Addition,Subtraction, Multiplication and Division *in*

Year 2

OVERVIEW of addition in Year 2

- Based on children's secured knowledge of place value from Autumn 1, they use the facts of ones and tens to support their addition calculations, e.g.

  12 + 31 = 43

- All of this learning will also need to be applied in problem solving, e.g.

  Mila bakes 26 cupcakes. Ethan bakes 13 more. How many cupcakes do they bake in total?

Year 2

OVERVIEW of addition in Year 2

- In Year 1 children learned their number bonds/ facts to 10, e.g:

  6 + 4 = 10

- In Year 2 we continue to build on these facts within 20, e.g.

  16 + 4 = 20

- All of this learning will also need to be applied in problem solving, e.g.

Joe found 13 toy cars and Tom has 7.

How many have they got altogether?

Year 2

OVERVIEW of addition in Year 2

- Children also continue to secure their use of inverse to add and subtract, e.g.

  6 + ? = 10 so 10 - 6 = 4, etc.

- Problem solving:

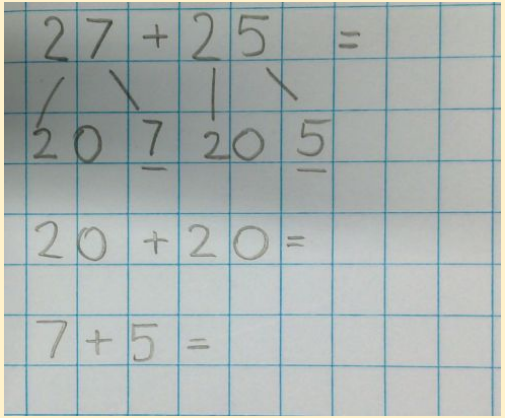
  Ava found 13 marbles. Together with Ziyan they now have 20 marbles. How many marbles did Ziyan have?

Year 2

OVERVIEW of addition in Year 2

- In Year 2 children use the bridging method to add 2 digit numbers, e.g.

  27 + 25 =



- Problem solving:

  Noam has scored 26 goals in the after school club this term. Freya has scored 36. How many goals have they scored in total?

OVERVIEW of addition in Year 2

Year 2

- In Year 2 children use 100 square to secure their method of adding tens:

  Find 53.

  What is 20 more?

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

- Problem solving:

2 Daley have 30 pencils.

2 Simmonds have 20 more.

How many pencils do 2 Simmonds have?

30 + 20 =

OVERVIEW of addition in Year 2

Year 2

- In Year 2 children use 100 square to secure their method of adding tens and ones:

  67 + 23 =

- Problem solving:

There are 26 books on Lily's shelf.

Her Mum puts 43 more books on the shelf.

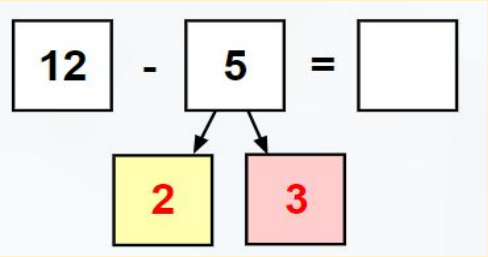
How many books are there altogether?

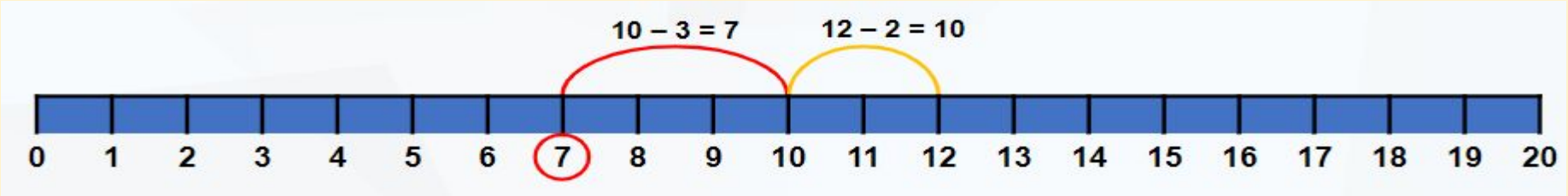
26 + 43 =

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

OVERVIEW of subtraction in Year 2

- In Year 1 children use the number line to count backwards to support their subtraction calculation. In Year 2 children can continue to do so.
- When subtracting across 10, in Year 2 we use place value knowledge and number bonds, e.g.





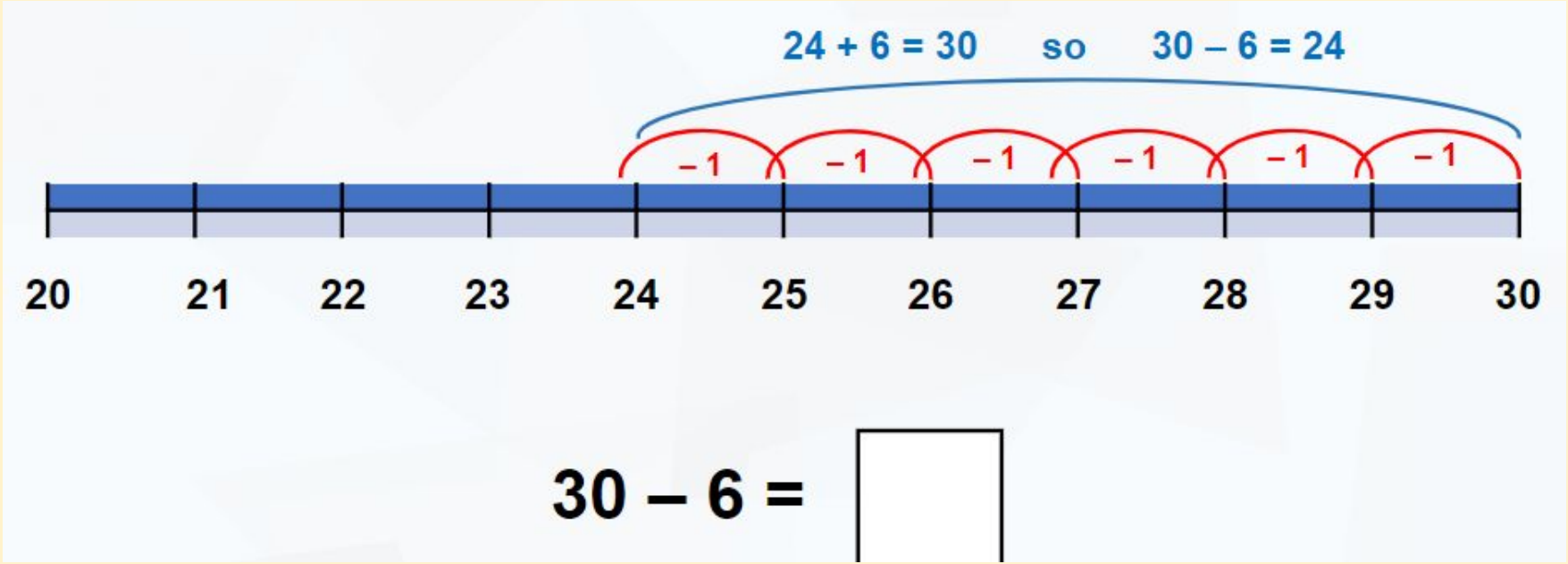
- Problem solving:

  There are 16 buses in the depot. 9 leave the depot. There are 8 left. True or False?

  16 - 9 = 8

OVERVIEW of subtraction in Year 2

- When subtracting from 10, in Year 2 we count back, e.g.



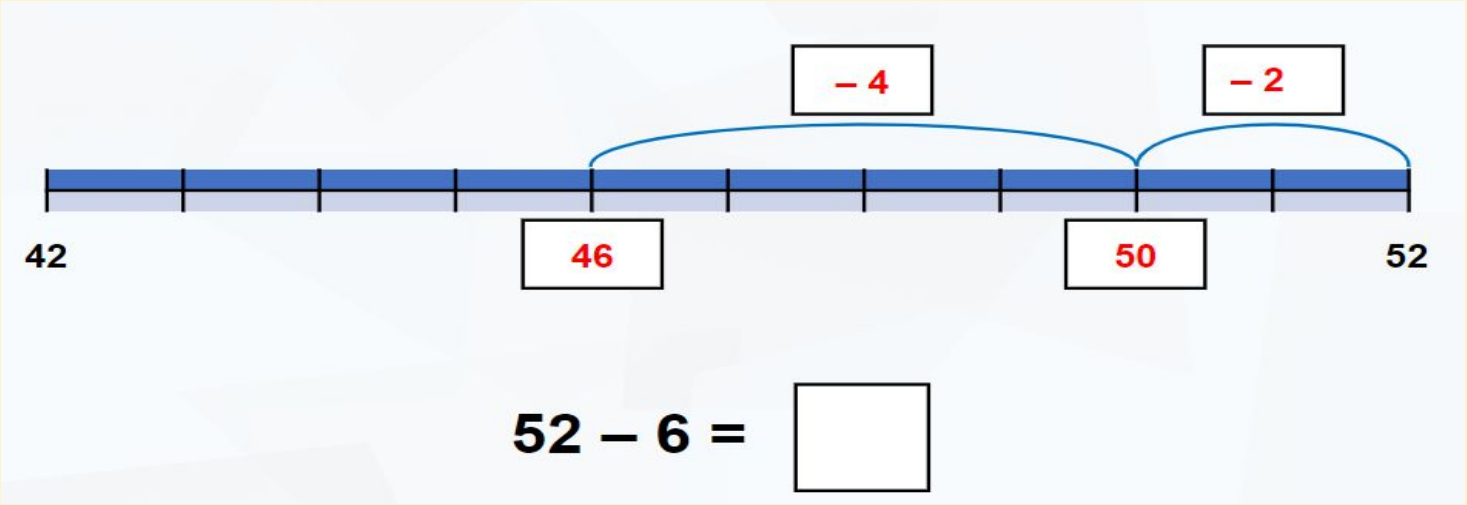
- Problem solving:

  50 children are going on the Y2 trip. 4 are poorly. How many children will go?

OVERVIEW of subtraction in Year 2

Year 2

- In Year 2 children use their place value to go back to the nearest 10 and subtract the remaining number, e.g.



- Problem solving:

  There are 47 chairs in the hall. 9 chairs are taken. There are 38 chairs spare.

  True or False?

OVERVIEW of subtraction in Year 2

Year 2

- In Year 2 children use 100 square to secure their method of subtracting tens:

Find 53.

What is 20 less?

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

- Problem solving:

2 Daley have 68 pencils.

2 Simmonds have 30 less.

How many pencils do 2 Simmonds have?

68 - 30 =

OVERVIEW of subtraction in Year 2

Year 2

- In Year 2 children use 100 square to secure their method of subtracting tens and ones:

  67 - 23 =

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

- Problem solving:

There are 84 books on Lily's shelf.

Her Mum takes off 45.

How many books are there left?

84 - 45 =

Practical application

Using the resources on your table explore the following calculations.
What questions come to your mind?

13 + 8 = 45 + 30 =

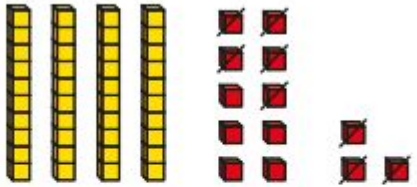
25 - 7 = 72 - 40 =

Ron has these grapes.

Teddy has 25 more grapes than Ron.

How many grapes does Teddy have?

Max is using base 10 to work out 53 – 8



Why did Max make 53 like this?

Use base 10 to work out the subtractions.

42 – 7	25 – 9	31 – 8	42 – 5

Questions to ask when adding and subtracting

Tiny is working out 57 + 26

7 ones + 6 ones = 13 ones

5 tens + 2 tens = 7 tens

The answer is 713

Do you agree with Tiny?

Talk about it with a partner.

Jo has 47 stickers.

Ben has 16 more stickers than Jo.

How many stickers does Ben have?

Things to look out for

- Children may say, for example, 25 + 38 = 513 because 5 ones + 8 ones = 13 ones and 2 tens + 3 tens = 5 tens.
- Children may forget to add the extra ten that resulted from an exchange.

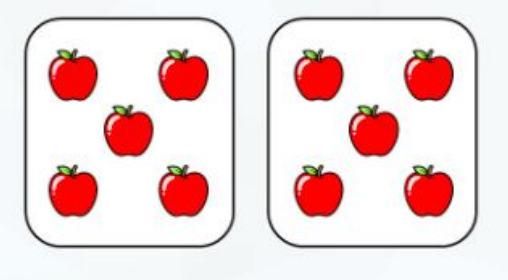
Key questions

- Is the question an addition or a subtraction? How do you know?
- Do you need to make both numbers using base 10? Why/why not?
- What does the number _____ represent in the calculation?
- Do you need to make an exchange? How do you know?

Year 2

How we teach multiplication and division

At this stage, pupils will be developing fluency in the 2, 5, 10 and 3 multiplication tables, so should be able to solve multiplication problems about groups of 2, 5, 10 or 3. Pupils have started to use repeated addition and equal groups to help aid their understanding.



There are **two** equal groups of **five**

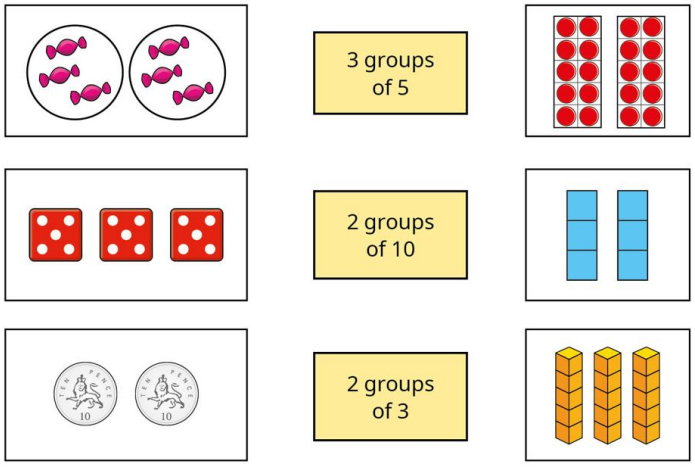
- This means that pupils can use their knowledge that 2 x 5 = 10 to solve a problem about 2 groups of 5. They can also use repeated addition to support their learning. Eg, 5 + 5 = 10

Year 2

How we teach multiplication and division

There are … equal groups of …

Match the pictures and the labels.



Draw a picture to match each number sentence.

- 4 + 4 + 4 = 12
- 2 + 2 + 2 + 2 + 2 + 2 = 12
- 10 + 10 = 20
- 5 + 5 + 5 + 5 = 20

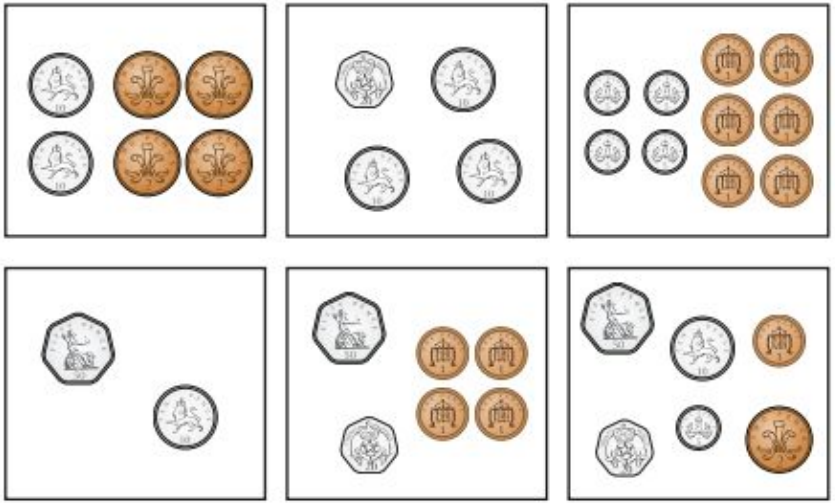
Things to look out for

- Children may not be able to spot equal and unequal groups.
- Children may try to find the total instead of finding the amount in each group.
- Children may not realise that two groups are equal if they do not look the same.

- Are the groups equal or unequal? How do you know?
- How can you make the groups equal?
- How many groups are there?
- How many are in each group?
- What is the same and what is different about these two pictures?
- Do all equal groups look the same?

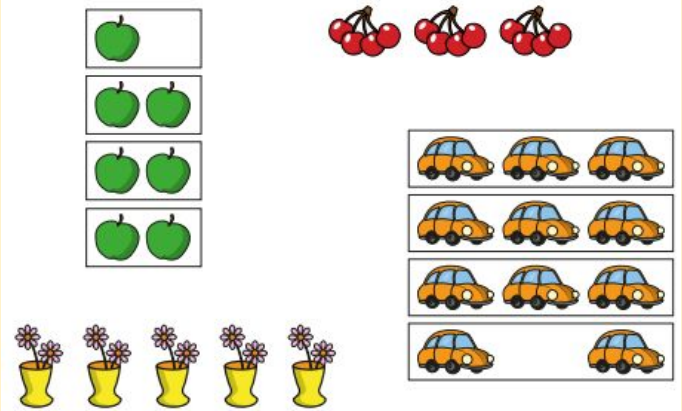
Coming up in Spring...

How much money is in each box?

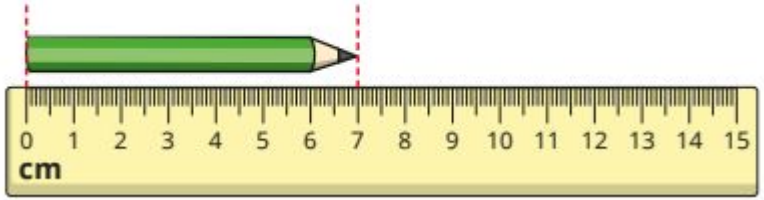


Which pictures show equal groups?

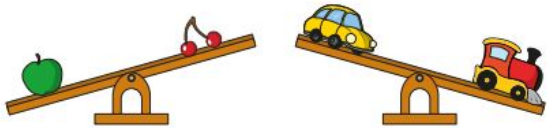
Which pictures show unequal groups?



How long is the pencil?



Complete the sentences for each picture.



The _____ is heavier than the _____

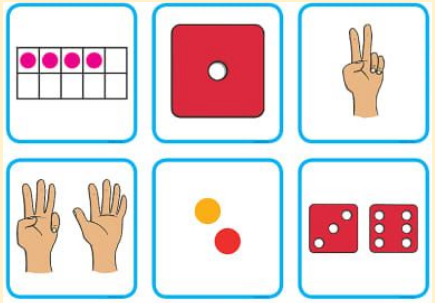
The _____ is lighter than the _____

MATHS at home

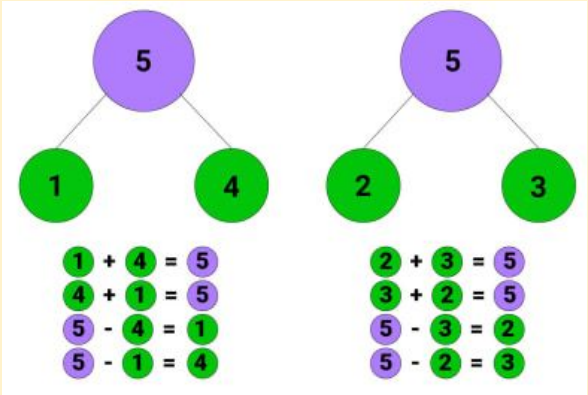
Year 2

NumBots equips each pupil with the set of core maths skills they require:

- Subitising - *the ability to instantaneously recognise the number of objects in a small group without the need to count them*



- Number bonds



- Addition and subtraction

Year 2

MATHS at home

To promote maths skills in children, encourage them to play maths puzzles and games.

Teach them to have a positive attitude and believe they can improve with effort rather than focus on speed and involve them in everyday activities involving numbers and measurements, such as shopping and cooking.

Here are some good websites to help families learn maths together:

Year 2

MATHS at home (online resources)

- https://www.nationalnumeracy.org.uk/helping-children-maths/family-maths-toolkit
- https://www.mathsontoast.org.uk/
- https://www.familymathstoolkit.org.uk/
- https://thirdspacelearning.com/blog/how-help-child-with-maths-at-home/

MATHS at home (apps for Year 2 learners)

- https://play.ttrockstars.com/ttrs/dashboard Multiplication facts practice
- https://www.topmarks.co.uk/maths-games/daily10 Mental maths practice
- https://www.topmarks.co.uk/maths-games/hit-the-button Mental maths practice
- https://www.topmarks.co.uk/ordering-and-sequencing/caterpillar-ordering Ordering numbers - select 0 to 100
- https://mathsframe.co.uk/en/resources/resource/37/placing_numbers_on_a_number_line Placing numbers on a number line (select to 100)
- https://www.topmarks.co.uk/learning-to-count/place-value-basketball Place value basketball - understanding hundreds, tens and ones Select up to 100
- https://nrich.maths.org/students/primary A range of games and problem solving activities
- https://www.iseemaths.com/games-resources/ A range of games and problem solving activities

Key takeaways

Your child needs to be secure and confident in their foundational skills.

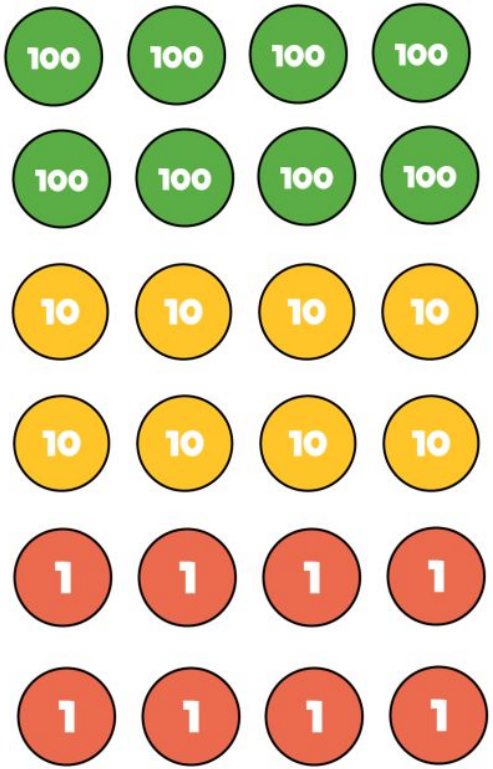
- Understanding and working with two-digit numbers, including the value of each digit
- Mastering basic addition and subtraction facts - solving contextual problems with these
- Recall their multiplication facts and associate division facts for the 2x, 5x, 10x and 3x

Key takeaways

- Encourage a positive maths attitude
- Try to incorporate maths into daily activities such as cooking, shopping or playing board games
- Support home learning by offering guidance, but encourage independence by allowing your child to solve problems on their own
- Use maths apps and games
- Provide real-world examples
- Celebrate achievements - celebrate the small victories, boost their confidence and motivation
- Communicate with teachers

Printouts – Place Value Chart

Hundreds	Tens	Ones



White Rose Maths