

Read, write and interpret mathematical statements involving addition (+) and equals (=) signs.

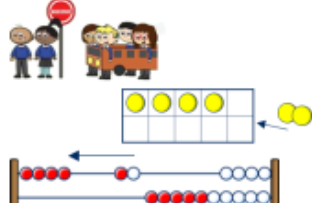
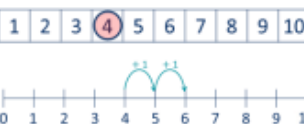
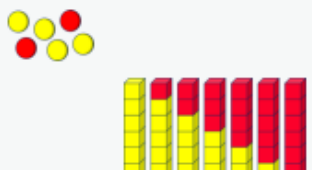
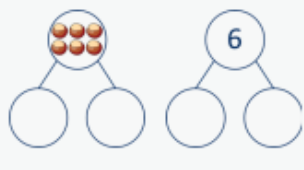
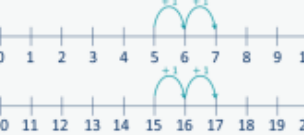
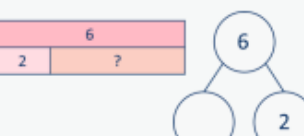
Represent and use number bonds within 20

Add 1-digit and 2-digit numbers to 20, including zero.

Solve one-step problems that involve addition, using concrete objects and pictorial representations, and missing number problems such as $7 = \square + \square$

Representations

Progression of skills

Add together (aggregation) 2 quantities are combined to find the total.	There are ... There are ... There are ... altogether. 	... is a part. ... is a part. ... is the whole. 	... plus ... is equal to is equal to ... + ... $4 + 2 = 6$ $2 + 4 = 6$ $6 = 4 + 2$ $6 = 2 + 4$
Add more (augmentation) A quantity is increased.	First... Then... Now... 	I start at ... I jump on ... I land on ... 	... plus ... is equal to is equal to ... + ... $4 + 2 = 6$ $2 + 4 = 6$ $6 = 4 + 2$ $6 = 2 + 4$
Bonds within 10 Include bonds for each number within 10 Encourage children to notice patterns.	... is made of ... and and ... make ... 	... can be partitioned into ... and ... 	... plus ... is equal to ... $6 + 0 = 6$ $5 + 1 = 6$ $4 + 2 = 6$ $3 + 3 = 6$ $2 + 4 = 6$ $1 + 5 = 6$ $0 + 6 = 6$
Related facts within 20 Make links to known facts.	I know that ... and ... = ... so ... and ... = ... 	... more than ... is ... so ... more than ... is ... 	What patterns do you notice? $5 + 2 = 7$ $15 + 2 = 17$ $7 = 5 + 2$ $17 = 15 + 2$
Missing numbers Make links to known facts.	How many more do you need to make ...? 	If ... is the whole and ... is a part, the other part must be... 	... plus ... is equal to ... $2 + \square = 6$ $6 = 2 + \square$ 

Year 1

Read, write and interpret mathematical statements involving subtraction (−) and equals (=) signs.

Represent and use number bonds and related subtraction facts within 20

Subtract one-digit and two-digit numbers to 20, including zero.

Solve one-step problems that involve subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = \square - 9$

Progression of Skills

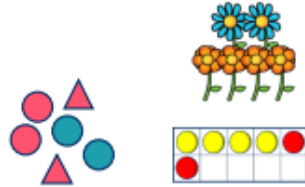
Find a part

Link to number bonds and known facts. E.g. $2 + 4 = 6$ so if 6 is the whole and 4 is a part, the other part must be 2

There are ... in total.

... are ...

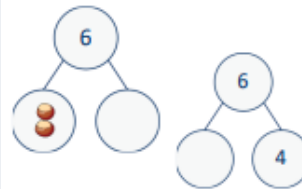
How many are **not** ...?



... is the whole.

... is a part.

... is a part.



... subtract ... is equal to ...

... is equal to ... − ...

$$6 - 2 = 4$$

$$6 - 4 = 2$$

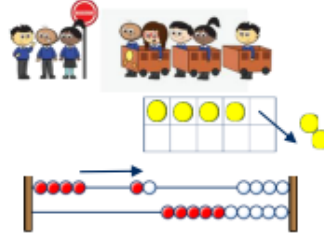
$$4 = 6 - 2$$

$$2 = 6 - 4$$

Take away

A quantity is decreased.

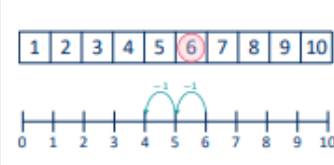
First... Then... Now...



I start at ...

I jump back ...

I land on ...



... minus ... is equal to ...

... is equal to ... − ...

$$6 - 2 = 4$$

$$6 - 4 = 2$$

$$4 = 6 - 2$$

$$2 = 6 - 4$$

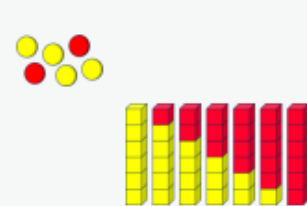
Bonds within 10

Focus on subtraction facts.

Encourage children to notice patterns.

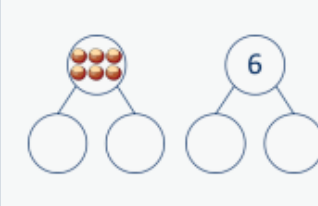
... is made of ... and ...

... and ... make ...



... can be partitioned into ...

and ...



... minus ... is equal to ...

$$6 - 0 = 6$$

$$6 - 1 = 5$$

$$6 - 2 = 4$$

$$6 - 3 = 3$$

$$6 - 4 = 2$$

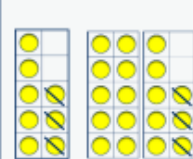
$$6 - 5 = 1$$

$$6 - 6 = 0$$

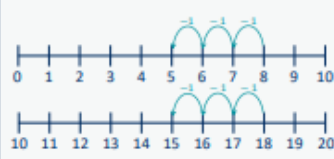
Related facts within 20

Make links to known facts.

I know that ... minus ... = ...
so ... minus ... = ...



... less than ... is ...
so ... less than ... is ...



What patterns do you notice?

$$8 - 3 = 5$$

$$18 - 3 = 15$$

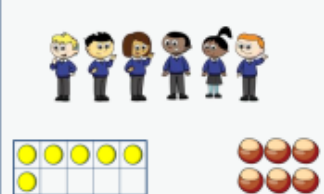
$$5 = 8 - 3$$

$$15 = 18 - 3$$

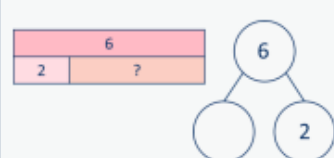
Missing numbers

Make links to known facts.

How many do you need to subtract to make ...?



If ... is the whole and ... is a part, the other part must be...



... minus ... is equal to ...

$$6 - \square = 2$$

$$2 = 6 - \square$$

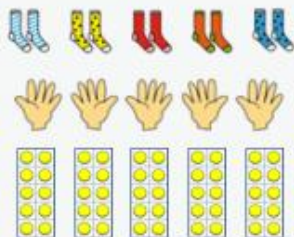


Progression of Skills

Count in 2s, 5s and 10s

Begin by counting objects that naturally come in 2s, 5s and 10s, for example pairs of socks or fingers.

There are ... equal groups of ...
There are ... altogether.



Continue to colour in ...s
What do you notice?

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

Complete the number track/number line by counting in ...s.

**Add equal groups (repeated addition)**

Children should be able to write a repeated addition to represent equal groups and to draw pictures or use objects to represent a repeated addition.

There are ... groups of ...
There are ... altogether.



$$10 + 10 + 10 = 30$$



$$5 + 5 + 5 + 5 = 20$$

What is the same? What is different?

$$2 + 2 + 2 =$$

$$5 + 5 + 5 =$$

$$10 + 10 + 10 =$$

Use objects or a drawing to represent the equal groups and find how many in total.

Make arrays

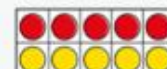
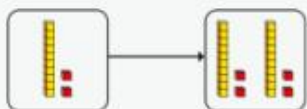
Children use their knowledge of adding equal groups to arrange objects in columns and rows.

There are ... rows of ... There are ... altogether.
There are ... columns of ... There are ... altogether.

**Make doubles**

Children understand that doubles are two equal groups. Children may begin to explore doubles beyond 20 using base 10

Double ... is ...
... + ... = ...



Solve simple one-step problems involving division, using concrete objects, pictorial representations and arrays with the support of the teacher.

Recognise, find and name a half as one of two equal parts of a quantity.

Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.

Progression of Skills

Make equal groups - grouping

Encourage children to physically move objects into equal groups. They can also circle equal groups when using pictures.

There are ... altogether.
How many groups of ... can you make?



Circle groups of 2
There are ... groups of 2



Take ... cubes.
Make equal groups.



There are ... groups of ...

Make equal groups – sharing

Encourage children to check that the objects have been shared fairly and each group is the same.

... have been shared equally between...
There are ... on/in each ...



Take ... cubes.
Share them between ...



12 shared between ... is ...

Find a half

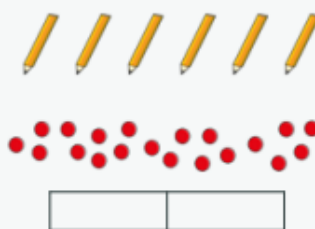
Start with practical opportunities to share a quantity into 2 groups. Progress to circling half of the objects in a picture and then to finding the whole from a given half.

To find half, I need to share into 2 equal groups.



There are ... in each group.

Half of ... is ...



If ... is half, what is the whole?

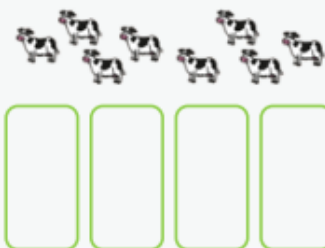


4 is half of ...

Find a quarter

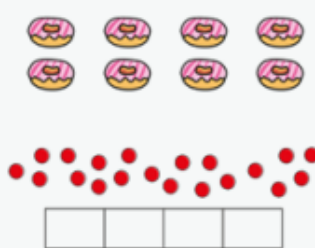
Start with practical opportunities to share a quantity into 4 groups. Progress to using pictures or bar models to find a quarter and then to finding the whole from a given quarter.

To find a quarter, I need to share into 4 equal groups.



There are ... in each group.

A quarter of ... is ...



If ... is one quarter, what is the whole?



3 is one quarter of ...