# Supporting your Child in Maths

Step by step guide to early practical and written calculation methods.

- **Based on research of how children best understand numbers and calculation**

- **Can be used for large numbers, decimals and negative numbers**

- **These methods build up strong visual images, which children can transfer to more difficult calculations**

- **Alongside these children develop mental methods and using a calculator**
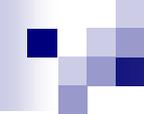
Mathematics

In Key Stage 1 the children are expected:

- to become fluent in the basics of maths, through frequent practice to develop understanding and ability to recall and apply knowledge quickly and accurately.
- To reason mathematically and solve problems without giving up.
- To use maths vocabulary correctly.

The key focus areas:

- whole numbers, counting, place value, time and money.

Number

Year 1

- Number recognition. At home- look at numbers and say the number as you see it in the house or when outside.
- Counting to and across 100, forwards and backwards beginning with 0 or 1, or from any given number. At home- count every day up and down.
- Combining 2 groups of everyday objects. At home make a game of adding 2 things together, saying the numbers as you add them- remember to start from the first number and count on.
- Use mathematical language; equal to, more than, most. At home relate the vocabulary to everyday objects and activities- you have more sweets than your brother. You both have the same number of books- that means the numbers are equal.

- Writing simple number sentences. At home, if you are doing any calculations on a paper or the computer, let your child see what you are doing and say what you are doing using the correct vocabulary of 'I am adding or I am subtracting/taking away' etc
- In school we use pictorial representations – a number line to support understanding of addition and subtraction. At home, please do not confuse your child by showing them different methods, school will move onto those methods when the children are ready
- Recite 2 and 10 x tables as you walk to school- this is not the same as counting in 2s and 10s.
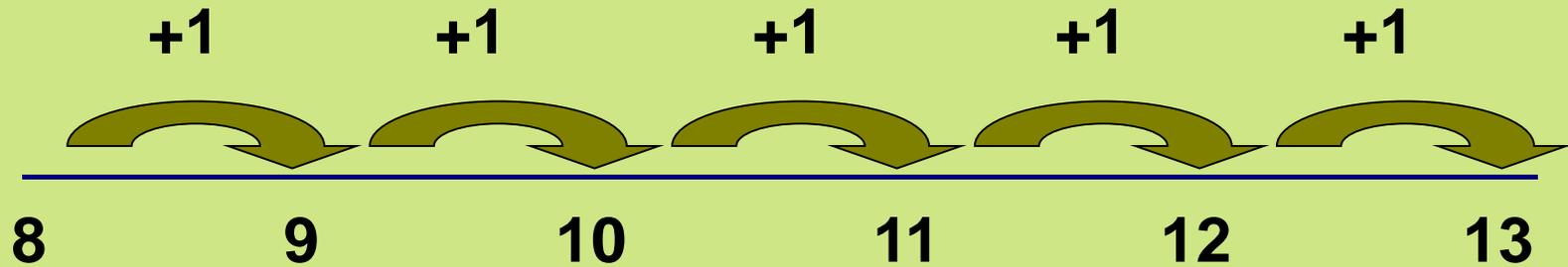
Number

Year 2

- Counting. At home continue to count up and down and across 100, 200 etc from any given number.

- Addition /subtraction. At home- please continue to support the use of the empty number line for addition and subtraction.

- Mentally subtract a 2 digit number from another 2 digit number. At home practise mentally subtracting single digits.

- Estimation. At home ask your child what number is 9 really close/near to? 10. What about 29? 30 or 41? 40.

- Recite 2,3,4,5,10 x tables as you walk to school or the shops. Mix them up. Little and often. Begin to link to the related multiplication i.e. 3 x 4 = 12 and related division facts e.g. if 4 x 3 = 12 then 12 ÷ 3 =4 and 12 ÷ 4 = 3.
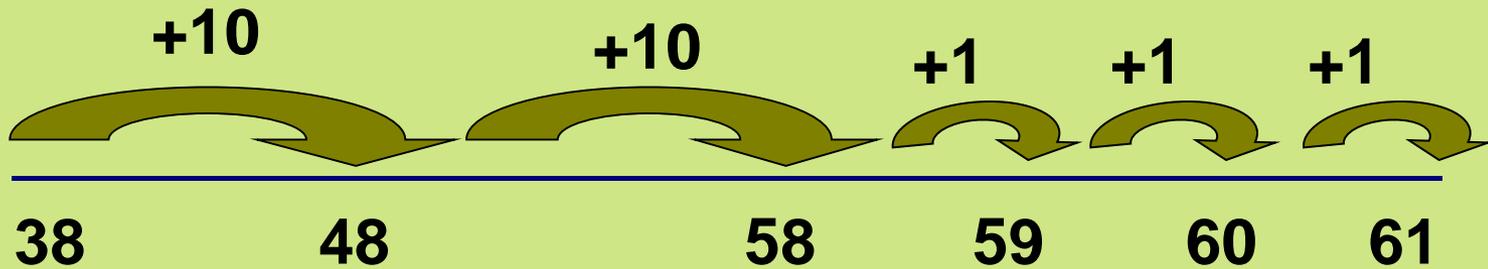
Number line - addition

8 + 5

+1 +1 +1 +1 +1

8 9 10 11 12 13

The answer is 13

Number line - addition

Year 2

38 + 23

The answer is 61

Number line - addition

52 + 36

+30

+6

52   82   88
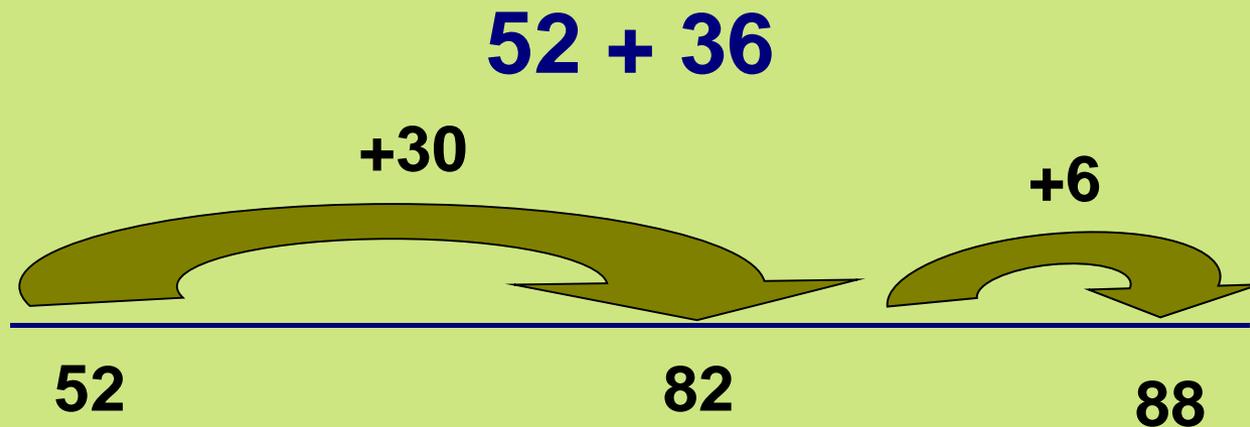
The answer is 88

Always start with largest number and add the smaller number on in steps.

Year 2

- Also partitioning in different ways e.g.

  23 = 20 + 3

  23 = 10 + 13

At home use the terms tens and units when looking at 2 digit numbers.

Column Addition

■ This will be introduced in the summer term Year 2 when appropriate- please do not teach this method at home before this.

```
    T   U
    6   4
+   2   3
———————————
    8   7
```

Column Addition

- If appropriate we may extend to carrying.

```
  T  U
  4  6
  2  5
 ───────
  7  1
 ───────
    1
```

Number line - subtraction

9 – 4

```
                    5    6    7    8    9
_____

                    -1   -1   -1   -1
```
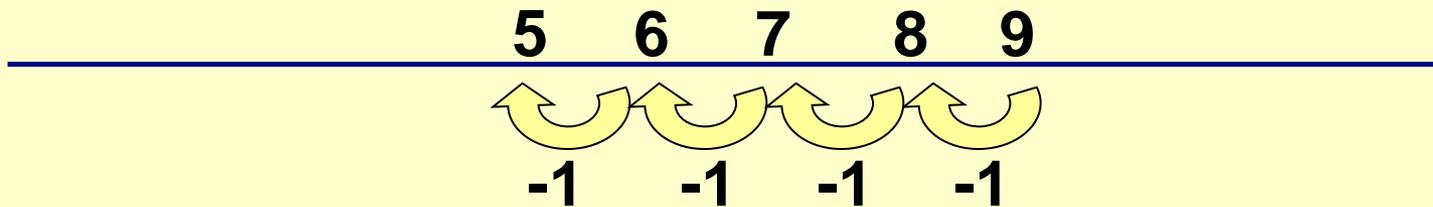
The answer is 5

Number line - subtraction

Year 2

Counting back in tens and ones:

34 – 12

22   **23**   **24**   **34**

-1   **-1**   **-10**
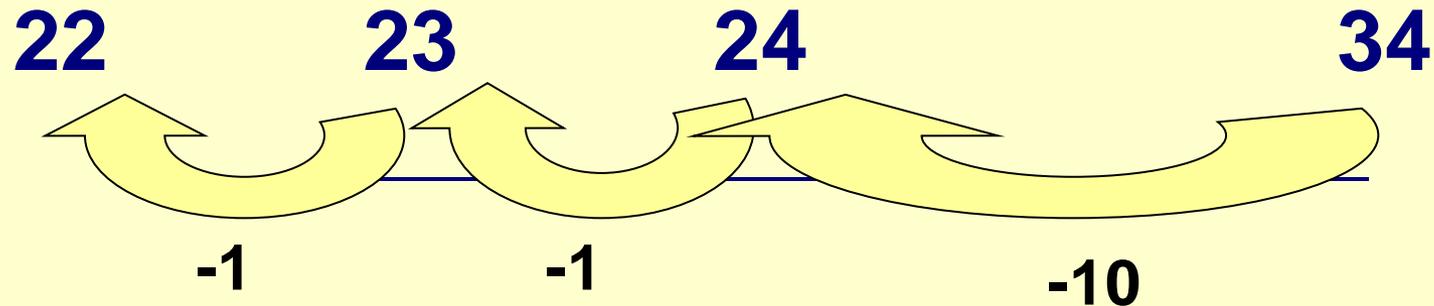
The answer is 22

Year 2
Column subtraction

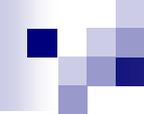- This will be introduced in the summer term Year 2 if appropriate- please do not teach this method at home before this.

$$
\begin{array}{cc}
T & U \\
6 & 4 \\
- \ 2 & 3 \\
\hline
4 & 1
\end{array}
$$

Column Subtraction 'Giving Method'

- If appropriate we may extend to the 'giving method for column subtraction.

$$
\begin{array}{cc}
T & U \\
4 & {}^{|}4 \\
2\,_3 & 5 \\
\hline
1 & 9 \\
\hline
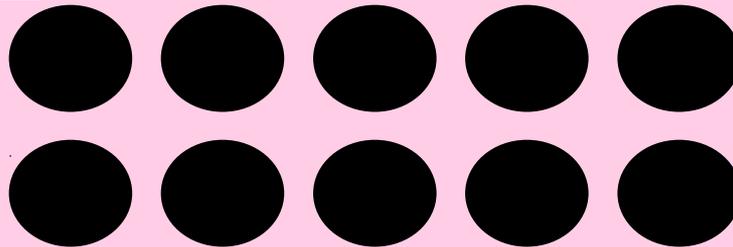\end{array}
$$

Multiplication and division

Year 1

- Halving and doubling. At home use vocabulary of half and double.

Year 2

- Continue halving and doubling. At home link to additional vocabulary half is dividing by 2, double is x 2 and twice.

Multiplication – Arrays   Year 2

5 x 2

5 x 2
or 5 + 5

2 x 5
or 2 + 2 + 2 + 2 + 2

Multiplication – grid method

42 x 2

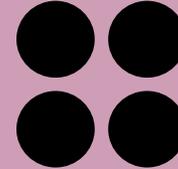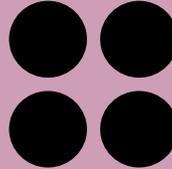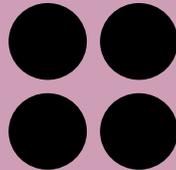| x	40	2
2	80	4

= 84

Division – sharing

Sharing-

12 sweets are shared equally between 3 children.

How many do they have each?

Division – grouping

In a class, 18 children are asked to get into groups of 6.
How many groups will there be?

Fractions
Year 1

- To recognise, find, name ½ as 1 of 2 equal parts of an object, shape or quantity.

- To recognise, find, name ¼ as 1 of 4 equal parts of an object, shape or quantity.

- At home- if you are cutting a cake or pizza etc into half or quarter then say the terms as you cut and say how many pieces there now are- remember they must be equal!

- - if you are counting out any objects to put into bowls, on plates or to give to members of the family, then use the vocabulary at the same time.

Fractions

Year 2

- Identify 1/3, ¼, ½, 2/4, ¾ of objects, shape or quantity.
- At home continue using the vocabulary of fractions but extend it to thirds and more that 1 part of a fraction e.g ¾

as you cut, count or share. Use the vocabulary of 'a whole' before you start cutting your cake or pizza and, if possible, show that you can have ' a whole and a half etc'.

Money

Year 1

- Recognise and know the value of coins and notes. At home count the money in your purse or pocket, saying the value of the coins as you count. Try and use cash at the shops for some small items and let your child count out the money. Set up a 'shop' at home so you and your child can buy and sell.

Year 2

- To use different coins to make the same amount. At home use actual coins and see how many ways you can make e.g 20p.

Time

Year 1

- Tell the time to the hour and half past. At home make sure you have an analogue clock (one with a face)that your child can see easily. When you look at the clock, say the time that it is showing especially if it is o'clock or half past. When your child is confident with those times then start to introduce quarter past and quarter to.

Year 2

- To read the time to the nearest 15 minutes. At home when you look at the clock, say the time that it is showing especially if it is quarter past and quarter to. When your child is confident with those times then start to say the time to the nearest 5 minutes.