groups of 3 is **5** groups.

## Ideas For Games/Activities To Practise Number Skills

### **Matching Pairs**

Encourages children to notice and think of attributes or characteristics of an object/shape/ number etc. This game can be adapted for **recognition** of numbers:

With a numbered set of cards, find matching numbers, e.g. 2 sevens.

Some cards can show numerals others can show number words and yet others can show multiple objects.

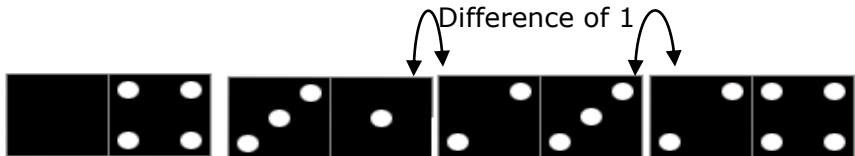
### **Calculations with cards**

With a numbered set of cards see if pairs (or more) of cards can be collected that:

- Total 8
- Total 20
- Have a difference of 2

### **Dominoes**

Put down dominoes so that 'next door neighbours' add up to 7, or have a difference of 1 (shown below).



Play dominoes in the normal way but score points each turn by adding together the two sets of dots at the ends of the domino chain.

### **Snakes and Ladders**

Encourage your to say what number must be thrown to land on a ladder or to avoid a snake?

Try playing back from 100, subtracting and going down ladders and up snakes. Or use 2 different colour dice and move the sum or difference thrown.

## **Bingo**

Number sentences can be written in the game card squares. When a number is called out the child can cross off the corresponding number sentence (eg.  $3+2=$  is crossed off when the number 5 is called).

Also try this with subtraction, division and multiplication.

## **Everyday Activities**

- Sorting and counting buttons, tins in cupboard etc.
- Cutlery for the table - how many do I need? Put out 6 cups when you need 5 – Silly me I've put out too many. How many should I take away?
- Noticing numbers with values out and about - traffic speeds, shoe shop tickets, delicatessen counter tickets.
- We have 3 children for tea. The buns come in packs of 2 what can we do?
- Sorting socks into pairs. How many pairs? How many socks?
- Decorating cakes with smarties - I want 3 on each cake. Have we got enough? If you get to eat the remainder how many will that be?
- Sharing out sweets equally between friends – mum has remainder how many is that?
- Paying for SMALL amounts - what coins could I use?