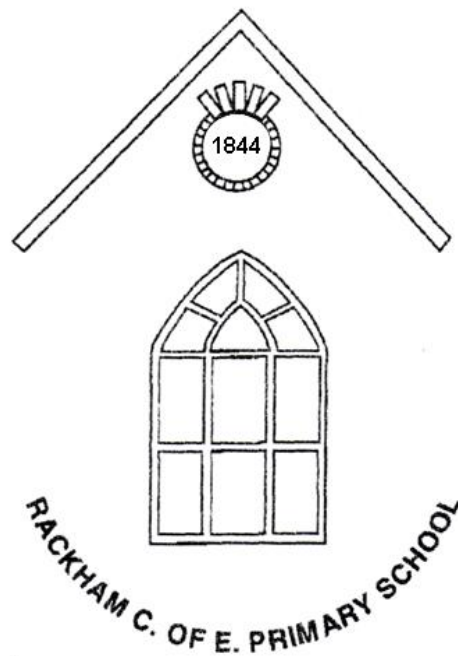


# Guidance on calculation methods in Year 1



Information on the four operations (+ - x and ÷) that follows may help you understand the processes your child might be using.

Children will set calculations out in 'number sentences' like this:

$$17 + 5 =$$

$$12 - 6 =$$

**If you have any further questions, do please let us know.**

## **Addition**

A lot of work in Key Stage 1 is done on adding pairs of single digit numbers together mentally so that the children know their number bonds to 10, 20, etc.

The progression of methods for addition starts with combining two or more numbers and counting how many there are **altogether**.

**Number sentence:  $4 + 15 =$**

The children count on from the largest number using a number line.

Children draw their own blank number lines to help them calculate the answer.

### Step by step: how to use a number line to add

Find bigger number on a number line and jump on the number of jumps of the smaller number.

Use items to help count on.

Use a ruler as a number line.



Or use a hundred square.

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

## Subtraction

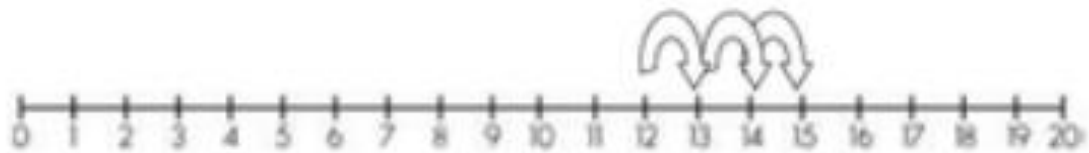
Count back on a number line or use objects.



Eventually the children will count on starting from the smaller number and stopping at the largest to find the difference.

$$15-12=$$

Look! We only have to count up 3 to get from 12 to 15!



## Multiplication

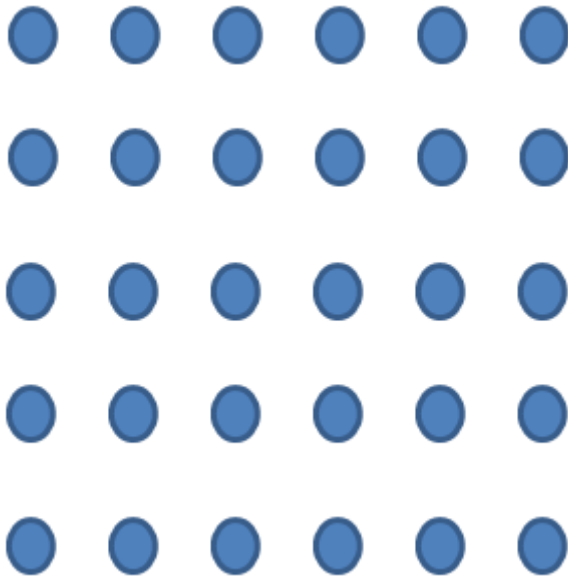
If children know multiples of 2 (the two times table), they can quickly work out multiples of 4 and of 8 (if they can find work out doubles).

The method for teaching multiplication are arrays, where children draw dots in rows/columns.

### Step by step: how to use arrays to multiply

$$5 \times 6 =$$

1  $5 \times 6$  would be drawn as 5 **rows** of 6.



2 Add up all the dots in the rows to find the total.

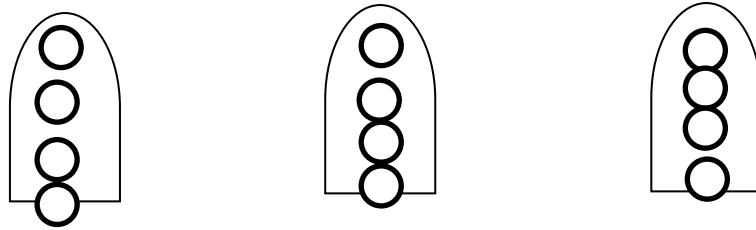
Additionally the children could use objects to make groups or arrays in a practical manner.

## Division:

The children could use objects to share into groups in a practical manner.

Children draw an upside down 'U' to share:

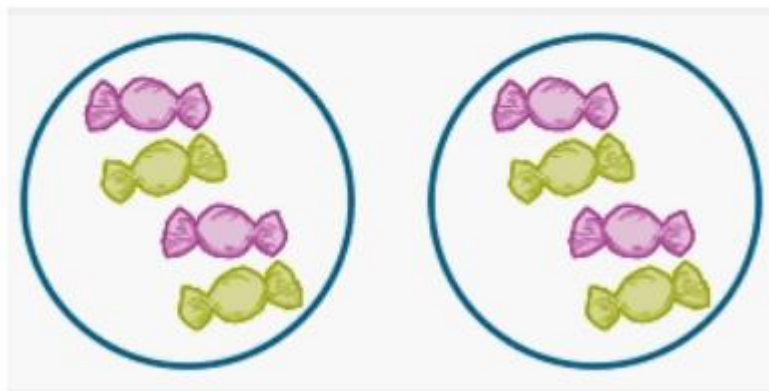
$$12 \div 3 =$$



## Fractions of quantities

$$1/2 \text{ of } 12 =$$

Practical sharing of objects into two groups.



Children could also use the upside down 'U' method to share into two groups.