



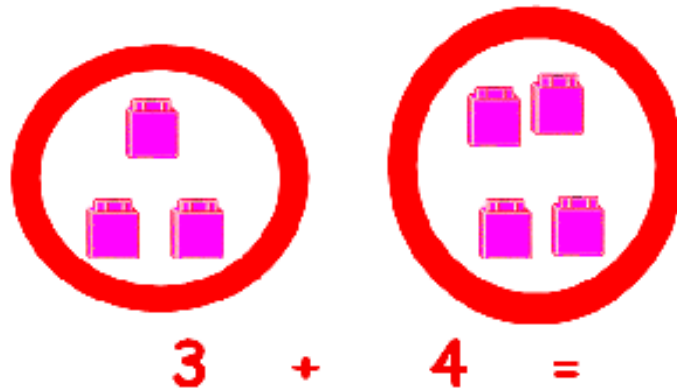
Year 1 and 2 Mathematics Booklet.

Addition

Calculations - Addition

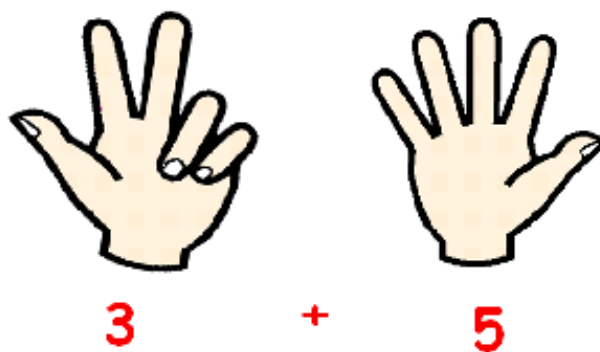
Year 1

Children start by using real objects, combining the 2 groups and counting the total number of objects.



Year 1

Children are taught to add numbers to 10 using their fingers



Year 1

Addition to 20 and beyond

Children are encouraged to put the largest number in their head and then count on using their fingers.



Year 1 Adding numbers up to 20

Children are then taught to find the largest number on a number strip and then counting on the smaller number.



$$9 + 5 =$$

Year 1 The hundred square

When adding a 1 digit number to a 2 digit number the children find the largest number on a 100 square and the count on the smaller number.

$$53 + 6 =$$

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Year 2 The empty number line

The children are taught to add 10 using an empty number line. They start by putting the largest number on the empty number line and then drawing on the jump of 10.

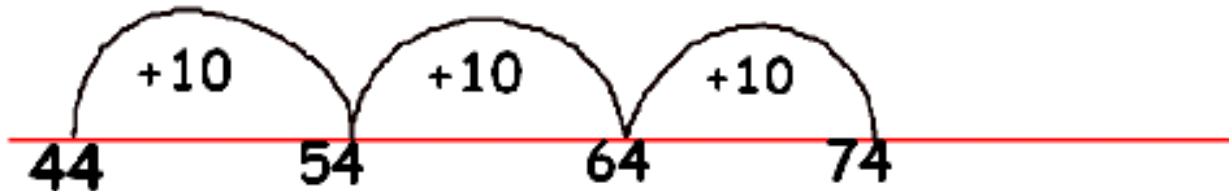
$$75 + 10 =$$



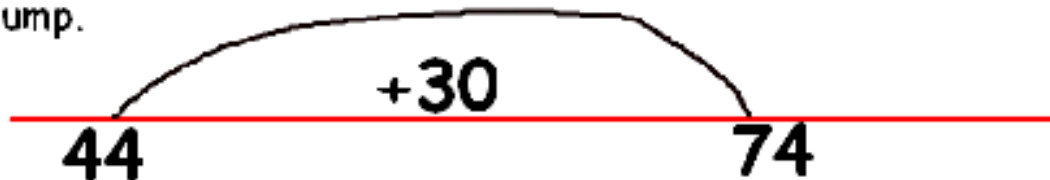
Year 2 The empty number line

Children are taught to put the largest number on the number line and then draw on the multiples of 10.

$$44 + 30 =$$



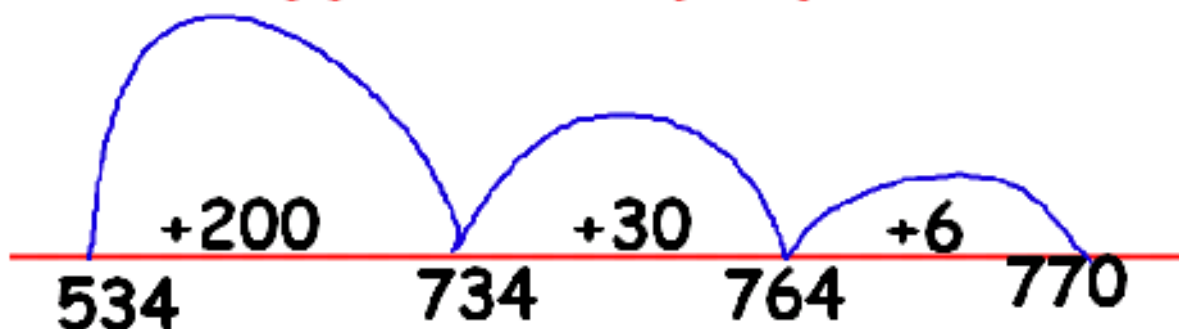
Some children who are confident to add multiples of 10 in their head will add all the multiples of 10 in one jump.



Year 2- The empty number line

Children who are confident to add multiples of 10 will be taught to add 3 digit numbers using an empty number line and partitioning .

$$534 + 236 =$$
$$534 + 200 + 30 + 6 =$$



Subtraction

Calculations - Subtraction

Year 1

Children begin by taking away objects from a given set



$$7 - 4 =$$

Year 1

Subtraction from 10 using fingers



$$8 - 5 =$$

Year 1 Subtracting numbers up to 20

Start from the largest number on a number strip and then count back.



$$14 - 5 =$$

Year 1 Using a hundred square

Subtracting a 1 digit number from a 2 digit number

When working with larger numbers children are taught to start from the largest number on a 100 square and count back.

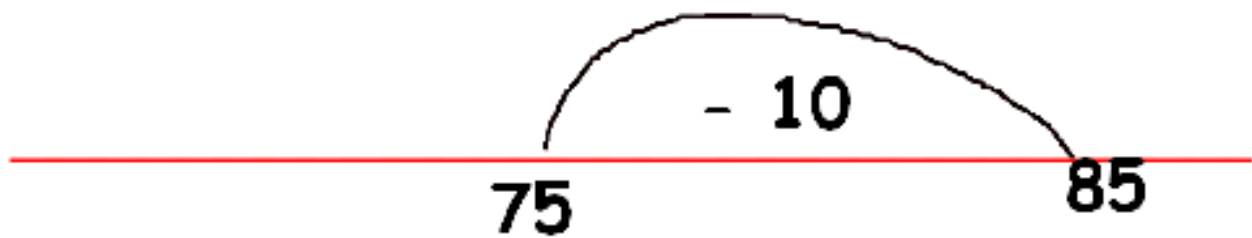
$$53 - 6 =$$

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Year 2 The empty number line

The children are taught to subtract 10 using an empty number line. They start by putting the large number on the right hand side of the empty number line and then drawing on the jump of 10.

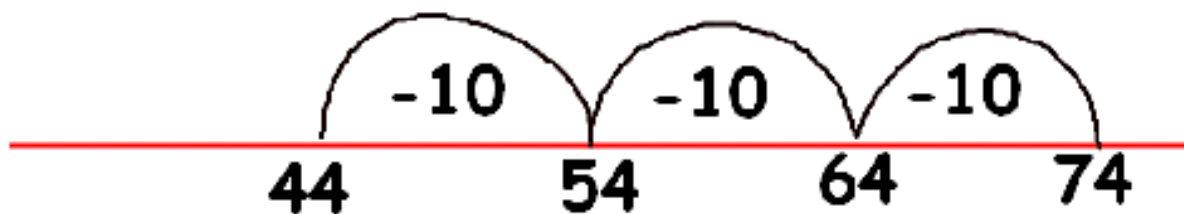
$$85 - 10 =$$



Year 2 The empty number line

Children start on the right hand side of the number line and then subtracting multiples of 10 using an empty number line.

$$74 - 30 =$$



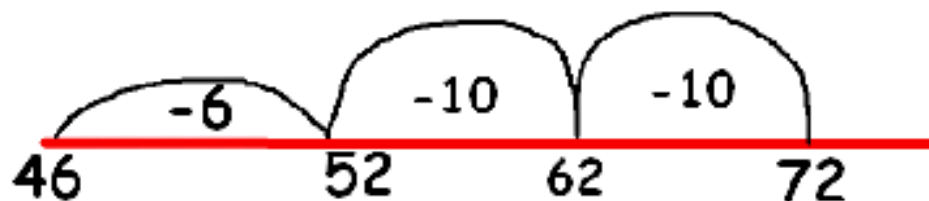
Children confident to subtract multiples of 10 will record this in one jump



Year 2 The empty number line

When subtracting a 2 digit number using an empty numberline children partition the smaller number into tens and units. Then record on an empty numberline starting on the right hand side.

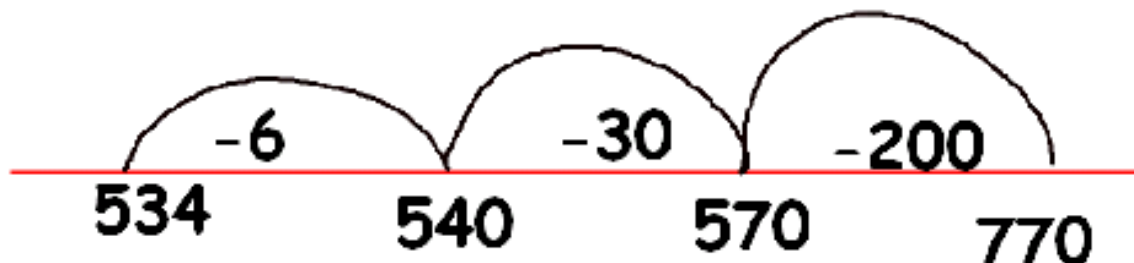
$$72 - 26 =$$
$$72 - 20 - 6 =$$



Year 2 The empty number line

Children can subtract 3 digit numbers using an empty number line and partitioning .

$$770 - 236 =$$
$$770 - 200 - 30 - 6 =$$

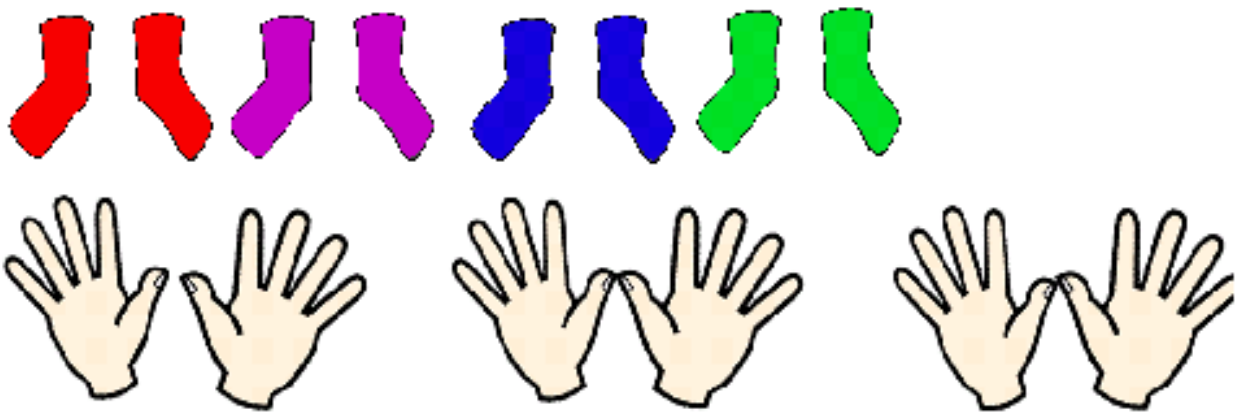


Multiplication

Calculations Multiplication

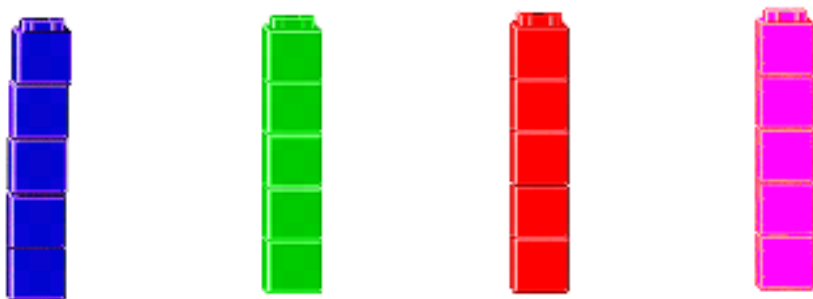
Year 1

Children practice counting socks and fingers etc in 2's, 10's and 5's as appropriate



Year 1 Making equal groups

Children use objects to make equal groups



4 lots of 5

Year 2 Array

Children draw an array

$$4 \times 3 =$$
$$4 \text{ lots of } 3 =$$

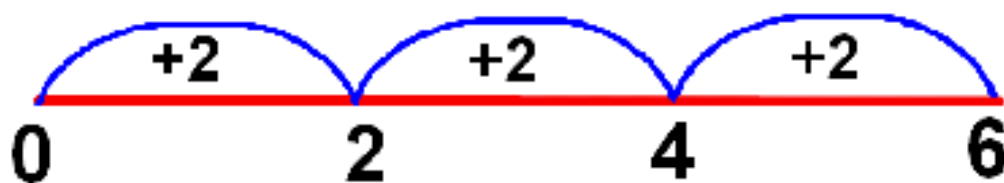
1 lot of 3	x	x	x	3
2 lots of 3	x	x	x	6
3 lots of 3	x	x	x	9
4 lots of 3	x	x	x	12

Year 2 The empty number line

Children are taught to show 3 groups of 2, as 3 jumps of 2 on the number line, then add the total number of jumps.

$$3 \times 2 =$$
$$3 \text{ lots of } 2$$

As repeated addition
- Jumps of the same amount
on a numberline



Year 2 Partition to multiply

Children are taught to multiply a 2 digit numbers by a single digit by partitioning the largest number.

$$13 \times 5 =$$

$$\begin{array}{r} 13 \times 5 = \\ \swarrow \quad \searrow \\ 10 \times 5 + 3 \times 5 = \\ 50 + 15 = \end{array}$$

Division

Calculations

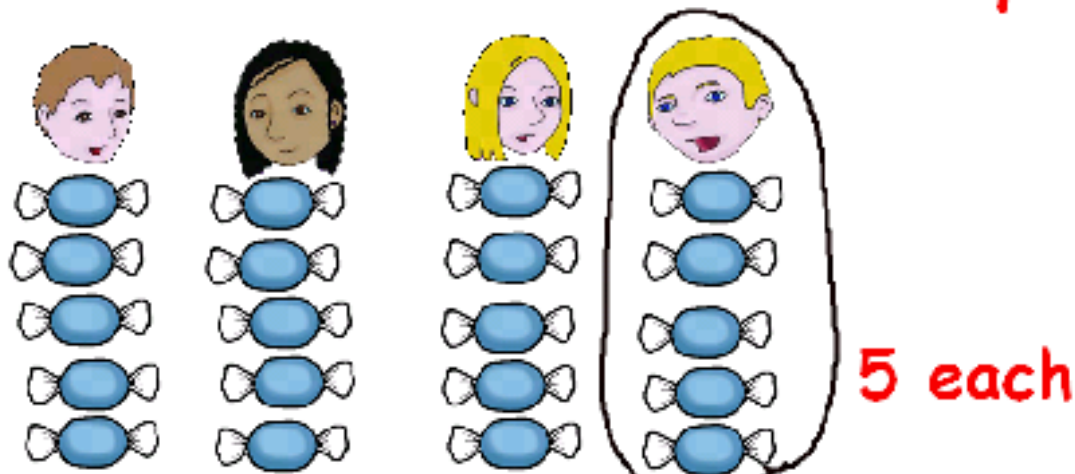
Division

Year 1 and year 2

Children share practically into equal groups, and record their sharing as an array.

$$20 \div 4 =$$

20 shared between 4 equals

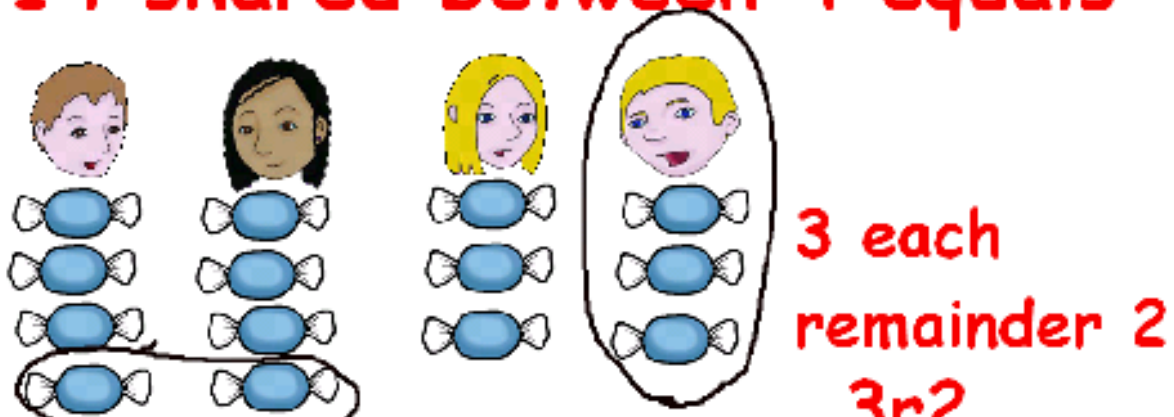


Year 2 Sharing into equal groups as an array

Children draw arrays to record their sharing into equal groups with remainders.

$$14 \div 4 =$$

14 shared between 4 equals



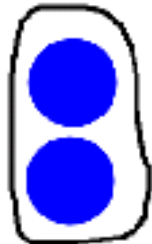
Year 2 Dividing into groups ~ arrays

Children organise counters into equal groups, and then count the groups. They progress to drawing their groups as arrays

$$6 \div 2 =$$



**1 group
of 2**



**2 groups
of 2**



**3 groups
of 2**