A Parent's Guide to Maths at Ipplepen Primary School

Year 3

The way Maths is taught in primary schools may seem to have changed considerably since you yourself were in the classroom. With the introduction of a new National Curriculum in 2014, some more complicated concepts have been introduced and a much deeper understanding of what is taught is now necessary.

From starting in Foundation, all the way through to Year Six, your child will follow a progressive scheme of learning that will build on their previous knowledge and adapt known methods and images to ensure their working becomes more efficient as they work with larger numbers.

This guide is designed to support you to understand the methods that are being taught in the classroom on a year group basis and the understanding that your child will be gaining. We provide the children with images to match the concrete tools they may be using to complete maths problems with the aim to be able to remove the concrete depictions and replace them with pictorial representations by the end of KS2.

It is however very important to recognise that although a new method may be introduced to your child as they progress through the school, if they find it more difficult to grasp, they will always be supported to continue using *their* most efficient method whilst being provided with plenty of opportunities to practise the new (more effective) technique. It is very important that your child understands the workings of each method, not simply a mechanical means to answer a question.

Terminology

It is important to note the vocabulary we use in school and that you try to embed this in any maths talk at home.

Your child will now be working with some larger numbers (up to 3-digits) and will need to know about the fourth digit's column.

Thousands	Hundreds	Tens	Ones
Th	H	T	O

Addition (+)	Subtraction (-)	Multiplication (x)	Division (÷)	Equals (=)
add more plus increase total sum altogether	subtract minus less decrease take away fewer leave difference	multiply times lots of groups of product array multiplied by repeated addition	divide by share divisible by group divide share equally	equivalent same as total makes balances

Multiplying and Dividing by Multiples of 10

27 x 10

Hundreds	Tens	Ones
2	7	
2	7	0

One place to the **left**.

2 x 100

Hundreds	Tens	Ones
		2
2	0	0

Two places to the **left**.

780 ÷ 10

Hundreds	Tens	Ones
7	8	0
	7	8

One place to the **right**.

400 ÷ 100

Hundreds	Tens	Ones
4	0	0
		4

Two places to the **right**.

When multiplying and dividing by multiples of 10, the children are taught to move their number up or down the place value chart the correct number of places. They then may need to add 'place holder 0s'.

Multiplication Tables

By the end of the year, your child will be expected to rapidly and fluently recall all of the facts related to the multiplication tables that they have been taught.

Previous Learning

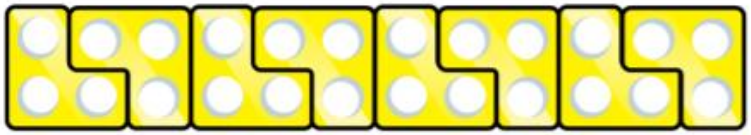
Your child will have spent the last year learning and practising the 2, 5 and 10 times tables and should now be fairly fluent in the recall of these facts up to x 12. They will also know the associated 'fact family'.

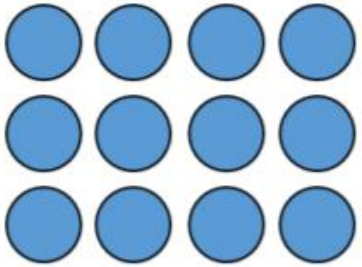
e.g.

8 x 3 = 24	3 x 8 = 24
24 ÷ 8 = 3	24 ÷ 3 = 8

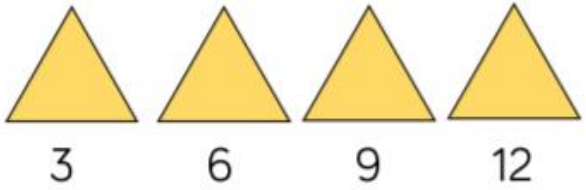
Several representations of each multiplication table will be used throughout your child's learning and they will be encouraged to find their most useful representation and continue to practise with this. Through playing TTRockstars, your child will continually practise and become more fluent in all of the tables that they have learned.

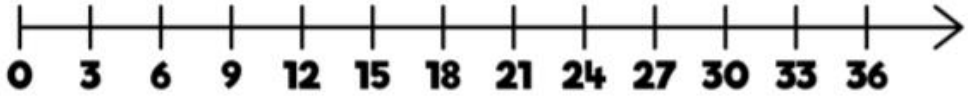
Skill: 3 times table





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



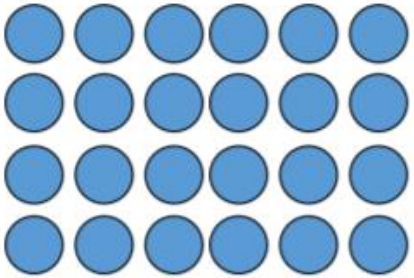


New Learning

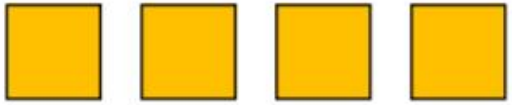
In Year 3, your child will learn and practise the 3 times table.

Your child will look at the patterns they see in the shape of the numbers and when highlighted on a hundred square.

Skill: 4 times table

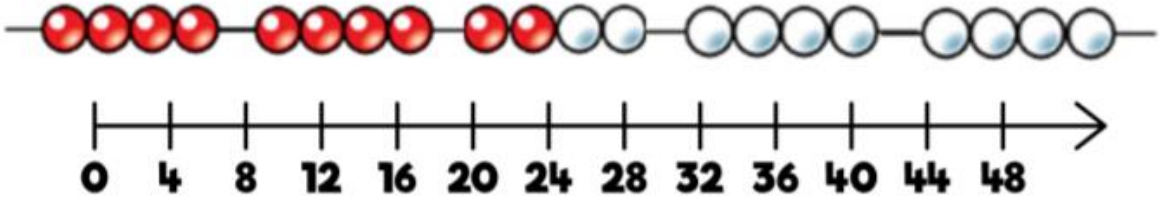


1	2	3	(4)	5	6	7	(8)	9	10
11	(12)	13	14	15	(16)	17	18	19	(20)
21	22	23	(24)	25	26	27	(28)	29	30
31	(32)	33	34	35	(36)	37	38	39	(40)
41	42	43	(44)	45	46	47	(48)	49	50



4 8 12 16

4	8	12	16	20
24	28	32	36	40
44	48	52	56	60



New Learning

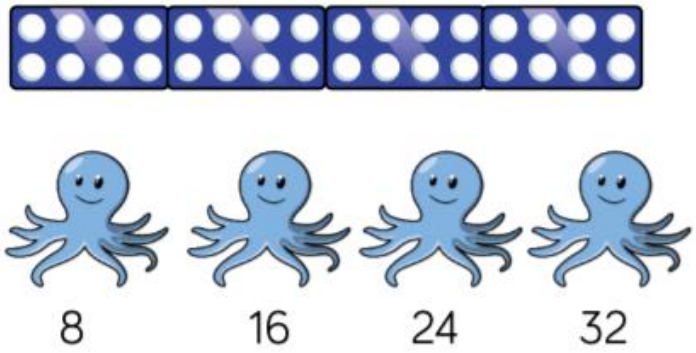
In Year 3, your child will learn and practise the 4 times table.

Your child will look at the patterns they can see on the hundred square and note that all of the multiples are even.

They will make links to the two times table, seeing how each multiple is double.

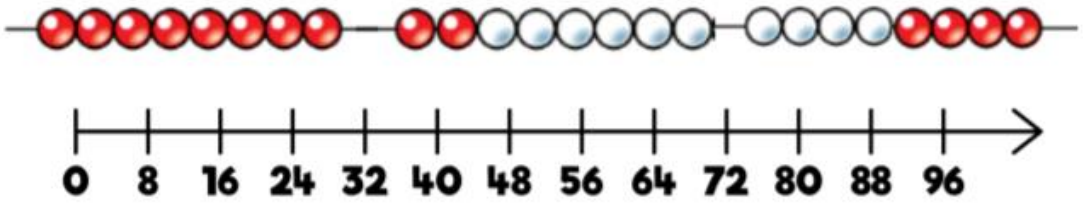
They will think about and use 'tricks' to multiply by four – double and double again.

Skill: 8 times table



8	16	24	32	40
48	56	64	72	80

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



New Learning

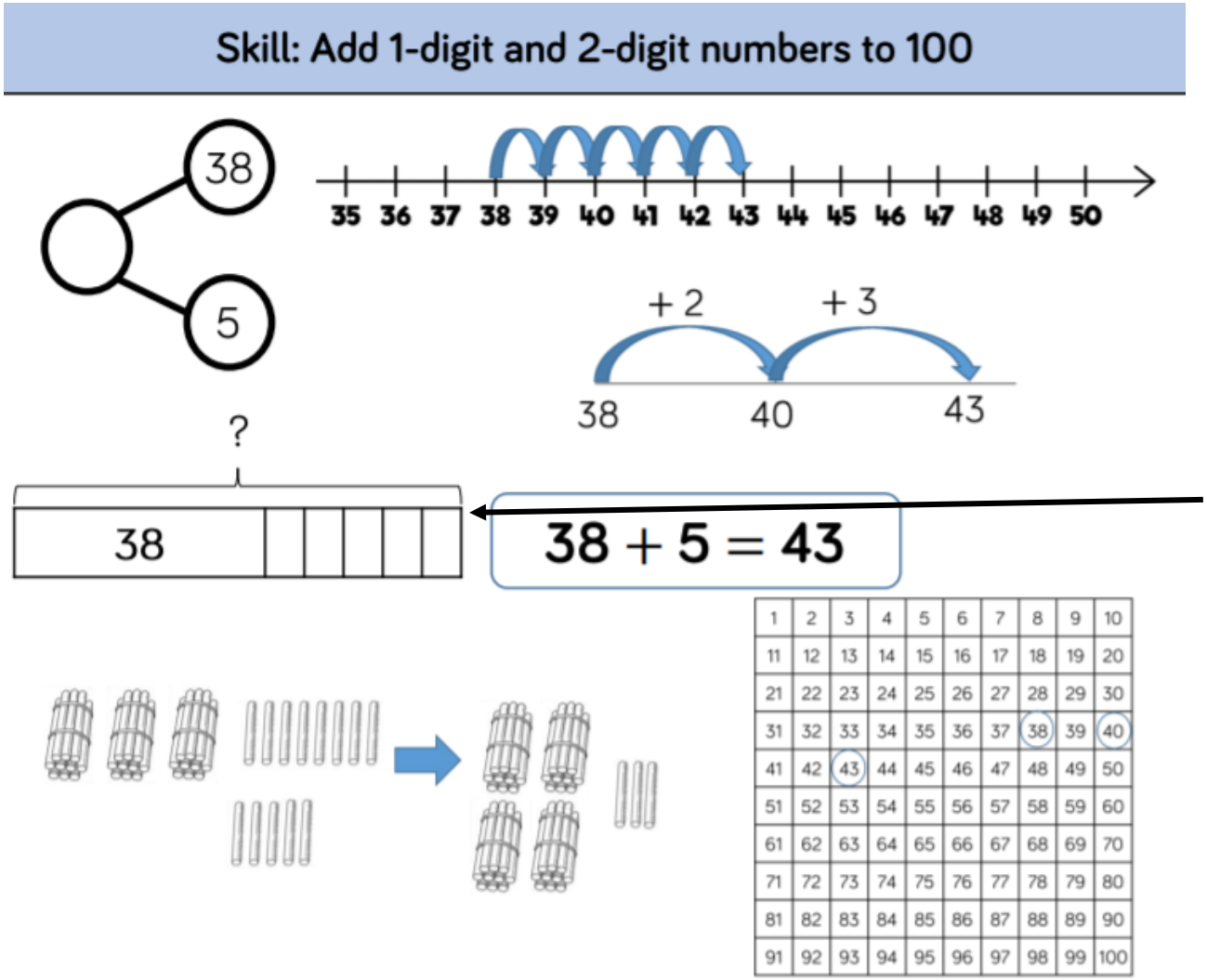
In Year 3, your child will learn and practise the 8 times table.

Your child will look at the patterns they can see on the hundred square and note that all of the multiples are even.

They will make links to the four times table, seeing how each multiple is double.

They will think about and use 'tricks' to multiply by eight – double, double again and double again.

Addition

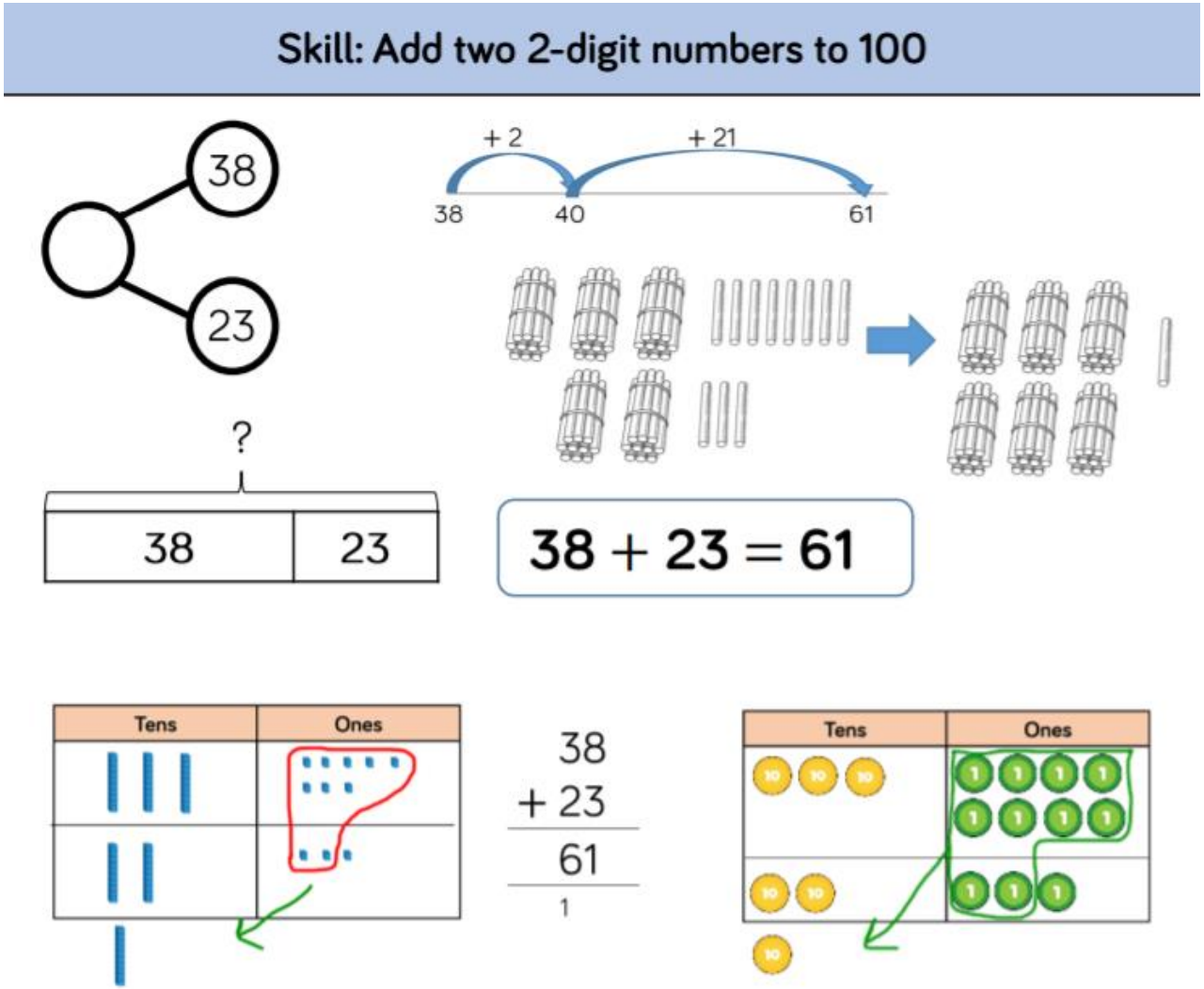


Previous Learning

Your child should be confidently adding one and two-digit numbers using a range of methods but will have been encouraged to choose their most efficient method.

Some children will still rely on concrete representations to support their workings.

More often, your child will have seen problems represented with a bar tool and will be beginning to more independently use these to support themselves.



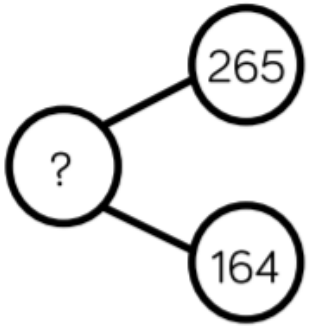
Previous/New Learning

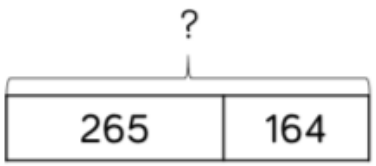
(Some children will have started to use these methods in Year Two whereas others may be new to them this year.)

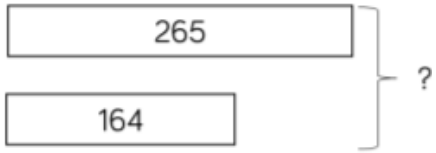
Your child will be encouraged to add numbers in larger chunks. This could be with concrete or pictorial representations.

They will use concrete and pictorial representations alongside formal written methods to support them in understanding each step. By working through the problem in these stages, your child will be able to recognise where they may have made a mistake more easily.

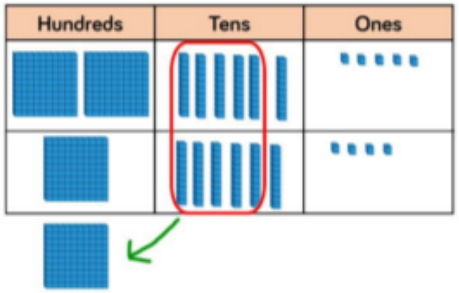
Skill: Add numbers with up to 3 digits



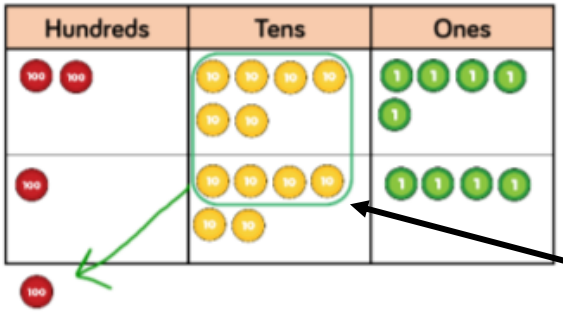




$$265 + 164 = 429$$



$$\begin{array}{r} 265 \\ +\ 164 \\ \hline 429 \\ \hline 1 \end{array}$$



New Learning

Your child will begin to more confidently and independently use the bar tool to represent the calculations they are completing.

Your child will use base 10/dienes and place value counters to support them when adding numbers with up to three-digits.

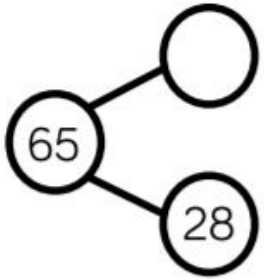
They will be encouraged to write their calculation alongside the concrete/pictorial representations that they will have use.

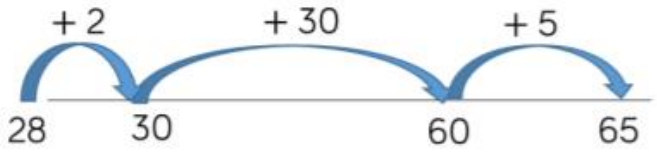
Your child will practise 'regrouping' when there are numbers that are too high to fit in a place value column.

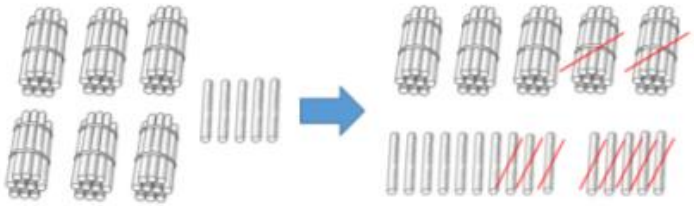
New Learning

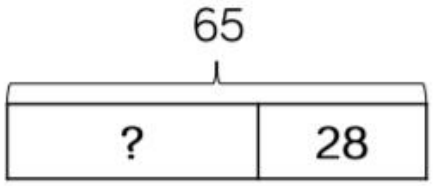
Subtraction

Skill: Subtract 1 and 2-digit numbers to 100

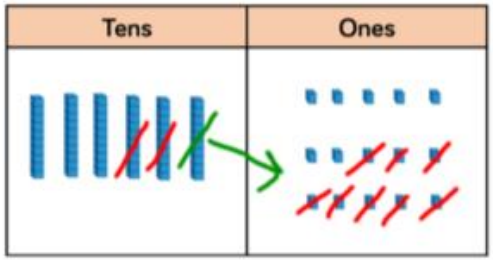




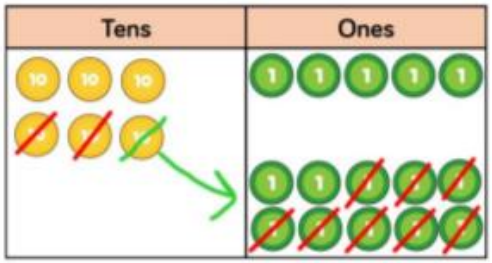




$65 - 28 = 37$



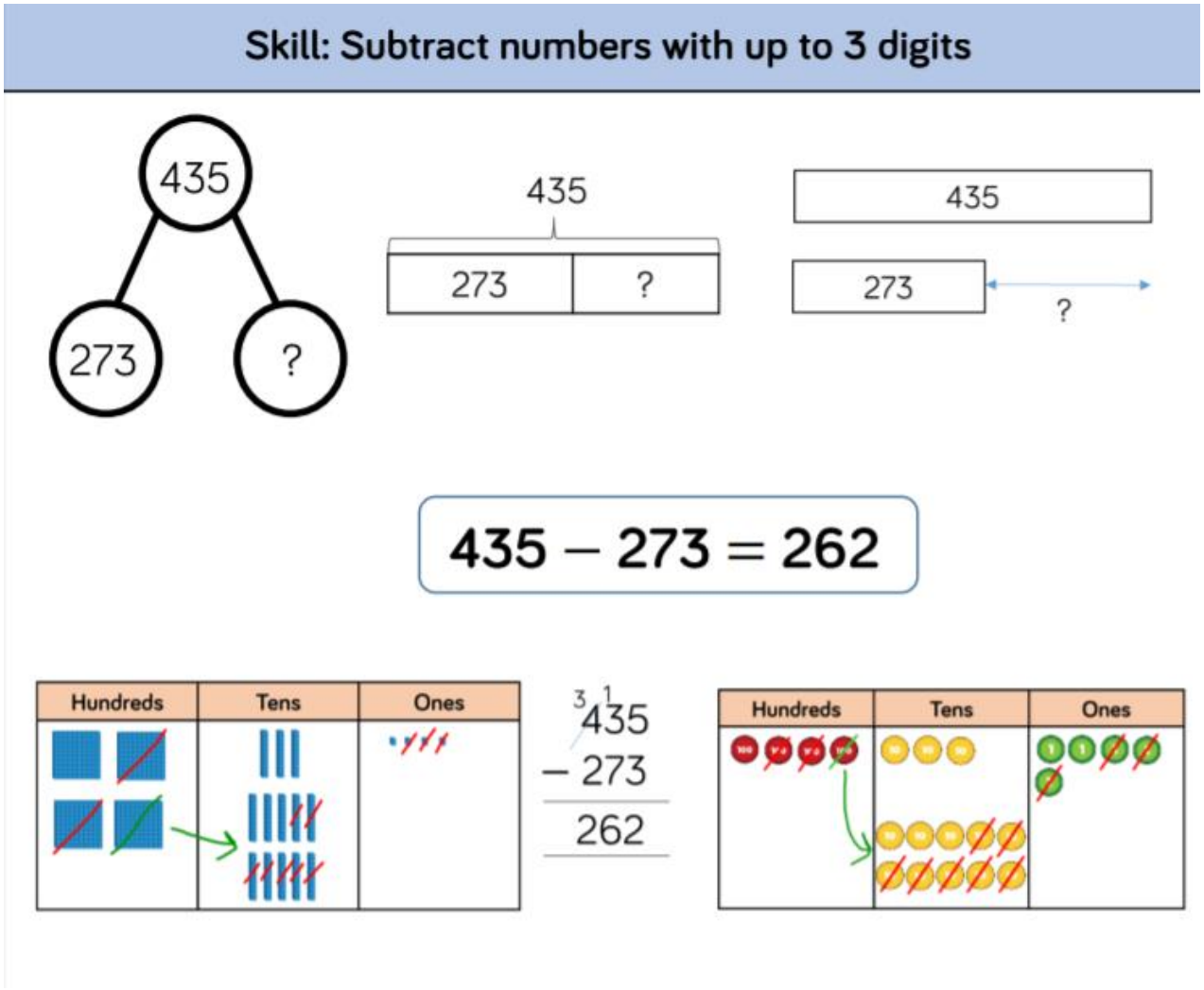
$$\begin{array}{r} {}^{5}\cancel{6}\,{}^{1}5 \\ -\ 28 \\ \hline 37 \end{array}$$



Previous Learning

Your child will have worked with increasingly large numbers to practise their subtraction skills. They will have been encouraged to subtract larger chunks to be more efficient.

Some children will have begun to use the formal written method of column subtraction but this will have been heavily supported by concrete representations and they may not have learned the concept of decomposing yet.



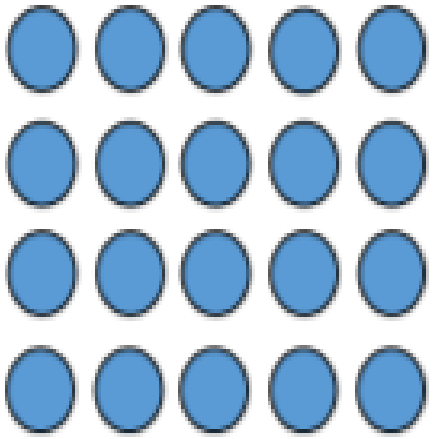
New Learning

Part-whole models will make way to the use of the bar tool to pictorially represent each calculation your child completes.

Your child will learn how to complete written column subtraction but will often write this alongside the concrete or pictorial representation they have used to understand the process.

The concrete representations allow your child to confidently use the concept of 'decomposing' – breaking down a number from a larger column to support solving the problem.

Multiplication



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

$$4 \times 5 = 20$$

$$5 \times 4 = 20$$

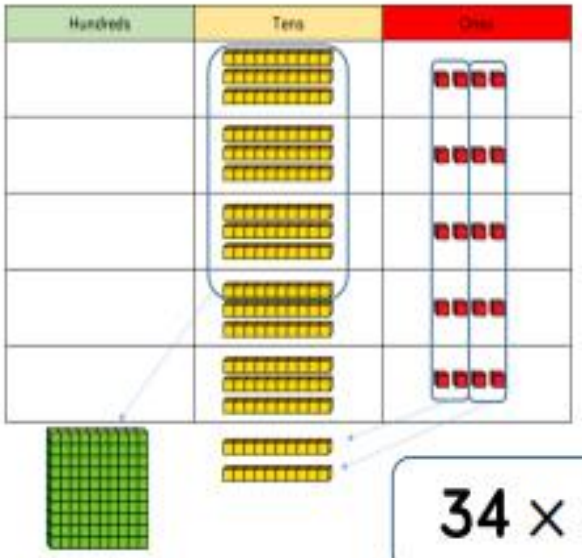
Previous/New Learning

Your child will have used repeated addition and begun to use arrays to support their solving of multiplication problems.

They may continue with these methods throughout Year Three.

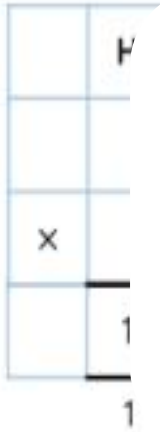
Some children will move on to formal written methods this year.

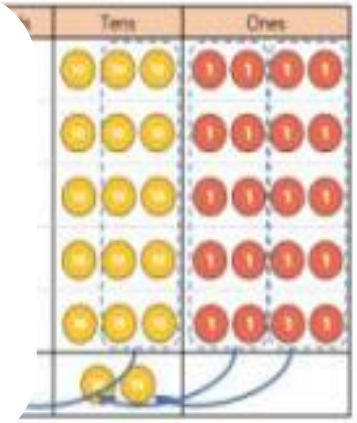
Skill: Multiply 2-digit numbers by 1-digit numbers



	H	T	O	
		3	4	
×			5	
		2	0	(5 × 4)
+	1	5	0	(5 × 30)
	1	7	0	

$$34 \times 5 = 170$$





New Learning

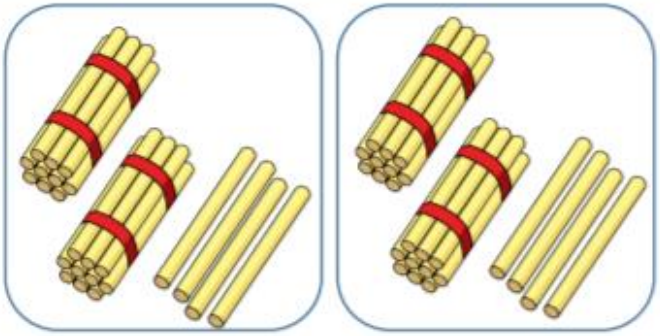
Your child may still mostly use concrete representations to support their understanding of written methods.

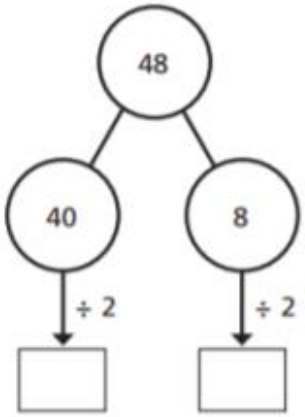
The 'expanded method' of multiplication clearly sets out all of the steps required to solve the problem and will be most used by those that no longer require pictorial representations to support them.

Division

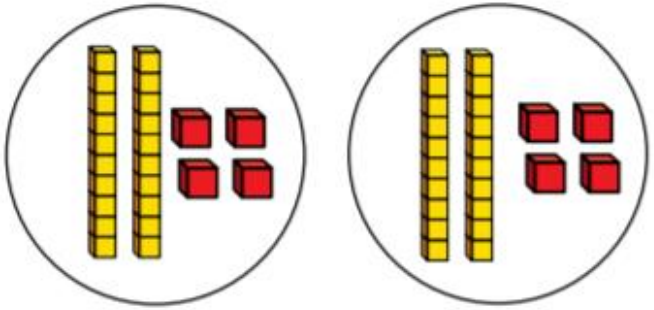
Skill: Divide 2-digits by 1-digit (sharing with no exchange)

Tens	Ones
10 10	1 1 1 1
10 10	1 1 1 1





$48 \div 2 = 24$

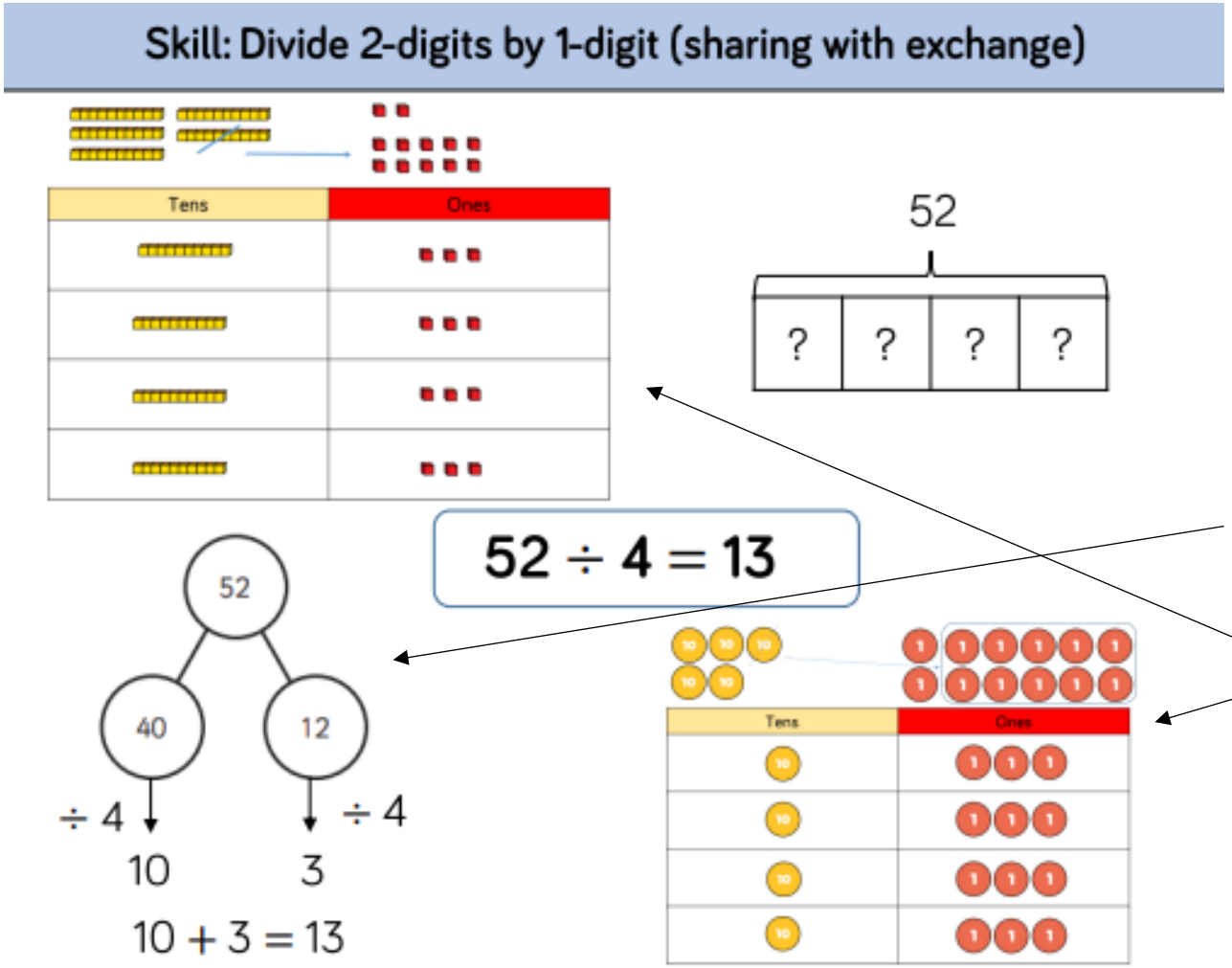


Previous Learning

Your child will have learned about how to divide numbers using sharing.

They will have used a range of concrete objects to support their workings.

The part-whole model will have been used to partition numbers to make them easier to work with.

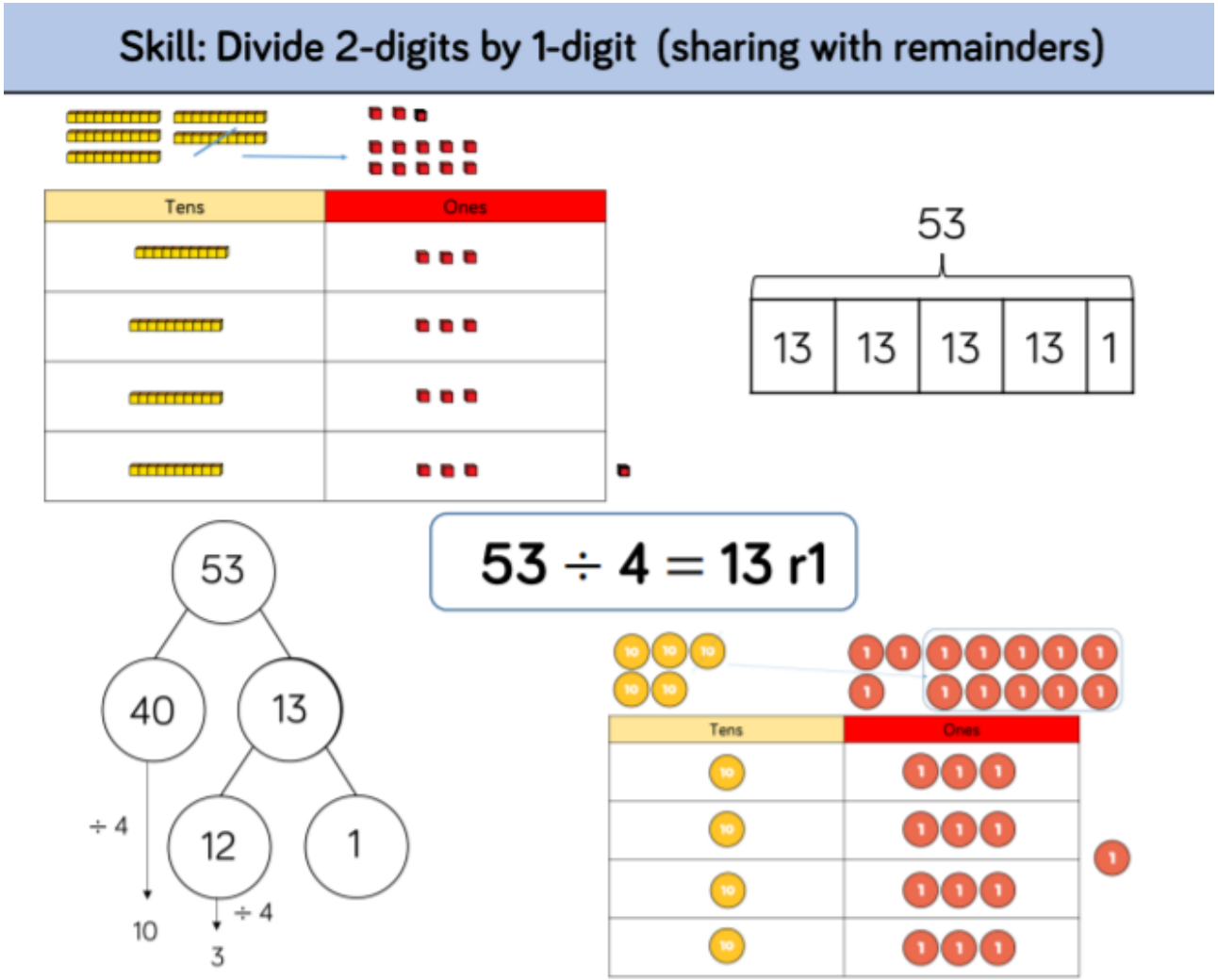


New Learning

Your child will learn how to divide two-digit numbers by one-digit numbers using a variety of methods and will choose their favourite and most efficient.

Some will like to partition and use their times tables knowledge.

Others will still prefer to use concrete representations.



New Learning

Your child will have solved some problems involving remainders by the end of the year and will understand that this is an amount 'left over' after dividing a number and must be smaller than the divisor.