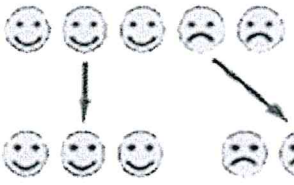
Addition

Add with numbers up to 20 – Informal Strategies



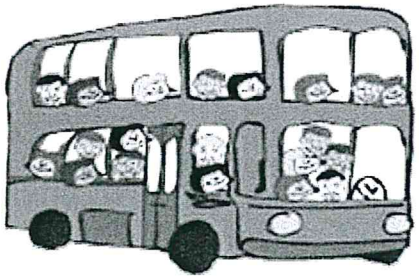
5 = 3 + 2

3 + 2 = 5

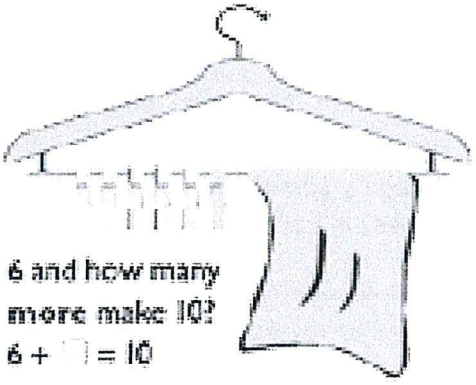
5 and 1 more is? 6

5 and 2 more is? 6, 7

5 and 3 more is? 6, 7, 8



20 = 12 + 8



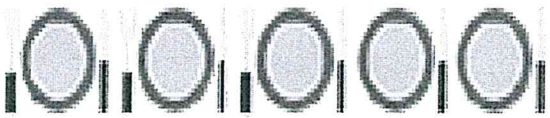
6 and how many more make 10?

6 + ☐ = 10

10 = 5 + 5

10 = 1 + 9

10 = 2 + 8



9 and 1 more is 10

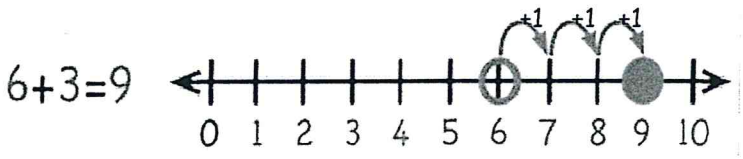
9 add 1 equals 10

9 + 1 = 10

Addition

Year 1 Add with numbers up to 20

Use numbered number lines to add, by counting on in ones. Encourage children to start with the **larger** number and count on.



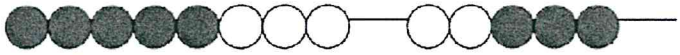
Children should:

- Have access to a wide range of counting equipment, everyday objects, number tracks and number lines, and be shown numbers in different con-texts.
- Read and write the addition (+) and equals (=) signs within number sentences.
- Interpret addition number sentences and solve missing box problems, using concrete objects and number line addition to solve them: 8 + 3 =
  15 + 4 = 5 + 3 + 1 =

This builds on from prior learning of adding by combining two sets of objects into one group (5 cubes and 3 cubes) in Early Years.

Bead strings or bead bars can be used to illustrate addition including bridging through ten by counting on 2 then counting on 3.

8 + 5



Key vocabulary: *add, more, plus, and, make, altogether, total, equal to, equals, double, most, count on, number line*

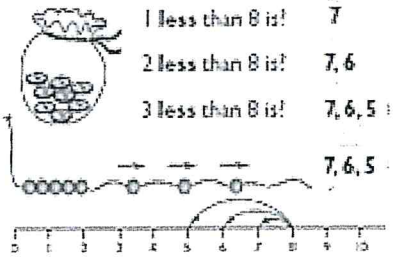
Key skills for addition at Y1:

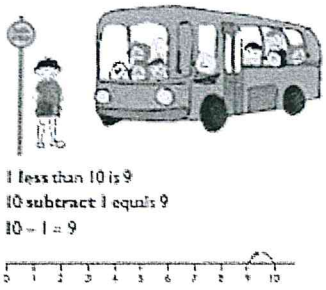
- Read and write numbers to 100 in numerals, incl. 1—20 in words
- Recall bonds to 10 and 20, and addition facts within 20
- Count to and across 100
- Count in multiples of 1 2, 5 and 10
- Solve simple 1-step problems involving addition, using objects, number lines and pictorial representations.

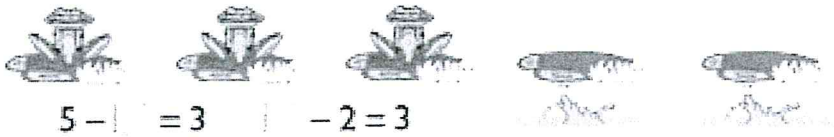
Video clips: Using a range of equipment and strategies to reinforce addition statements / **bonds to 10**

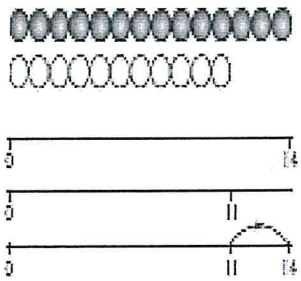
Subtraction

Subtract numbers within 20 – Informal Strategies

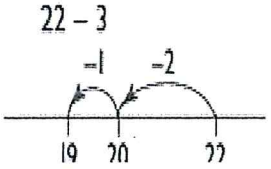


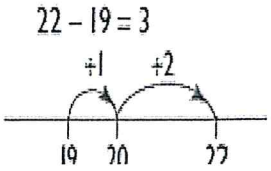


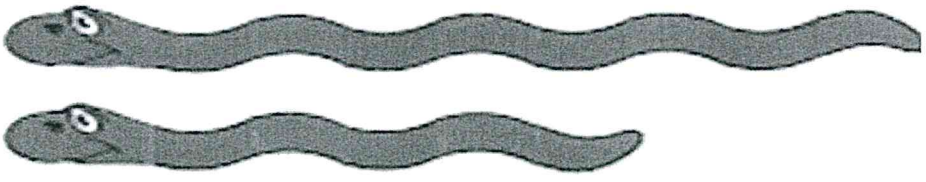




The differen
between 11
and 14 is 3.
14 – 11 = 3
11 + | = 14







The difference is?

Subtraction

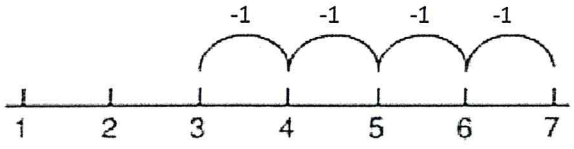
Year 1 Subtract from numbers up to 20

Children consolidate understanding of subtraction practically, showing subtraction on bead strings, using cubes etc. and in familiar contexts, and are introduced to more formal recording using number lines as below:

Read, write and interpret number sentences with – and = signs.

Subtract by taking away

Count back in ones on a numbered number line to take away, with numbers up to 20:

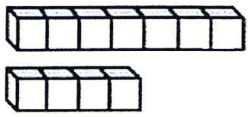


$7 - 4 = 3$

Model subtraction using hundred squares and numbered number lines/tracks and practically.

Find the „distance between"

This will be introduced practically with the language **'find the distance between'** and **„how many more?"** in a range of familiar contexts.



„Seven is 3 more than four"

„I am 2 years older than my sister"

Mental subtraction

Children should start recalling subtraction facts up to **and within** 10 and 20, and should be able to subtract zero.

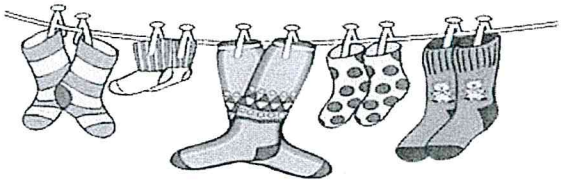
Key vocabulary: *equal to, take, take away, less, minus, subtract, leaves, distance between, how many more, how many fewer / less than, most, least, count back , how many left, how much less is_?*

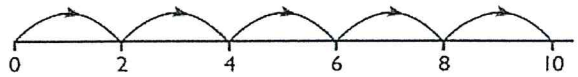
Key skills for subtraction at Y1:

- Given a number, say **one more or one less.**
- Count to and over 100, **forward and back**, from any number.
- Represent and use **subtraction facts to 20 and within 20.**
- Subtract with **one-digit and two-digit** numbers to 20, including zero.
- Solve one-step problems that involve addition and subtraction, using concrete objects (ie bead string, objects, cubes) and pictures, and missing number problems.
- Read and write numbers from 0 to 20 in numerals and words.

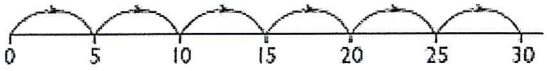
Multiplication – Informal Strategies

Multiplication

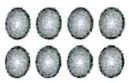




$2 + 2 + 2 + 2 + 2 = 10$
$2 \times 5 = 10$
2 multiplied by 5
5 pairs
5 hops of 2



$5 + 5 + 5 + 5 + 5 + 5 = 30$
$5 \times 6 = 30$
5 multiplied by 6
6 groups of 5
6 hops of 5



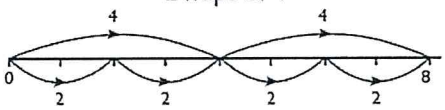
$4 \times 2 = 8$
$2 \times 4 = 8$

$5 \times 2 = 10$
$2 \times 5 = 10$

$2 \times 4 = 8$
$4 \times 2 = 8$

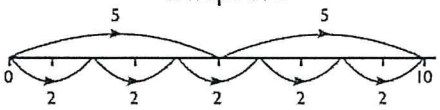
$2 \times 5 = 10$
$5 \times 2 = 10$

2 hops of 4



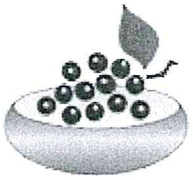
4 hops of 2

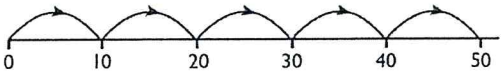
2 hops of 5



5 hops of 2

$4 \times 3 = 12$



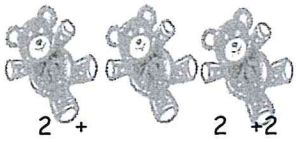


$10p + 10p + 10p + 10p + 10p = 50p$
$10p \times 5 = 50p$
5 hops of 10

Multiplication

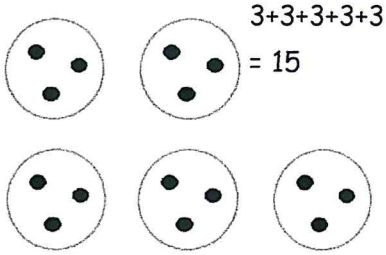
Year 1 Multiply with concrete objects, arrays and pictorial representations.

How many legs will 3 teddies have?



2 + 2 +2 = 6

There are 3 sweets in one bag.
How many sweets are in 5 bags altogether?



3+3+3+3+3
= 15

- Give children experience of counting equal group of objects in 2s, 5s and 10s.
- Present practical problem solving activities involving counting equal sets or groups, as above.

Key vocabulary: *groups of, lots of, times, array, altogether, multiply, count*

Key skills for multiplication at Y1:

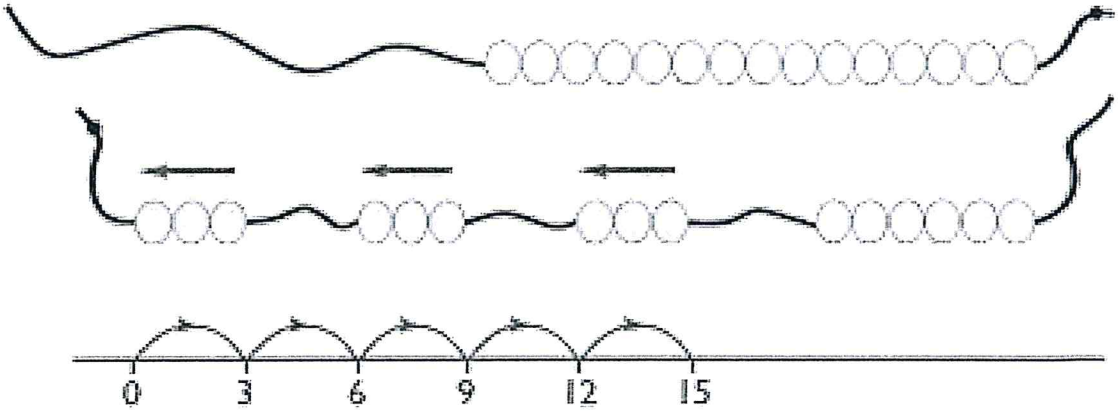
Count in multiples of 2, 5 and 10.

Solve one-step problems involving multiplication, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.

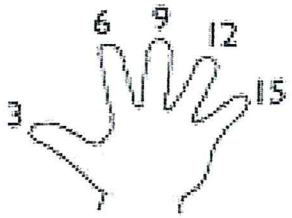
Make connections between arrays, number patterns, and counting in twos, fives and tens. Begin to understand doubling using concrete objects and pictorial representations.

Division

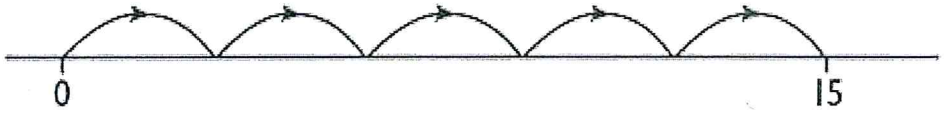
Division - Informal Strategies



How many 3s in 15?



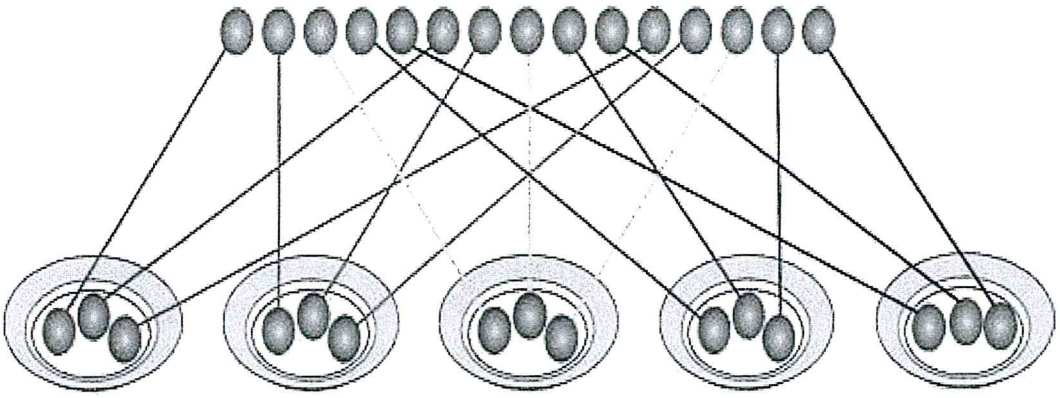
$15 \div 3 = 5$



5 hops in 15. How big is each hop?

$15 \div 5 = 3$

15 shared between 5



Division

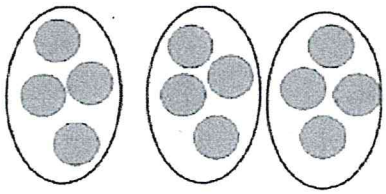
Year 1 Group and share small quantities

Using objects, diagrams and pictorial representations to solve problems involv-ing **both grouping and sharing.**

How many groups of 4 can be made with 12 stars? = 3

Grouping:

Sharing:



12 shared between 3 is 4

Example division problem in a familiar context:

There are 6 pupils on this table and there are 18 pieces of fruit to share between us. If we share them equally, how many will we each get?

Can they work it out and give a division statement... ?

"18 shared between 6 people gives you 3 each."

Pupils should :

- use lots of practical apparatus, arrays and picture representations
- Be taught to understand the difference between „grouping" objects (How many groups of 2 can you make?) and „sharing" (Share these sweets between 2 people)
- Be able to count in multiples of 2s, 5s and 10s.
- Find **half** of a group of objects by sharing into 2 equal groups.

Key Vocabulary: *share, share equally, one each, two each..., group, groups of, lots of, array*

Key number skills needed for division at Y1:

- Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations arrays with the support of the teacher
- Through grouping and sharing small quantities, pupils begin to understand, division, and finding simple fractions of objects, numbers and quantities.
- They make connections between arrays, number patterns, and counting in twos, fives and tens.