

Maths methods

Key Stage 1: Year 1 and Year 2

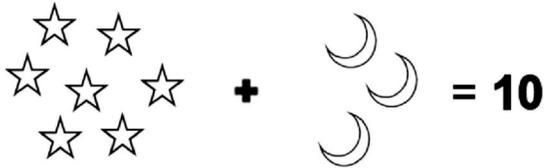
Maths methods and strategies taught in school now are very different from those that many parents learned at school. This can often cause confusion when parents are trying to support their child at home.

This document shows the main methods and vocabulary taught in each year group for addition, subtraction, multiplication and division. Each child's progress is different but most children will acquire these methods by the end of their year.

YEAR 1: Addition

Practical activities using pictures and practical resources (e.g. counters, blocks).

$$7 + 3$$



Partitioning 14 → 10 + 4 (14 splits to 10 and 4)

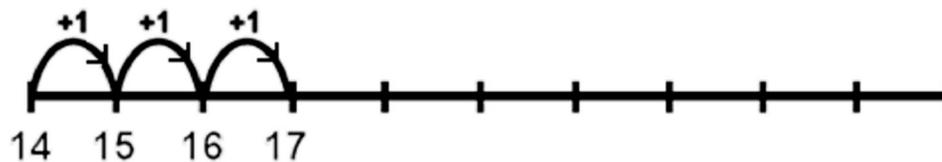
Arrow Cards are used in school to partition:



22 splits to give 20 and 2

Using number line/ tracks for addition:

$$14 + 3$$



*Start at 14, jump on in 'ones' three times
So the answer is 17*

$$14 + 3 = 17$$

Vocabulary:

+, add, more, plus, make, sum, total, altogether, score, double, one more, two more, ... ten more, how many more to make...? how many more is... than...? how much more is...?

YEAR 2: Addition

Practical rather than written, using 100 square.

Horizontal addition

Eg: $72 + 23$

$$\begin{array}{r} \rightarrow \\ 72 + 23 \\ \swarrow \quad \searrow \quad \swarrow \quad \searrow \\ 70 \quad 2 \quad 20 \quad 3 \end{array}$$

$$\begin{array}{r} (70 + 20) + (2 + 3) \\ 90 \quad + \quad 5 \\ 95 \end{array}$$

Collect the 'tens' together

$$70 + 20 = 90$$

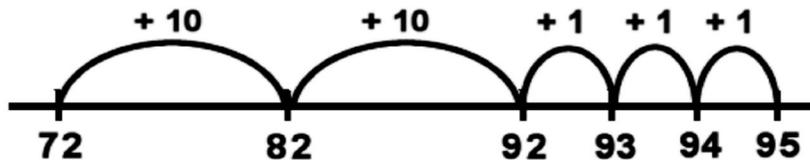
Then collect the 'units' together

$$2 + 3 = 5$$

Find the total $90 + 5 = 95$

Using number line for TU + TU

$$72 + 23$$



Start at 72 – Jump forward in 'tens' twice ($23=20+3$) then jump forward in 'ones' three times.

Vocabulary:

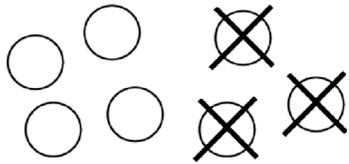
□ add, addition, more, plus make, sum, total altogether, score, double, near double, one more, two more... ten more... one hundred more, how many more to make...? how many more is... than...? how much more is...?

YEAR 1: Subtraction

Children use lots of practical activities

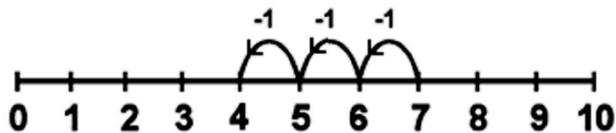
Subtraction as take away

$$7 - 3 = 4$$



Using objects (e.g. counters, blocks etc.) or draw and cross out.

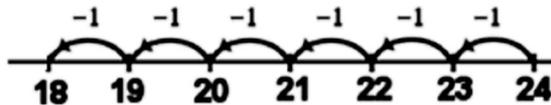
Using a number line for $7 - 3$ (starting with a printed number line, then moving to a blank one)



Start at 7, jump back in 'ones' three times
 $7 - 3 = 4$

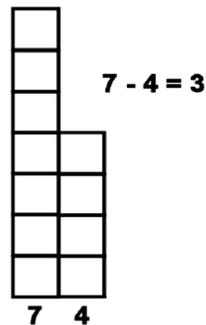
Same for TU – U using number line

$$24 - 6$$



$$24 - 6 = 18$$

Subtraction as finding the difference.



Use practical apparatus (e.g. counters, blocks etc.) to demonstrate the difference.

$$\text{Difference} = 3$$

Vocabulary:

subtract, take (away), minus, leave, how many are left/left over? how many have gone? one less, two less, ten less... how many fewer is... than...? how much less is...? difference between, equals sign, is the same as.

YEAR 2: Subtraction

Continuing as lots of practical activities, as for Year 1.

Subtraction as take away.

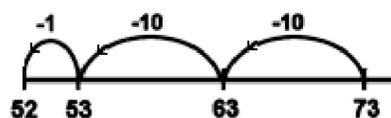
Partitioning $73 - 21$

$$\begin{array}{r} 70 \\ \text{O} \\ 3 \\ 73 \end{array} - \begin{array}{r} 20 \\ \text{O} \\ 1 \\ 21 \end{array} = \begin{array}{r} 50 \\ \text{O} \\ 2 \\ =52 \end{array}$$

Partitioning the tens and units: putting the 'tens' on top of the petal and the units underneath.

*Subtract the tens $70 - 20 = 50$
then the units $3 - 1 = 2$*

Number line $73 - 21$

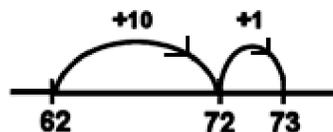


$$73 - 21 = 52$$

Start at 73 – Jump back in 'tens' twice. Then jump back in 'ones' once.

Subtraction as finding the difference (for numbers which are close together)

$$73 - 62$$



$$73 - 62 = 11$$

*Start at 62. Jump 10 to 72 then 1 unit to 73.
Total jumps = $10 + 1 = 11$*

Vocabulary:

subtract, take (away), minus, leave, how many are left/left over? how many have gone? one less, two less, ten less..., how many fewer is... than...? how much less is...? difference between, $\square\square$ equals sign, is the same as.

YEAR 1: Multiplication

Practical

X2 x5 x10

Sequences – counting aloud in jumps of 2:

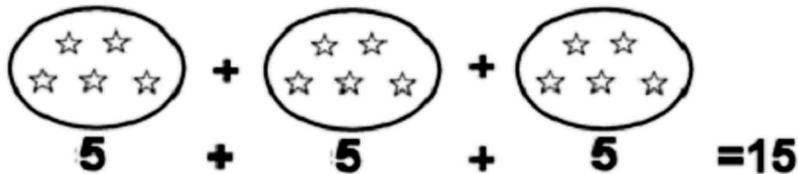
2, 4, 6, 8, 10

5, 10, 15, 20, 25

10, 20, 30, 40

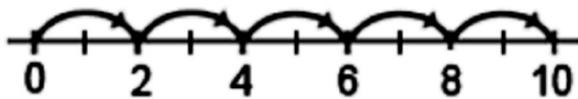
Repeated addition using hands or apparatus or diagrams.

3 x 5



Using a number line for jumps of 2, 5, 10

5 x 2



5 x 2 = 10

Vocabulary:

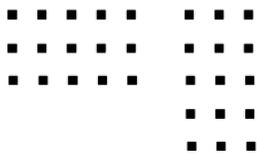
Lots of, groups of, multiply, times, add, steps of, jumps of

YEAR 2: Multiplication

x2 x5 x10

Arrays

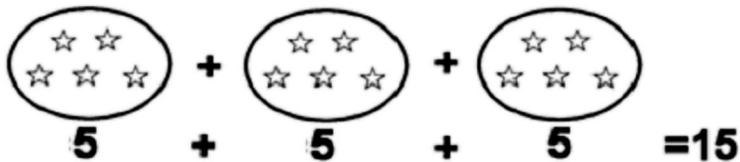
3 x 5 5 x 3



3 rows of 5 or
5 rows of 3

Multiplication as repeated addition

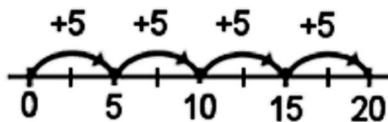
3 x 5



Continuing to use Number lines

4 x 5

4 Jumps of 5



4 x 5 = 20

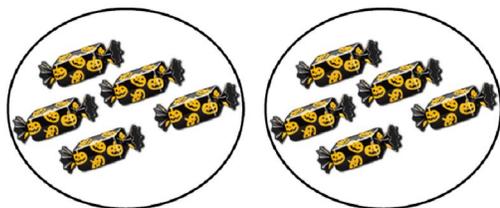
Vocabulary:

lots of, groups of, times, multiply, twice, three times... ten times, times as (big, long, wide... and so on), repeated addition, array, row, column, double.

YEAR 1: Division

Lots of practical problems using counters, blocks and sharing out.

Share 10 sweets between 2 children



Each child has 5 sweets.

How many groups of 5 bananas could you make with 10 bananas?



=
2 groups

10 bananas gives two groups of 5 bananas.

Vocabulary:

share, share equally, groups of, divide, how many groups?

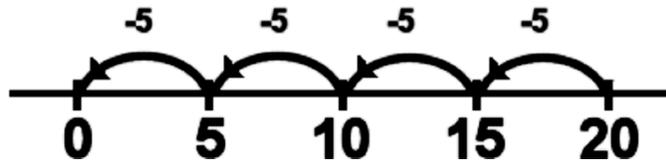
YEAR 2: Division

Practical division as in Year 1

Division using a number line;

$$20 \div 5 = 4$$

Repeated subtraction



Start at 20

Jump back in 5s to 0

*The number of jumps gives the answer –
4 jumps*

$$20 \div 5 = 4$$

With remainders - sharing using practical apparatus

Share 14 cubes between 4 children



Each person gets 3 cubes and there are 2 left over.

$$14 \div 4 = 3 \text{ remainder } 2$$

Vocabulary:

Halve, share, share equally, one each, two each, three each... group in pairs, threes... tens, equal groups of, divide, divided by, divided into, left, left over