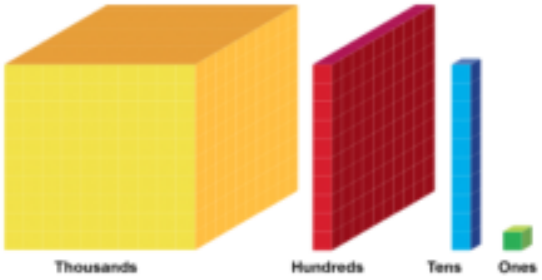
Maths Workshop Evening

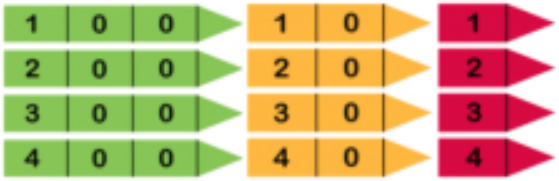
November 2018

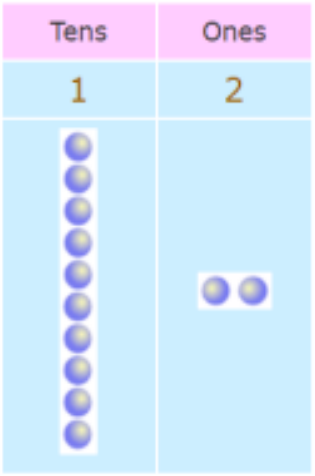
KS1 Year 2

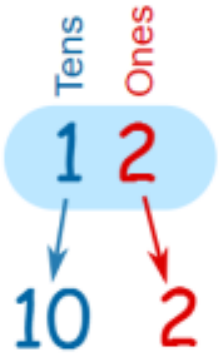
Place Value...

Place value is the value of each digit in a number.
It means understanding that 82 is made 80 and 2,
rather than 8 and 2.





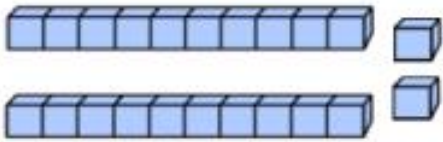


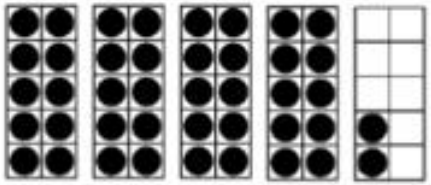


Place Value…

Place Value...

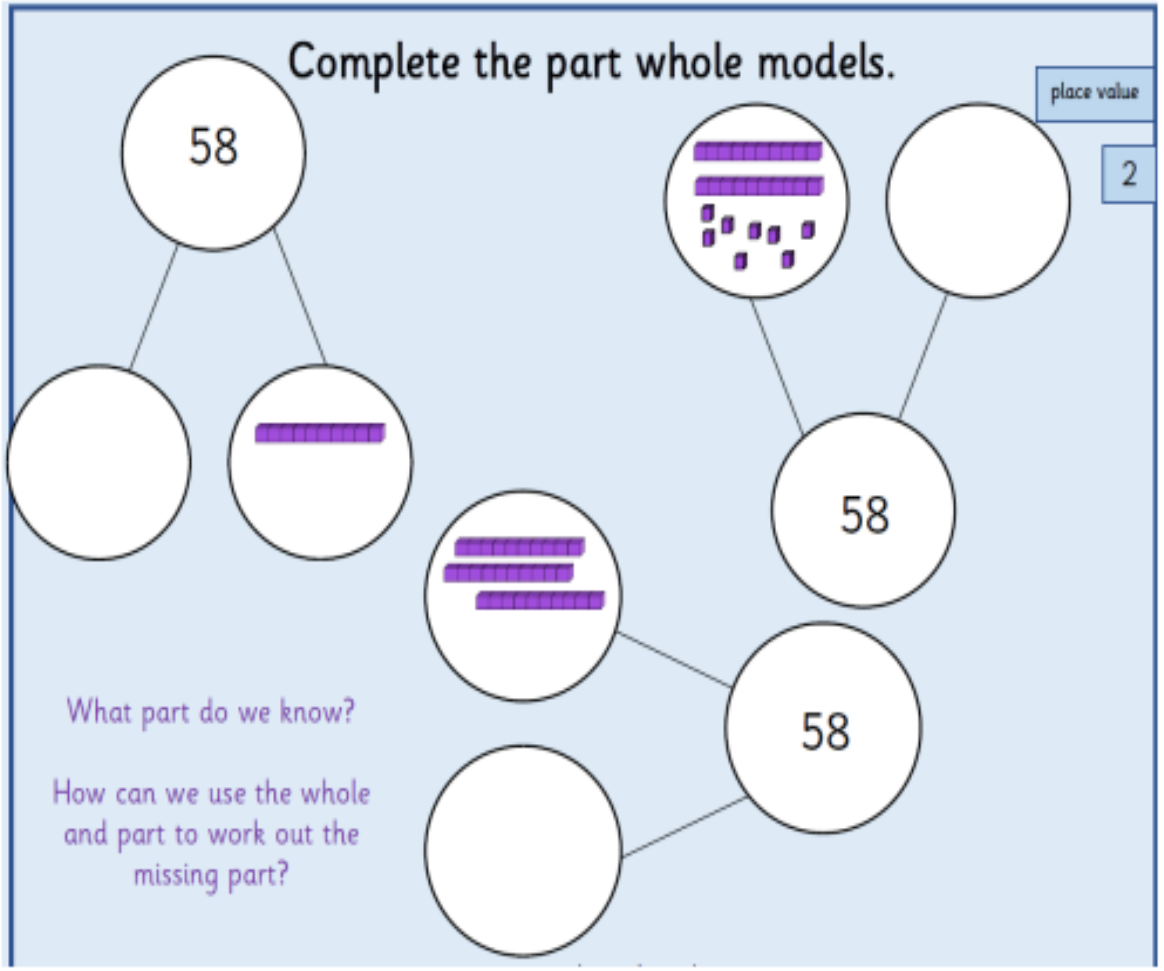
Match the representation to the correct number.





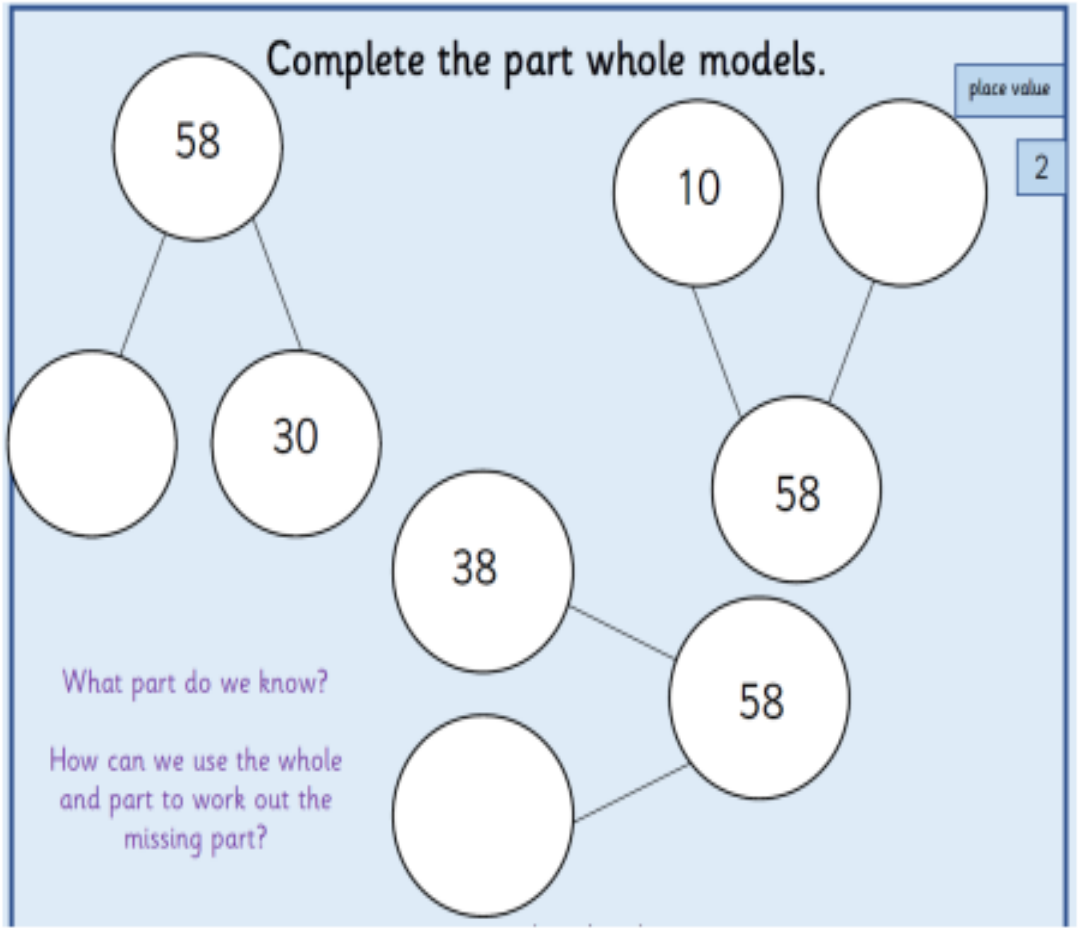
- forty-one
- 24
- 4 tens and 2 ones

Place Value...


Complete the part whole models.
place value
2
58
58
58
What part do we know?
How can we use the whole and part to work out the missing part?

Place Value...

It is important that children can partition numbers in a variety of ways, not just as tens and ones. For example, 58 is made up of 5 tens and 8 ones or 4 tens and 18 ones, or 20 and 38, etc.



Place Value...

How many two-digit numbers can you make using the digit cards only once?

I can make _____ two-digit numbers.

They are _____

Your turn!

Numeracy key words

Addition +	Subtraction -	Multiplication X	Division ÷
More than	Subtract	Multiply	Divide by
Total	Minus	Lots of	Share
Altogether	Less than	Times	Groups of
Plus	Take away	Multiplied by	
Add	Difference between	Multiples of	

Addition

23+12 =

Using a number line...

Addition Using partitioning... +

Partitioning both numbers into tens and ones mirrors the column method where ones are placed under ones and tens under tens. This also links to mental methods.

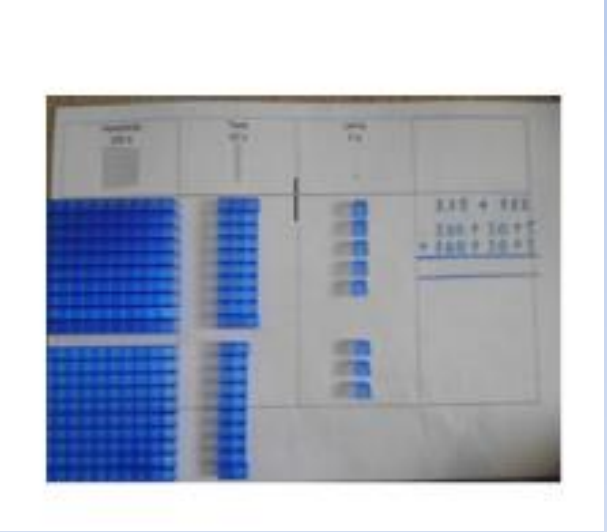
The expanded method **leads** children to the more compact method so that they understand its structure and efficiency. The amount of time that should be spent teaching and practising the expanded method will depend on how secure the children are in their recall of number facts and in their understanding of place value.

76 + 47

70 + 40 = 110

6 + 7 = 13

110 + 13 = 123

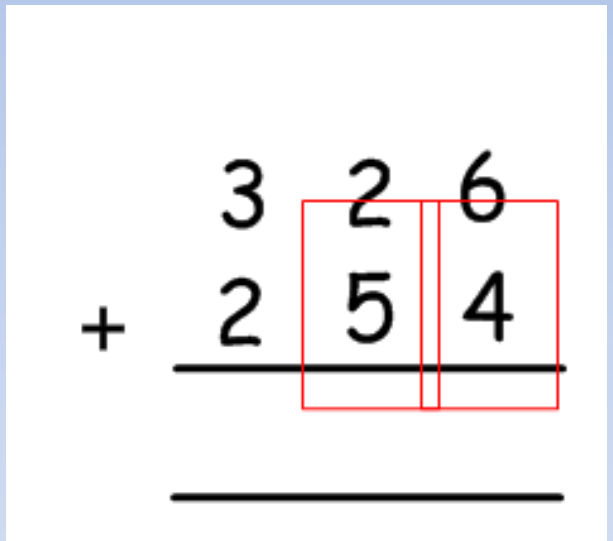


+

$$\begin{array}{r} 39 \\ 22 \\ \hline 11 \\ 50 \\ \hline 61 \end{array}$$

Addition Using columns... +

In this method, recording is reduced further. Carry digits are recorded **below** the line, **using the words 'carry ten' or 'carry one hundred', not 'carry one'.**



The bar model is a really good way of helping children to understand the relative sizes of numbers and to link three numbers together in different ways, showing addition and subtraction are closely related (inverse).

<table>
<tr><td colspan="2">There are 20 sweets in my bag and 13 sweets in my friend's bag. How many sweets have we got altogether?</td></tr>
<tr><td colspan="2"></td></tr>
<tr><td>20</td><td>13</td></tr>
</table>

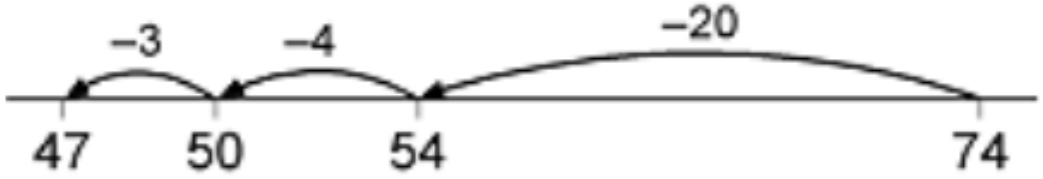
Number families...

Subtraction

Steps in subtraction can be recorded on a number line. The steps often bridge through a multiple of 10.

15 - 7 = 8

74 - 27 = 47 worked by counting back:



Subtraction

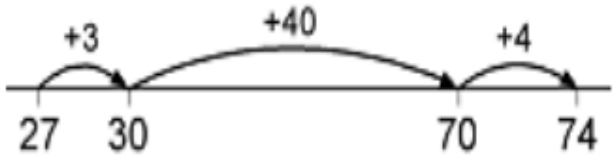
Using a number line...

28 - 13 =

Subtraction

Finding an answer by counting up - The steps can also be recorded by counting up from the smaller to the larger number to find the difference, for example by counting up from 27 to 74 in steps totaling 47. Pupils should be comfortable that either way we get the same answer (and that the three numbers involved therefore hold an inverse relationship).

74 - 27 =



Subtraction

Expanded layout, leading to column method

- Partitioning the numbers into tens and ones and writing one under the other mirrors the column method, where ones are placed under ones and tens under tens.
- The expanded method leads children to the more compact method so that they understand its structure and efficiency.

Example: 63 – 41 =

$$\begin{array}{r} 60 + 3 \\ -\ 40 + 1 \\ \hline + \\ \hline \end{array}$$

Start by subtracting the ones, then the tens. Refer to subtracting the tens, for example, by saying 'sixty take away forty', not 'six take away four'.

Subtraction

The concept of transfer / exchange

$$\begin{array}{r} 72 \\ -\ 47 \\ \hline \\ \hline \end{array}$$

Multiplication

We started with step counting in Year 1 and still do this but we also look for patterns and start to know that 1 x 2 = 2 and 2 x 2 = 4 etc.

Which times table has been highlighted on the number square?

How do you know?

Which of these numbers would you find in the 5 times table?

134 **67** **205** **502**

How do you know?

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

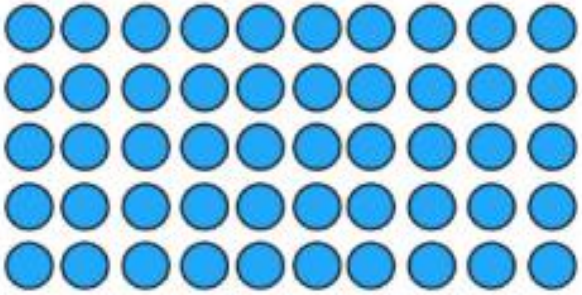
Multiplication

Arrays

×

2x10

5x10

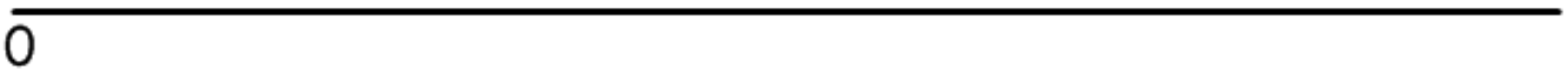


Multiplication

Using a number line

3 x 3 =

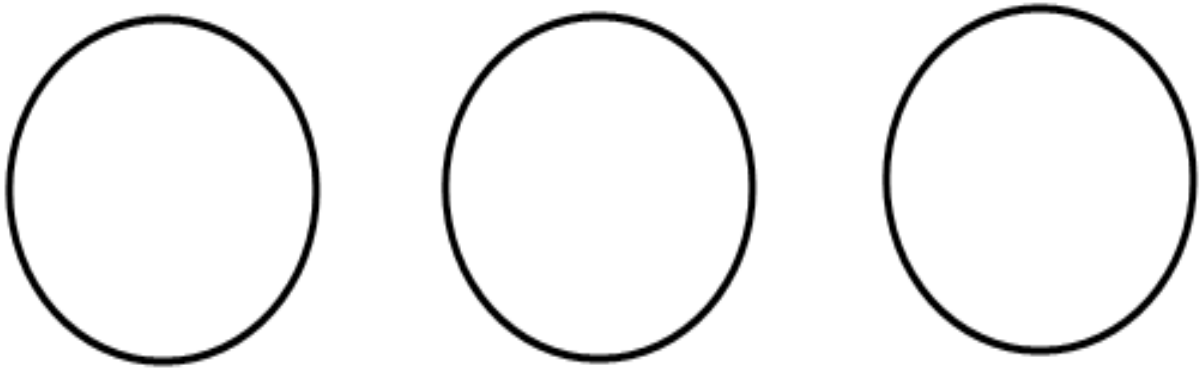
3+3+3=



Division

By sharing ÷

The farmer had 12 sheep. He put them into three fields. How many sheep were in each field.



12 ÷ 3 =

Division

$12 \div 3 =$

Using a number line

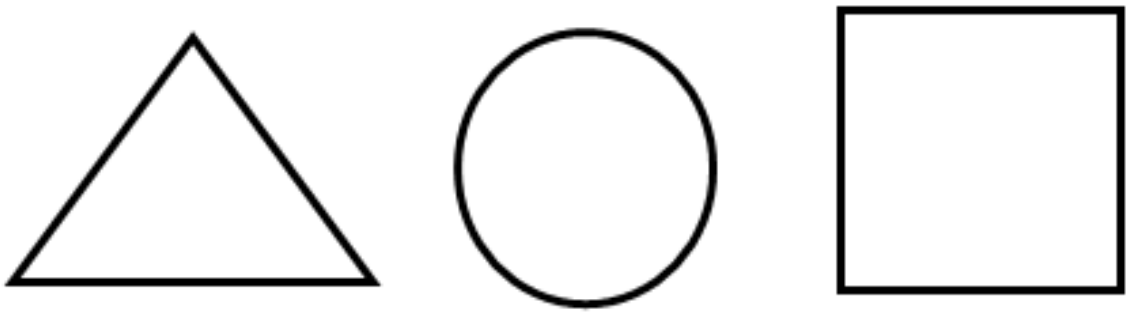
and repeated subtraction

Mental starters - brain warmers!

Prove it!! (Explain and justify)

Which is the odd one out?

4 5 8



Mental starters - brain warmers!

Missing number problems...

14 + ____ = 23

25 - _____ = 20

Mental starters - brain warmers!

20 + 14 = 30 + 4

(is the same as)

30 + 11 = 20 + ___