Year 1 Maths

These are the objectives that we cover when teaching maths in Year 1. We teach **Number, Place value** and **Addition and Subtraction** units each term, revisiting prior learning and moving the learning on. We have shown where this happens by colour coding the specific objectives. The rest of the content is covered in one specific term and is revisited as part of quick starters rather than full units.

Autumn Term / Spring Term/ Summer Term

Number: Place Value

- Count to and across 20/50/100 forwards and backwards (beginning with 0 or from any given number)
- Count, read and write numbers to 20/50/100 in numerals
- Given a number, identify one more and one less within 20/50/100

- Identify and represent numbers to 20/50/100 using objects and pictorial representations
- Understand the place value of each digit in a 2 digit number to 20/50/100. Partition (split) numbers into tens and ones.
- Compare numbers to 20/50/100 using the vocabulary and symbols of less than (<), more than (>) and equal to (=)
- Order numbers to 20/50/100
- Count in multiples of 2, 5 and 10.
- Read and write numbers from 1 to 20 in words

Number: Addition and Subtraction

- Represent and use number bonds (2 numbers that add together) and related subtraction facts within 10/20
- Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs
- Add and subtract one digit numbers to 10 and one and two digit numbers to 20/50, including zero
- Solve one step problems that involve addition and subtraction within 10/20/50, using concrete objects and pictorial representations and missing number problems.

Number: Multiplication and Division

- Count in multiples of twos, fives and tens.
- Solve one step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.

Number: Fractions

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

Measurement

Length and Height

- Measure and begin to record lengths and heights.
- Compare, describe and solve practical problems for: lengths and heights (for example, long/short, longer/shorter, tall/short, double/half)

Weight and Volume

- Measure and begin to record mass/weight, capacity and volume.
- Compare, describe and solve practical problems for mass/weight: [for example, heavy/light, heavier than, lighter than]; capacity and volume [for example, full/empty, more than, less than, half, half full, quarter]

Money

- Recognise and know the value of different denominations of coins and notes.

Time

- Sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening.
- Recognise and use language relating to dates, including days of the week, weeks, months and years.
- Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.
- Compare, describe and solve practical problems for time [for example, quicker, slower, earlier, later] Measure and begin to record time (hours, minutes, seconds)

Geometry

2D Shape

- Recognise and name common 2-D shapes, including: (for example, rectangles (including squares), circles and triangles)

3D Shape

- Recognise and name common 3-D shapes, including: (for example, cuboids (including cubes), pyramids and spheres.)

Position and Direction

- Describe position, direction and movement, including whole, half, quarter and three quarter turns

How do we teach maths?

We follow a CPA approach in our maths lessons.

We will always provide opportunities for children to use **concrete** apparatus to help them develop a strong understanding of mathematical procedures and concepts. We use lots of different types of mathematical apparatus that the children can physically manipulate. They will then move on to using images **(pictorial)** to help support their work, before working in an abstract way with just numbers.

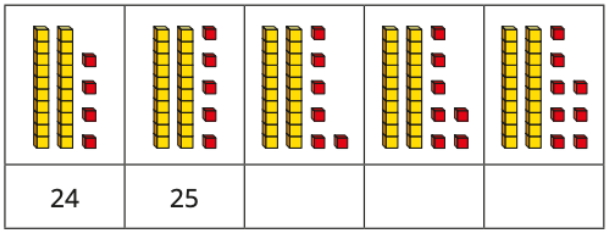
Below are just some examples of learning activities that the children might complete as part of each objective for **Number, Place Value, Addition, Subtraction, Multiplication, Division and Fractions.**

Number: Place Value

- Count to and across 20/50/100 forwards and backwards (beginning with 0 or from any given number)

Complete the number tracks.

a)



a) Which number comes **before** 44?

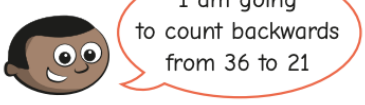
b) Which number comes **after** 32?

c) What are the next two numbers **after** 29?

Complete the number tracks.

a)	17	18	19							
b)	41	42	43							
c)	28	27	26							
d)	36	35	34							

b)



Will Mo say the number 29?

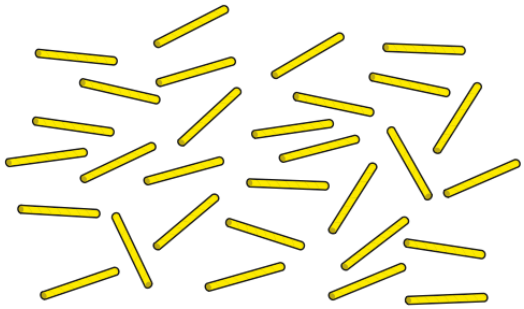
How do you know?

What do you notice?

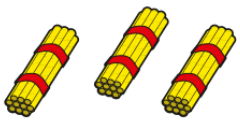
- Count, read and write numbers to 20/50/100 in numerals

How many straws are there?

a)

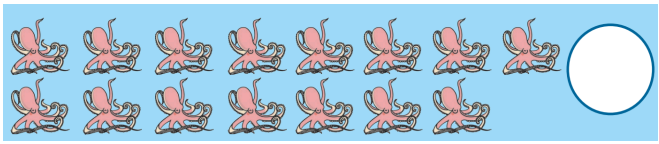


b)

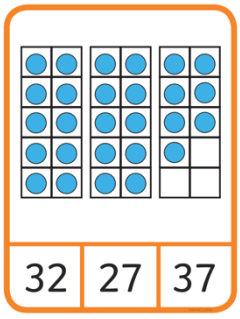


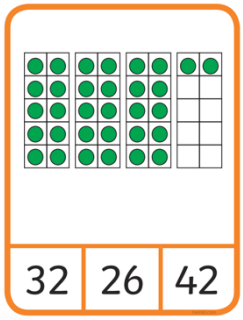
Which straws were easier to count?

Write how many items there are in the circle.



Circle the correct amount:



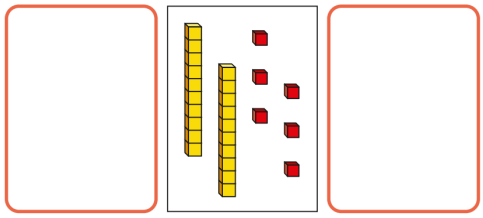


- Given a number, identify one more and one less within 20/50/100

Draw base 10 to show each number.

Write the numbers shown.

1 less



1 more

Fill in the missing numbers.

1 less	Number	1 more
	31	
31		
		31
47		
		47

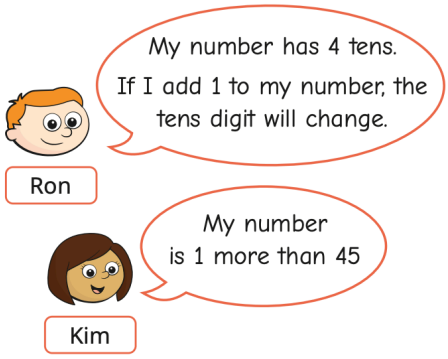
Fill in the missing numbers.

a) 1 more than 29 is ☐

b) 1 more than ☐ is 29

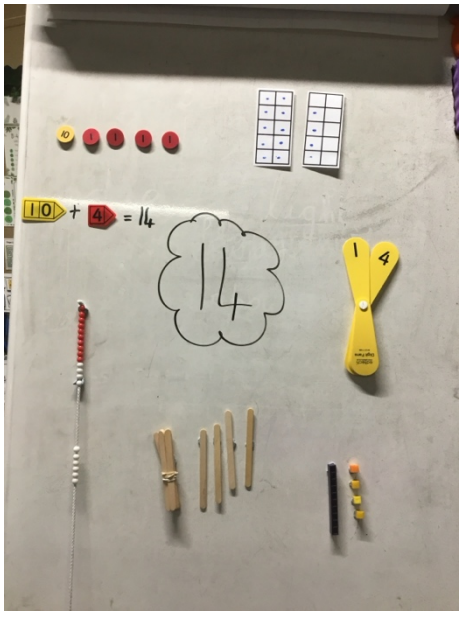
c) 1 less than ☐ is 36

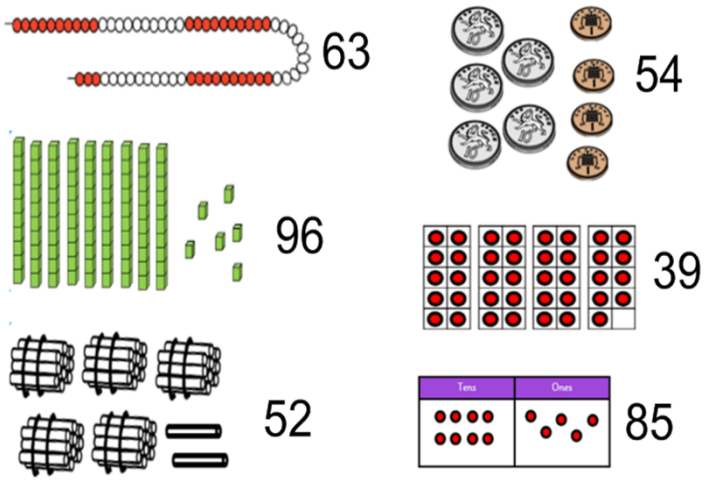
d) 1 less than ☐ is 39



Who has the greater number?

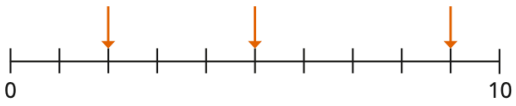
- Identify and represent numbers to 20/50/100 using objects and pictorial representations



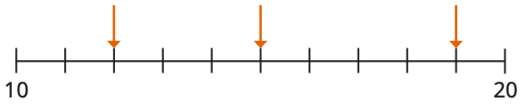


What numbers are the arrows pointing to?

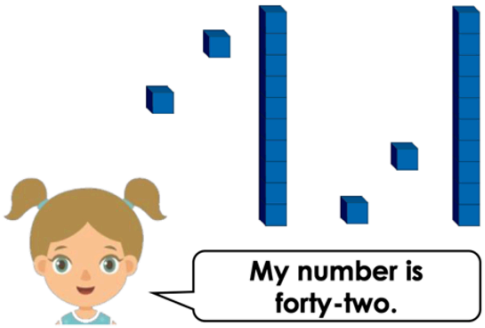
a)



b)



Rey has made the number below.



Explain her mistake.

- Understand the place value of each digit in a 2 digit number to 20/50/100

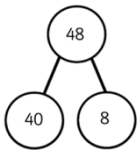
Understanding the place value of each digit in a 2 digit number:

<u>4</u>5 the 4 represents 40

6<u>7</u> the 7 represents 7

48 = 4 tens and 8 ones

48 = 40 + 8



Complete the number sentences.

a) 1 ten and 8 ones = ☐

b) ☐ = 2 tens and 5 ones

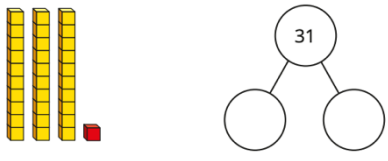
c) 4 ones and 2 tens = ☐

d) ☐ = 1 one and 4 tens

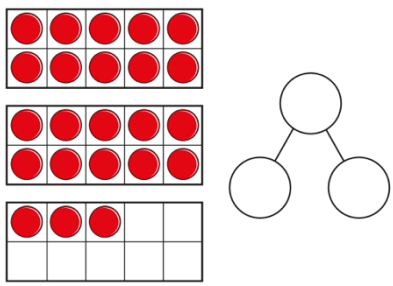
e) 2 tens and 10 ones = ☐

Complete the part-whole model for each number.

a)

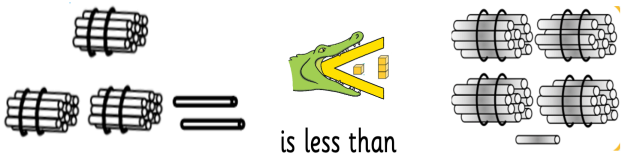


b)

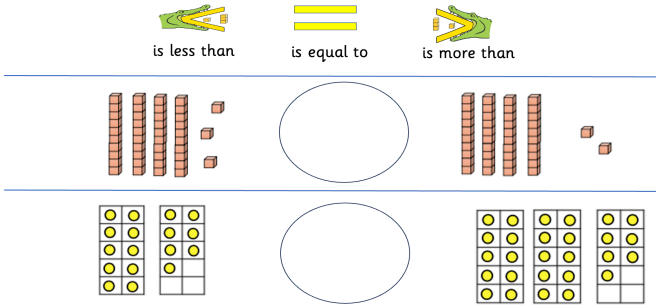


- Compare numbers to 20/50/100 using the vocabulary and symbols of less than (<), more than (>) and equal to (=)

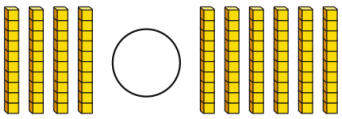
Is this correct? How do you know?

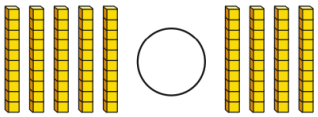


Use the symbols to compare the numbers represented by each image:



Write < or > to compare the numbers.

a) 

b) 

c) 9 tens ◯ 2 tens

d) 70 ◯ 80

Write <, > or = to compare the numbers.

a) 19 ◯ 41

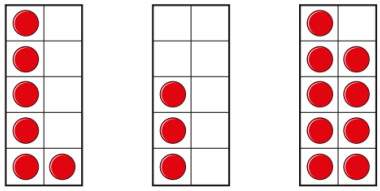
b) 51 ◯ 24

c) 79 ◯ 80

d) 100 ◯ 93

- Order numbers to 20/50/100

a) What are the numbers?



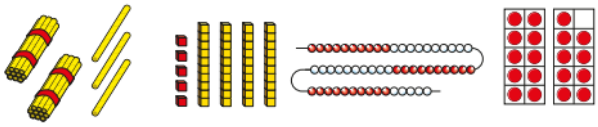
b) Write the numbers in order.
Start with the smallest number.

Order the numbers from greatest to smallest.

a) 16, 7, 13 **c)** 9, 20, 19

b) 9, 12, 17 **d)** 14, 17, 12

a) What numbers are shown?

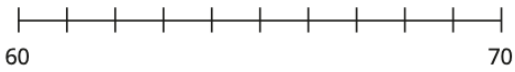


b) Which is the smallest number?

c) Which is the greatest number?

d) How did you find the smallest and greatest numbers?

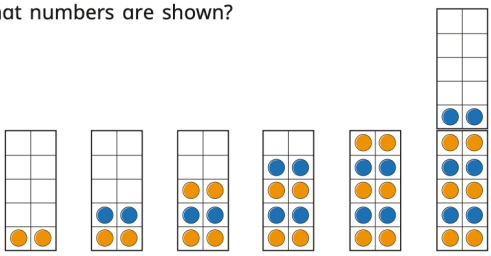
a) Label 68, 61 and 64 on the number line.



b) Write the numbers 68, 61 and 64 in order.
Start with the greatest number.

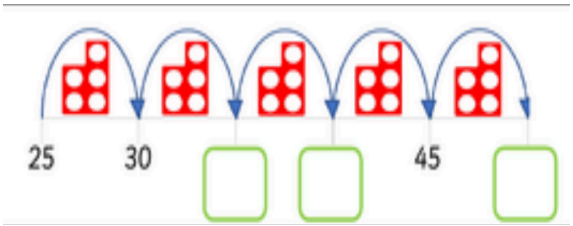
- Count in multiples of 2, 5 and 10.

What numbers are shown?



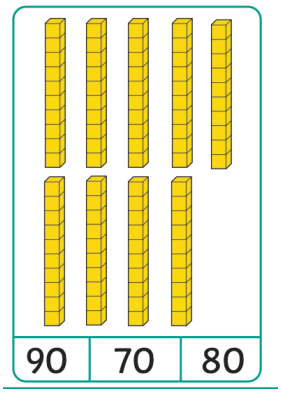
Complete the number tracks.

0	2			8	10	12			
22	20					10			



Complete the number tracks.

	5	10	15						
				35	30				



Complete the number tracks.

0	10								
					40	30			

- Read and write numbers from 1 to 20 in words

Write the numerals in words.

a) 12

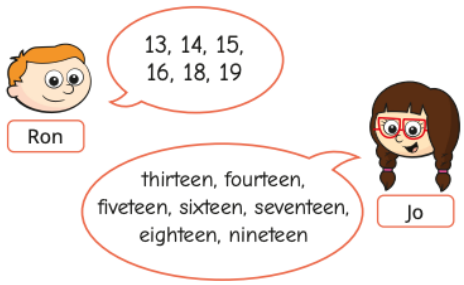
b) 13

c) 15

d) 18

e) 20

Ron and Jo are counting on from 13



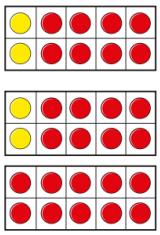
What mistakes have Ron and Jo made?

Number: Addition and Subtraction

- Represent and use number bonds and related subtraction facts within 10/20

Complete the additions to match the ten frames.

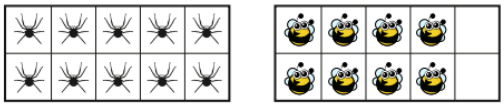
a)



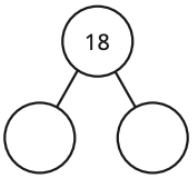
□ + □ = □

□ + □ = □

Look at the picture.



Complete the part-whole model and fact family.



□ + □ = 18

□ + □ = 18

18 − □ = □

18 − □ = □

Complete the number bonds.

a) 4 + 6 = □

4 + 16 = □

b) 5 + 5 = □

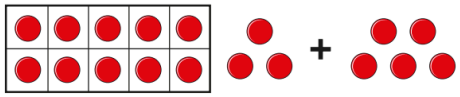
5 + 15 = □

Work out the additions.

a)

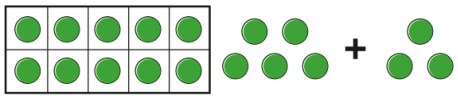
3 + 5

b)

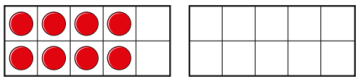


13 + 5

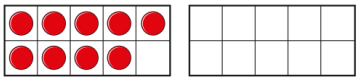
c)



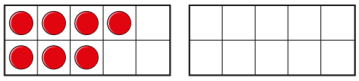
15 + 3



Double 8 is □



Double 9 is □



Double 7 is □

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

Write two addition sentences for each part-whole model.

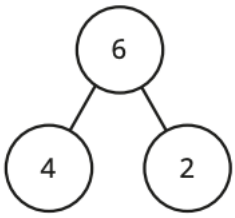
a)

b)

c)

Write the fact families.

a)



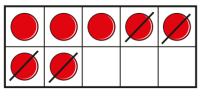
Draw a picture.

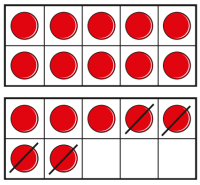
4 + 3 = □

- Read, write and interpret mathematical statements involving **subtraction (-)** and equals (=) signs

What subtractions are shown?

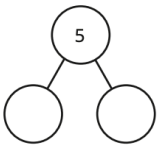
a)



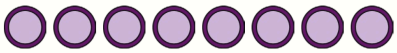


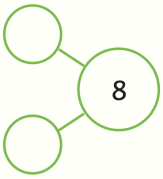
Use part-whole models and subtractions to answer the questions.

a) How many children do **not** have hats?



5 – 2 = ☐





If 8 – ☐ = ☐,

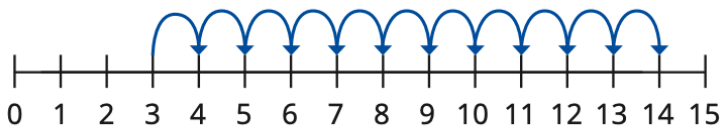
then 8 – ☐ = ☐.

- **Add** one digit numbers to 10 and one and two digit numbers to 20/50, including zero

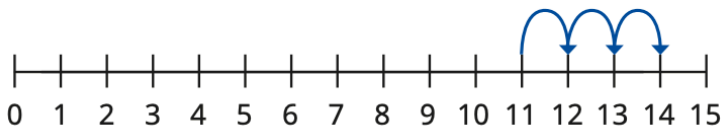
Add by counting on (using fingers):
5 + 2 =

Add by counting on (using concrete apparatus):
12 + 5 = 17

Add by counting on (using a number line):
3 + 11 = 14

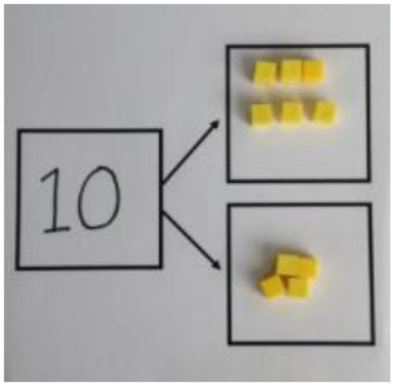


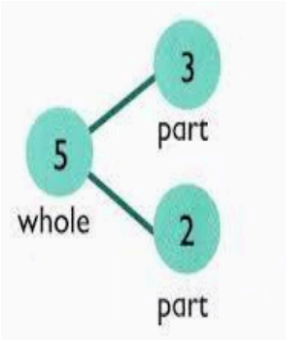
Add by counting on (starting from the biggest number on a number line):
11 + 3 = 14

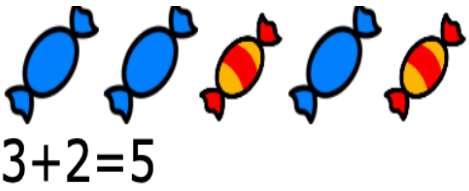


Add by combining 2 groups using a part whole model:
(Counting sets of objects, combining them and then recounting):

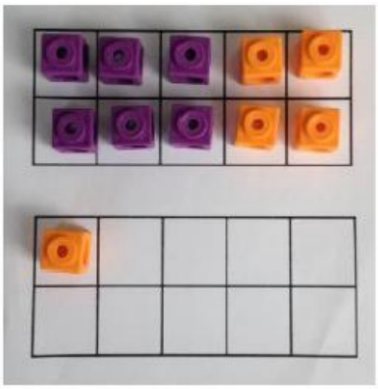
6 + 4 = 10



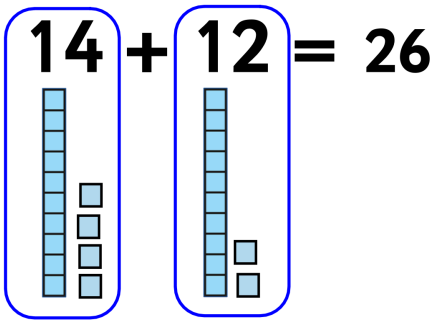




Add by regrouping to make 10 (using number bind knowledge):
Rather than counting on, children use their number bind knowledge and bridge to 10.
E.g. If 4 + 6 = 10 then 4 + 7 = 11.



Add by partitioning into tens and ones:

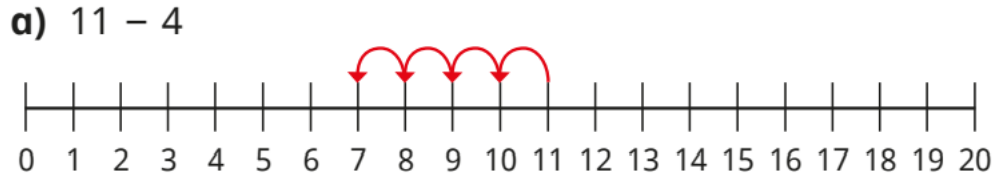


- **Subtract** one digit numbers to 10 and one and two digit numbers to 20/50, including zero

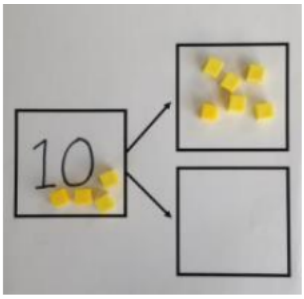
Subtract by counting back (using fingers):
7 – 2 = 5

Subtract by counting back (using concrete apparatus):
17 – 5 = 12

Subtract by counting back (using a number line):



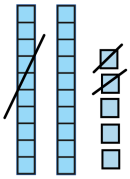
Subtract by using a part part whole model:
This develops knowledge of the inverse relationship between addition and subtraction.
10 – 6 = 4



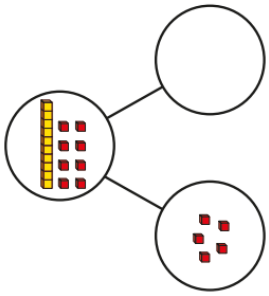
If 10 is the whole and 6 is one of the parts. What is the other part?

Subtract by partitioning:

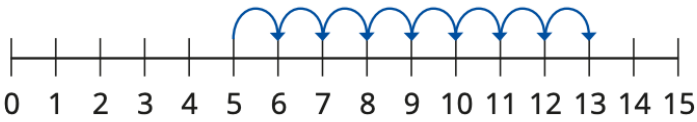
25 - 12 = 13



- Solve one step problems that involve **addition** within 10/20/50, using concrete objects and pictorial representations and missing number problems.

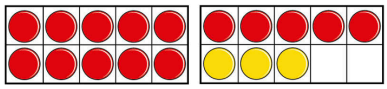


5 + ☐ = 13



☐ + 5 = 18

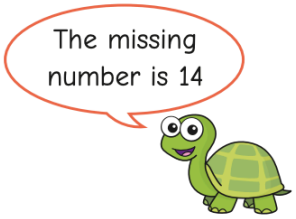
Which number sentences match the ten frames?



15 + 3 = 18	15 – 3 = 18
3 + 18 = 15	18 – 15 = 3

Tiny is working out the missing number.

3 + ☐ = 11

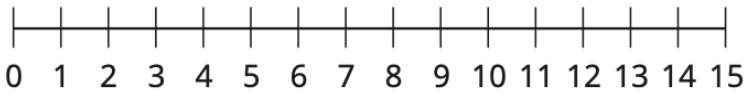


Do you agree with Tiny?

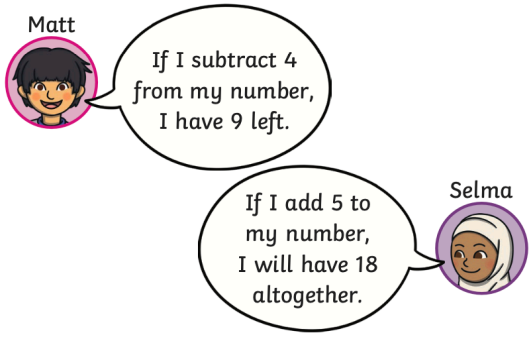
Explain your answer.

- Solve one step problems that involve **subtraction** within 10/20/50, using concrete objects and pictorial representations and missing number problems.

14 – ☐ = 8



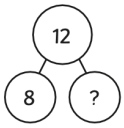
Both these children are thinking of the same number. True or false?



Use equipment to prove it.

Match each problem to the correct missing number.

_____ + 3 = 19



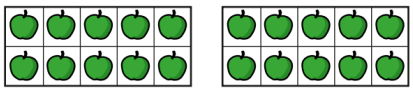
18 – _____ = 12

4
6
15
16

Number: Multiplication and Division

• Count in multiples of ten

How many apples are there in total?

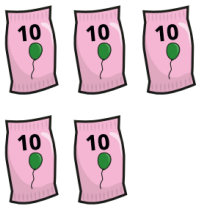


There are ☐ apples on each ten frame.

There are ☐ ten frames.

There are ☐ apples in total.

Tom has these balloons.



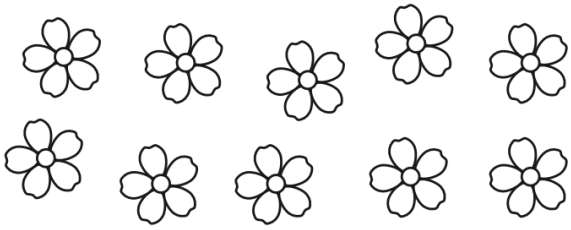
He needs 40 balloons for a party.

Does Tom have enough balloons?

How do you know?

• Count in multiples of five

Colour 35 petals.



Tiny is counting in 5s.

Which numbers will Tiny **not** say?

10	**25**	**12**	**51**
35	**50**	**4**	**40**

How do you know?

• Count in multiples of two

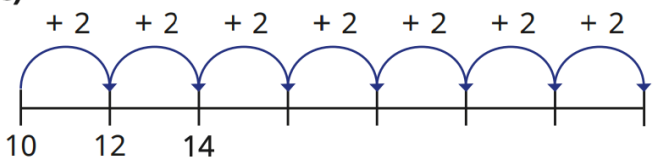
How many flowers are there?

There are ☐ flowers in each vase.

There are ☐ vases.

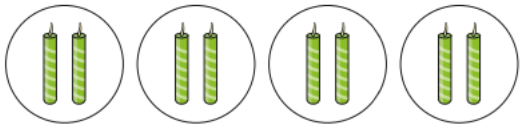
There are ☐ flowers altogether.

c)



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

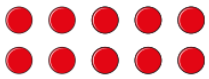
How many candles are there?



☐ + ☐ + ☐ + ☐ = ☐

There are ☐ candles.

Make this array.



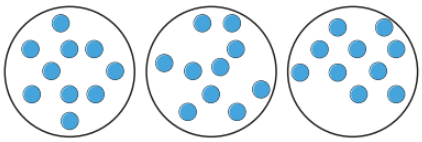
Complete the sentences.

a) There are ☐ counters in each row.

There are ☐ rows.

There are ☐ counters altogether.

b)



There are ☐ counters altogether.

There are ☐ equal groups of ☐ counters.

Use 30 counters.

a) How many equal groups of 2 can you make?

b) How many equal groups of 5 can you make?

c) How many equal groups of 10 can you make?

d) What other equal groups could you put the counters into?

Compare answers with a partner.

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

Jo and Max are sharing some sweets.

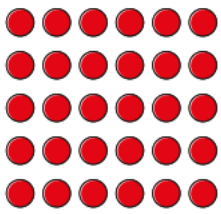
a) Share the sweets equally between Jo and Max.

b) How many sweets does each child get?

Each child gets ☐ sweets.

8 sweets shared equally between 2 is ☐

Use 30 counters.



a) Share the counters between 2 people.
How many counters does each person get?

b) Share the counters between 5 people.
How many counters does each person get?

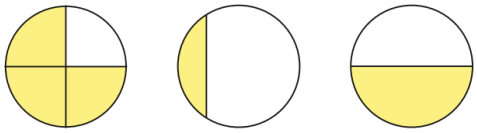
c) Share the counters between 10 people.
How many counters does each person get?

Number: Fractions

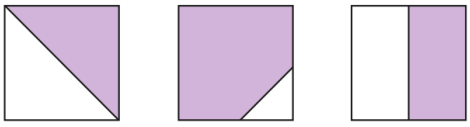
- Recognise, find and name a half as one of two equal parts of an object, shape or quantity.

Which shapes show one half?

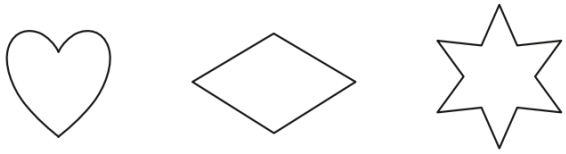
a)



b)

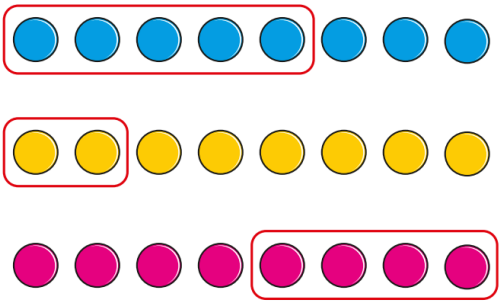


Draw a line to split each shape in half.



Compare answers with a partner.

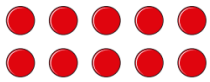
Which picture shows half the counters circled?



How many counters are there in each group?

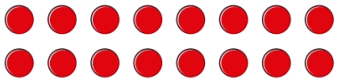
Find half of each group.

a)



Half of ☐ is ☐

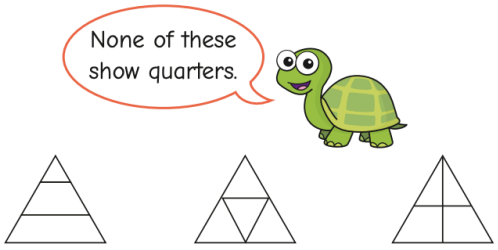
b)



Half of ☐ is ☐

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

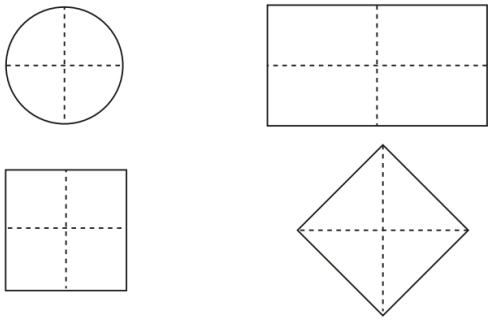
Tiny wants to show a quarter.

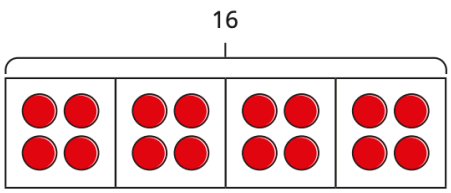


Do you agree with Tiny?

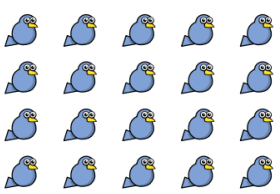
Talk about your answer.

Colour a quarter of each shape.





A quarter of 16 is ☐



A quarter of 20 is ☐

If you want to support your child at home with their maths, there are some great apps out there for them to try.

1 Minute Maths
This app is developed by White Rose which is a resource we use in school. It covers addition, subtraction, multiplication and division and uses images that the children will be familiar with from school. For every question, the children can click on 'show hint' and it will provide an image to support them in working it out.

Maths Shed
You can use your Spelling Shed login to access Maths Shed. The app works in a similar way to the Spelling Shed app. Children can choose from easy, medium or hard and can score points for correct answers. The games cover number bonds, addition, subtraction and lots more.

Hit the Button
This app is a fun game where children can practise their number bonds, doubles and halves and score points for correct answers.

The website **Topmarks** also has lots of great maths games for children to practise and reinforce their maths skills. You just search using a keyword at the top of the page and lots of games will pop up underneath.

We hope you have found this useful. Please do not hesitate to contact us if you need any further information.

Many Thanks
Year 1 Team