

Hadleigh Infants and Nursery School

Calculation Policy Year 2



Addition

It is important that children's mental methods of calculation are practised on a regular basis and secured alongside their learning and use of written methods of addition.

There are some key skills that children need to help with addition, which include:

- Counting forwards in ones and tens from any number.
- Recalling their addition facts for 10, 20 and 100.
- Doubles
- Adding mentally a series of one-digit numbers ($5 + 8 + 4$)
- Adding multiples of 10 ($60 + 20$)
- Partitioning two-digit numbers into tens and ones.
- Understanding and using addition and subtraction as inverse operations

Using and applying is a key theme and one of the aims of National Curriculum, it is important that their skills are broadened through their use and application in a range of contexts, these include:

- Using inverse
- Missing number questions
- Using units of measure including money and time
- Word problems
- Open ended investigations

Mathematical vocabulary used in relation to addition

- Add
- Plus
- Altogether
- Total
- Sum
- Make
- More



Addition

Hundred Square

$43 + 34 =$

Children will be required to partition the smallest number into tens and ones.

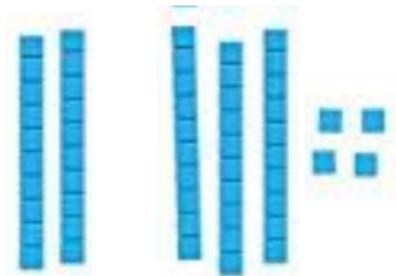
E.g. $34 = 30$ and 4 (3 tens and 4 ones)

The children will make jumps down when adding the tens and across when adding the ones.

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

Dienes

$20 + 34 =$



Partitioning

$43 + 34 =$

Children will be required to partition both numbers into tens and ones.

$$\begin{array}{r} 43 + 34 = \\ \swarrow \quad \searrow \quad \swarrow \quad \searrow \\ 40 \quad 3 \quad 30 \quad 4 \end{array}$$

The children then add the tens together.

Followed by adding the ones together.

Finally, add the two totals to find the answer.

$40 + 30 = 70$

$3 + 4 = 7$

$70 + 7 = 77$



Subtraction

It is important that children's mental methods of calculation are practised on a regular basis and secured alongside their learning and use of written methods of subtraction.

There are some key skills that children need to help with subtraction, which include:

- Counting forwards and backwards in ones and tens from any number.
- Recalling their number facts for 10, 20 and 100. and knowing their inverses.

($7 + 3 = 10$ therefore $10 - 3 = 7$ and $10 - 7 = 3$)

- Halves
- Subtracting multiples of 10 ($90 - 40$)
- Partitioning two-digit numbers into ten and ones.
- Understanding and using addition and subtraction as inverse operations

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- Using inverse
- Missing number questions
- Using units of measure including money and time
- Word problems
- Open ended investigations

Vocabulary used in relation to subtraction

- Take away
- Minus
- Difference between
- Less
- Subtract



Subtraction

Hundred Square

$$57 - 41 =$$

Children will be required to partition the smallest number into tens and ones.

E.g. $41 = 40$ and 1 (4 tens and 1 one)

The children will make jumps up (the numbers on the number square need to be reducing) when subtracting the tens and backwards when subtracting the ones

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

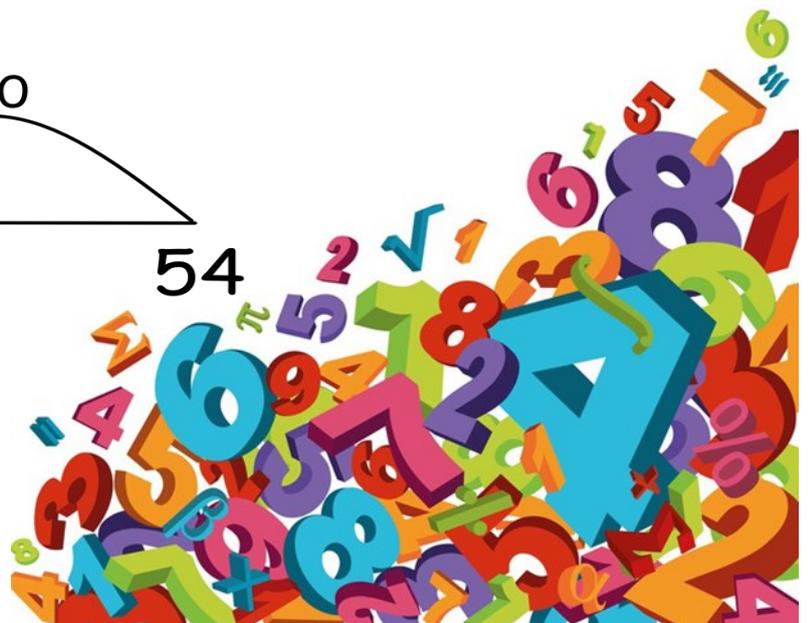
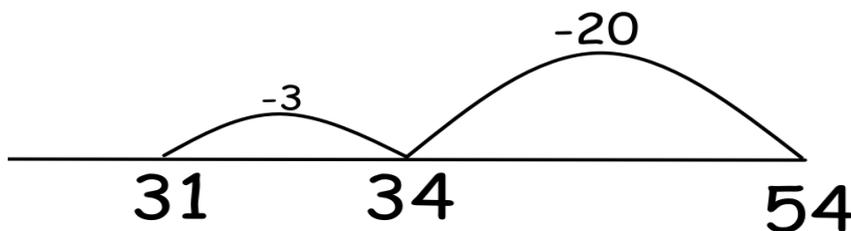
Blank Numberline

$$54 - 23$$

The children will draw a blank number line placing the largest number at the end. Next they need to partition the smallest number into tens and ones

e.g. $23 = 20$ and 3 .

Children will subtract the tens, then the ones completing the blank number line as they go.



Multiplication

It is important that children's mental methods of calculation are practised on a regular basis and secured alongside their learning and use of written methods of multiplication.

There are some key skills that children need to help with multiplication, which include:

- Counting in 2s, 5s and 10s
- Understanding multiplication as repeated addition
- Doubling
- Recalling multiplication facts
- Recognising multiples of 2, 5 and 10.
- Understanding and using division and multiplication as inverse operations

Using and applying is a key theme and one of the aims of National Curriculum, it is important that their skills are broadened through their use and application in a range of contexts, these include:

- Using inverse
- Missing number questions
- Using units of measure including money and time
- Word problems
- Open ended investigations

Vocabulary used in relation to multiplication

- Times
- Groups of
- Lots of
- Repeated addition
- Multiple of
- Multiplied by

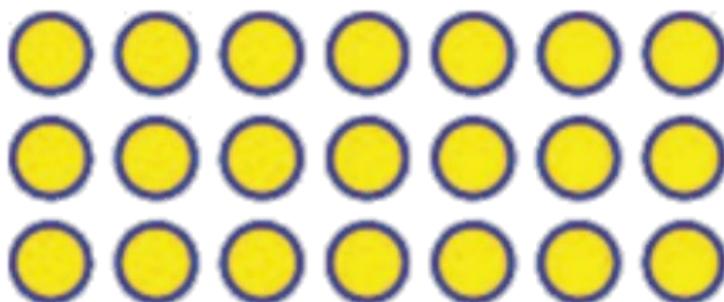


Multiplication

Arrays

Children can use arrays to work out multiplication problems and also to demonstrate their understanding of commutativity.

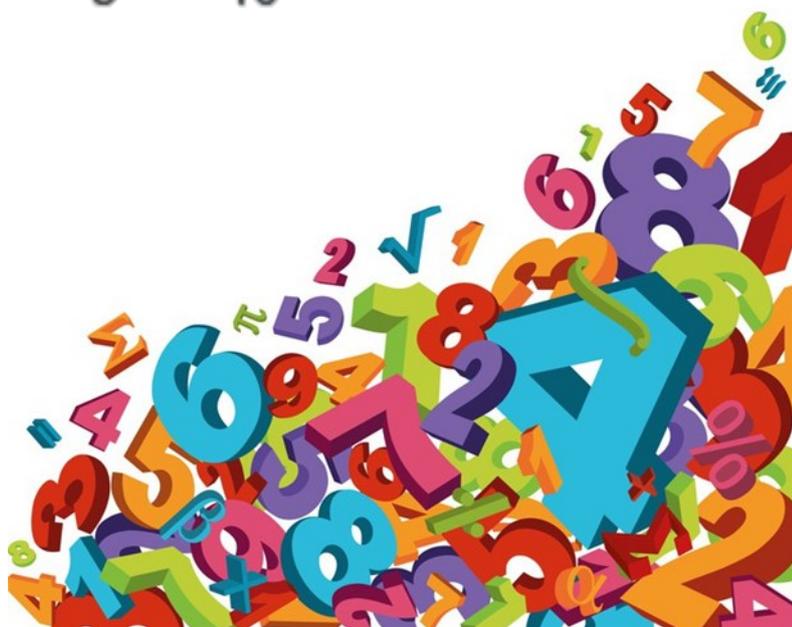
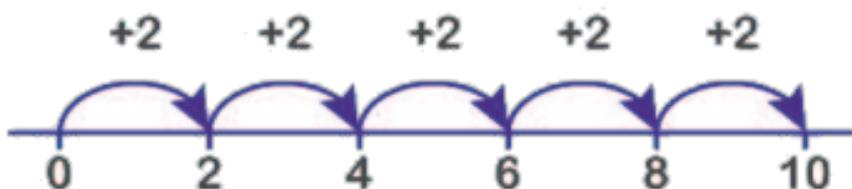
$$3 \times 7 \text{ or } 7 \times 3$$



Blank Numberline

$$2 \times 5 =$$

Children will count in jumps of 2, 5 times. The number on the final jump will be their answer.



Division

It is important that children's mental methods of calculation are practised on a regular basis and secured alongside their learning and use of written methods of division.

There are some key skills that children need to help with division, which include:

- Counting in 2s, 5s and 10s
- Halving
- Recalling division facts
- Understanding and using division and multiplication as inverse operations

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- Using inverse
- Missing number questions
- Using units of measure including money and time
- Word problems
- Open ended investigations

Vocabulary used in relation to division

- Share
- Equal groups of
- Share equally

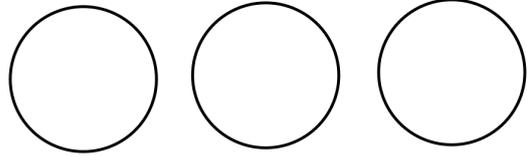


Division

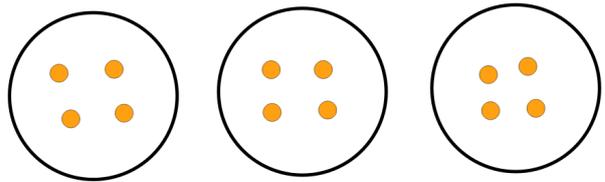
Arrays

$$12 \div 3 =$$

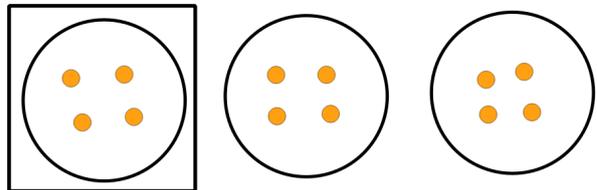
Children have 12 that they need to share between 3. Therefore they will draw 3 circles.



Then share twelve equally between the 3 circles.



The total in one of the circles will be your answer.



Blank number line

$$10 \div 2 =$$

Children will complete jumps of 2 until they reach 10. Then count the number of jumps they completed to find their answer.

