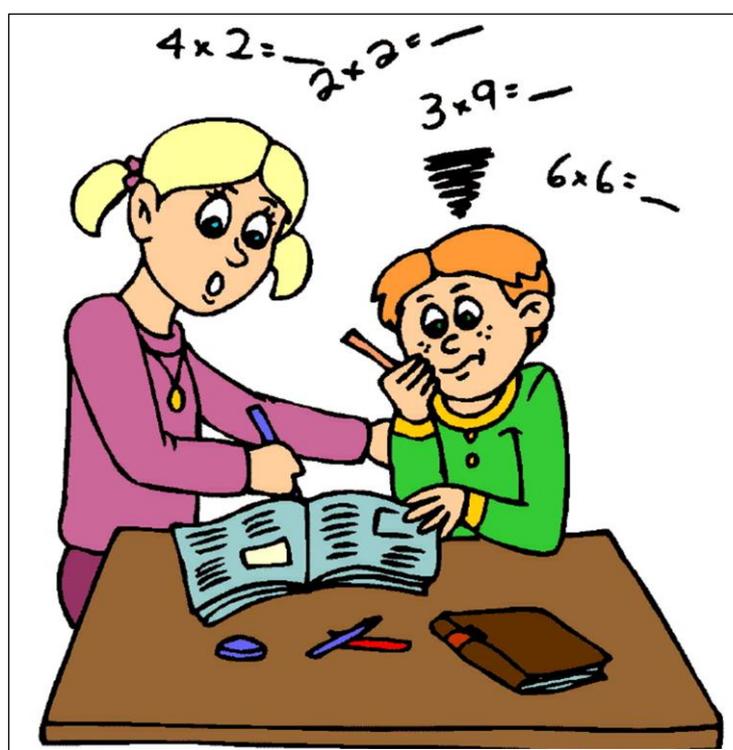




Dore Primary School



One shared maths policy for
pupils, staff and parents.



Let's keep looking out for fun
opportunities to practise our maths every
day!





Introduction



- ✓ This document is intended to provide pupils, staff and parents with a shared understanding of the calculations that the pupils will be learning in school.
- ✓ It will also provide us all with a shared vocabulary, so that when your child comes home from school and says that we have done the 'grid method' today, you will be able to use the document to understand exactly what they have been doing.
- ✓ The document provides examples of lots of practical ideas for practising maths on a day-to-day basis, it will also help you to support your children with their written methods.
- ✓ The policy has been split into stages, to allow for clear progression. Your child's class teacher will be able to inform you of your child's stage.

- ✓ Prior to each section you will find ideas of activities for your child to do, prior to stage 1.



Practical Maths



Ideas to develop Shape, Space and Measures

- ✓ When baking with your children, can the children use the scales to weigh out the ingredients? They could use both jugs and weighing scales to measure ingredients. Look at the scale and work out what the intervals represent.
- ✓ Make practical estimations: If dad is 1.78m, how tall do you think mum is? If your sister weighs 13kg, how much do you think you weigh? Children to use different sized rulers and tape measures to measure objects and people.
- ✓ Have fun taking cereal boxes to bits, looking at the nets and remaking the boxes. The net could be used as a guide to make boxes of other shapes and sizes.
- ✓ Practise telling the time with your child. Use digital and analogue clocks. Your child could become a time keeper e.g. Tell me when I have been cooking for 20 mins, tell me when it is 4:15.
- ✓ Use a stop clock to time how long it takes to do different activities e.g. how long does it take you to get dressed?
- ✓ Go on a shape hunt. How many squares can you find around your house?
- ✓ Play games using dice. If you say a number on the dice can the children tell you the number that is opposite?
- ✓ Hunt for right angles around the house. Can children identify angles smaller or larger than a right angle?

- ✓ Look for symmetrical patterns. Your child can also paint and draw symmetrical pictures.

Addition



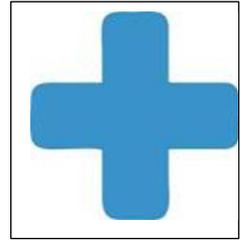
In preparation for stage 1

- Counting on activities, there are three of us so can you bring three forks please?
- If we have put out three forks and now we put out two more how many do we have? Let's count.

Practical maths ideas to practise addition

- There are four of us and we have three people coming for tea so how many will we be? How many extra plates, knives, glasses?
- Add the numbers on that car registration plate, those two buses, these three house numbers etc.
- What do all the numbers on that football team's shirts add up to? Can you make exactly 25? 36?
- You have £1.32 and you want to buy something for £2 so how much more do you need?
- When shopping, how much do you think these three items will cost at the till? – estimate and then see how close you are.
- We've put 125g of butter in and added 75g so how much altogether?
- If we've got 710ml of water and we need a litre, how much more water will we need?
- She ran the 100m in 13.56 seconds and I ran it 0.47 seconds slower so what was my time?

Addition Vocabulary



Within different situations your child will come across a range of vocabulary for addition:

From reception

Add, more, and, make, sum, total, altogether, score, double, one more, two more, ten more, how many more to make.....?, how many more than is

From Year 1

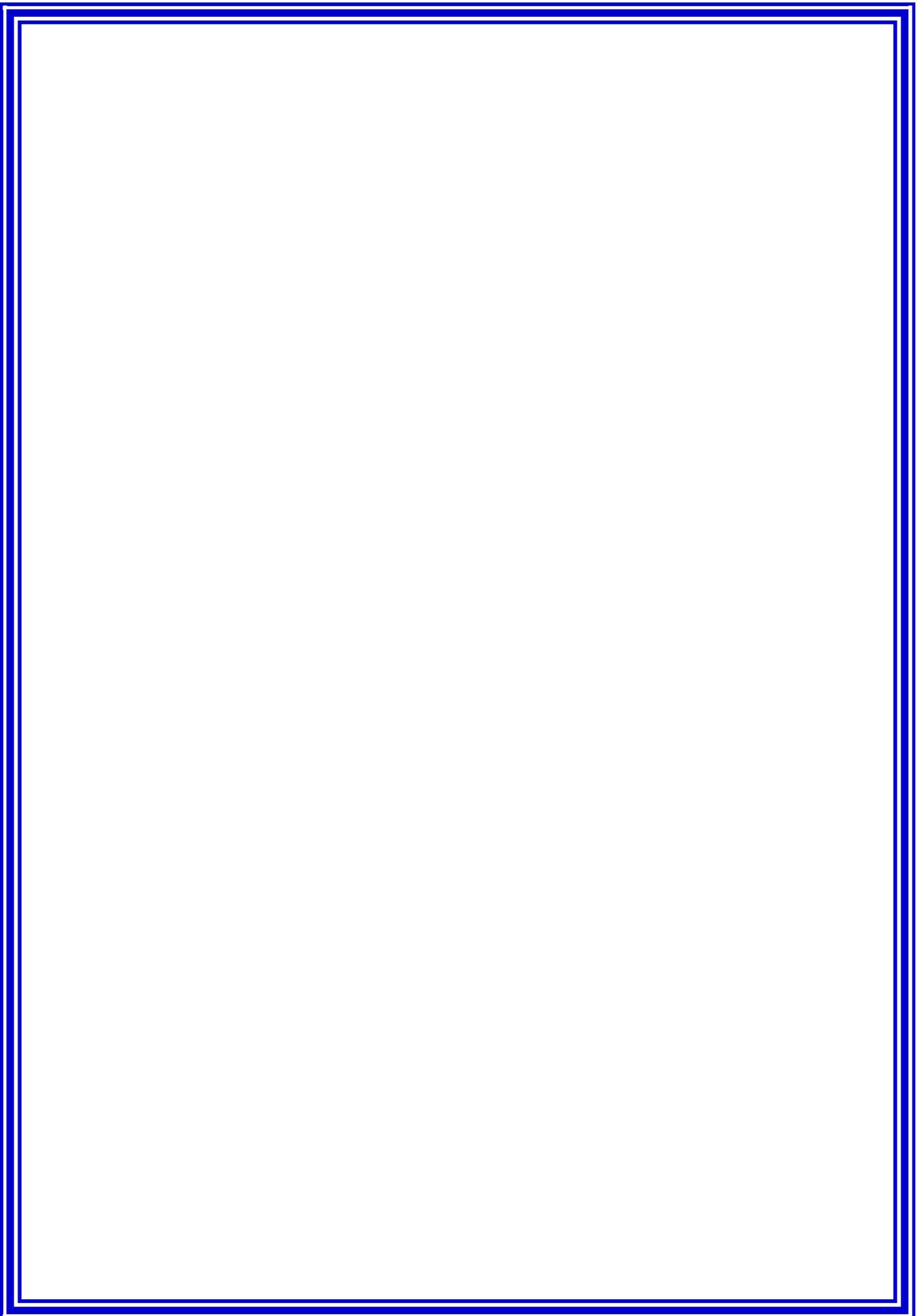
All of the above as well as: +, plus, near double, how much more is.....?

From Year 2 and Year 3

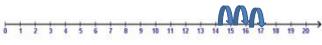
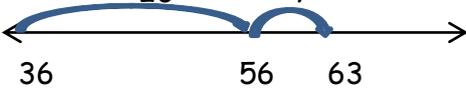
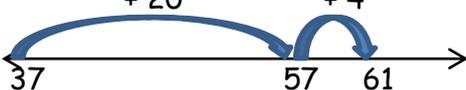
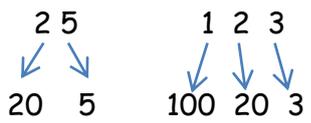
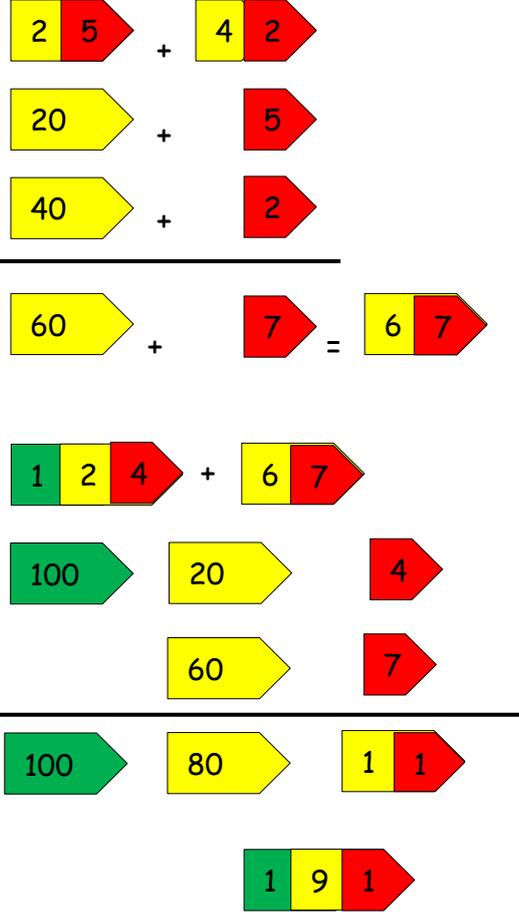
All of the above as well as: addition, one hundred more

From Year 4, Year 5 and Year 6

All of the above as well as: increase

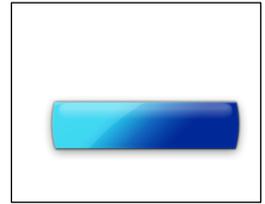


Addition

	Stage 1	Stage 2	Stage 3
Number lines	<p>Numbered number line</p> <p>$14 + 3 = 17$</p> 	<p>Empty number lines</p> <p>$36 + 27 =$</p>  <p>$24 + 37 =$</p>  <p>$24 + 37 =$</p> 	<p>Empty number lines</p> <p>$147 + 56 =$</p>  
Partitioning			<p>$38 + 61 =$</p> $\begin{array}{r} 30 \quad 8 \\ + 60 \quad 1 \\ \hline 90 \quad 9 = 99 \end{array}$ <p>$256 + 75 =$</p> $\begin{array}{r} 200 \quad 50 \quad 6 \\ + 70 \quad 5 \\ \hline 200 + 120 + 11 = 331 \end{array}$ <p>$3.4 + 5.8 =$</p> $\begin{array}{r} 3 \quad 4 \\ + 5 \quad 8 \\ \hline 8 + 1.2 = 9.2 \end{array}$ 
Mental Strategies	<ul style="list-style-type: none"> Number bonds to 10 ($8 + 2 = 10$) Simple additions e.g. $5 + 2 = 6 + 3 =$ Put 5 in your head and count on 2. 	<ul style="list-style-type: none"> Partition TU Bonds to 10 5 and a bit ($8 = 5 + 3$) Adding 10s and units Adding a multiple of 10 to a 2 digit number eg $57 + 30 =$ $83 + 50 =$ 	<ul style="list-style-type: none"> Partition HTU How many 100s, 10s units in any 3 digit number eg 479. Number bonds to 10 and 20 Adding to the nearest multiple of 10 ($184 + 7 =$)

	Stage 4	Stage 5
Number lines		
Partitioning	$24 + 77 =$ $\begin{array}{r} 20 + 4 \\ 70 + 7 \\ \hline 100 + 1 \\ \hline 110 \end{array}$ $1.7 + 2.8 =$ $\begin{array}{r} 1 . 7 \\ 2 . 8 \\ \hline 4 . 5 \\ \hline 1 \end{array}$	$124 + 67 =$ $\begin{array}{r} 124 \\ + 67 \\ \hline 191 \\ \hline 1 \end{array}$ $24.35 + 48.18 =$ $\begin{array}{r} 24.35 \\ + 48.18 \\ \hline 72.53 \\ \hline 1 \quad 1 \end{array}$
Mental Strategies	<ul style="list-style-type: none"> Partitioning HTU and recombining $\begin{array}{ccc} 1 & 2 & 3 \\ \swarrow & \downarrow & \searrow \\ 100 & 20 & 3 \end{array} + \begin{array}{ccc} 2 & 3 & 4 \\ \swarrow & \downarrow & \searrow \\ 200 & 30 & 4 \end{array} =$ <ul style="list-style-type: none"> $100 + 200 = 300$ then $20 + 30 = 350$ then $3 + 4 = 357$ Understanding place value to support the carry in mental <u>and</u> written methods when working to one decimal place. 	<ul style="list-style-type: none"> Adding decimals e.g. for money $£ 3.45 + £ 2.30 = £ 5.75$ Understanding place value to support the carry in mental <u>and</u> written methods when working to two decimal places. $2.75 \text{ kg} + 3.5 \text{ kg} = 6.25 \text{ kg}$

Subtraction



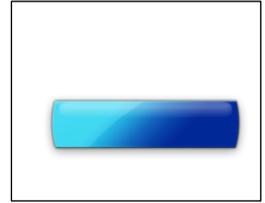
In preparation for stage 1

- Children must practise counting forwards and backwards, this is crucial for their mathematical development.
- Count forwards and backwards from different numbers e.g. 8, 9, 10, 11, 12 or 24, 23, 22, 21, 20.
- Begin to relate counting forwards and backwards to a number line.
- Sing songs and rhymes including taking away e.g. 10 green bottles.
- Practise the recognition of numbers.
- Say which is more **and less** out of groups of objects e.g. Sofia has more counters than Matthew, so Matthew has fewer counters than Sofia (ensure the vocabulary for 'less/fewer' is used as frequently as 'more').
- Compare the difference between different objects e.g. this tree is taller than that tree, so that tree is shorter than this tree.
- Begin to order objects by difference e.g. height or length.

Practical maths ideas to practise subtraction

- Go shopping with your child and ask them to work out how much change you will get.
- Work out the length of programmes on the TV by finding the difference between the start time and end time.
- Use a bus or train timetable to work out how long each journey is by finding the difference.
- When baking with your child ask them to work out how much more or less of each ingredient is needed.
- Work out how many miles are left to travel when you are on a journey.

Subtraction Vocabulary



Within different situations your child will come across a range of vocabulary for subtraction:

From reception

Take, take away, how many are left?, how many are left over?, how many have gone?, one less, two less, ten less, how many fewer is than.....? difference between,

From Year 1

All of the above as well as: -, subtract, minus, how much less is, halve, half

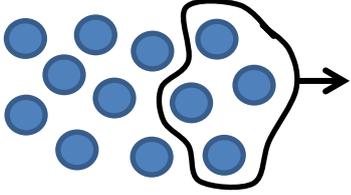
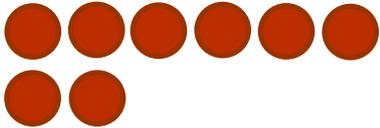
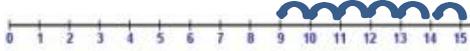
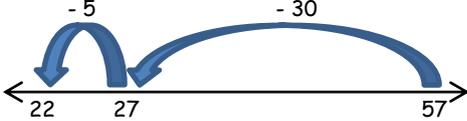
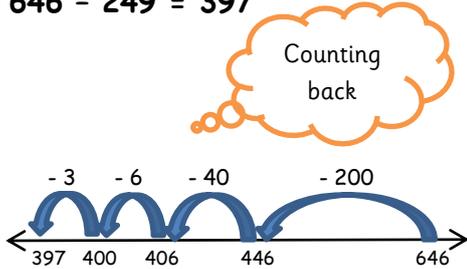
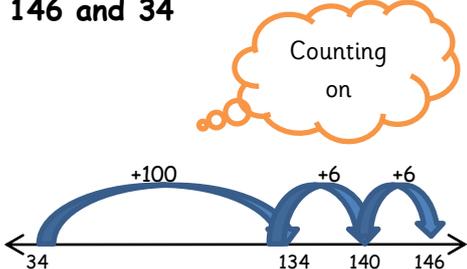
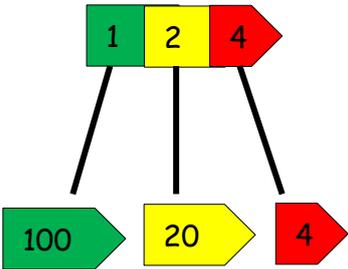
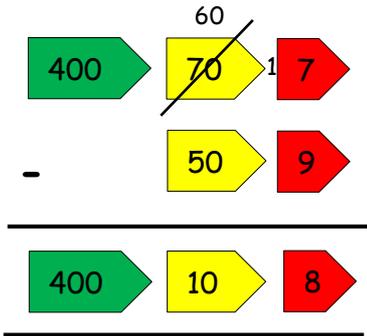
From Year 2 and Year 3

All of the above as well as: subtraction, one hundred less

From Year 4, Year 5 and Year 6

All of the above as well as: decrease, inverse

Subtraction

	Stage 1	Stage 2	Stage 3
Number lines	<p>$12 - 4 = 8$ 12 takeaway 4 (counting back)</p>  <p>An apple costs 6p and a pear costs 2p, how much more does the apple cost? Find the difference (counting on)</p> 	<p>$15 - 6 = 9$ Counting back on the number line.</p>  <p>$57 - 35 = 22$ Counting back on an empty number line.</p> 	<p>$646 - 249 = 397$</p>  <p>Find the difference between 146 and 34</p> 
Partitioning		<p>Basic partitioning</p> 	<p>$477 - 59 =$</p>  <p style="text-align: right;">= 418</p>
Mental Strategies	<ul style="list-style-type: none"> Use rhymes and poems that include counting back and taking away. Count backwards in 1s. Say which is bigger or smaller than out of 2 groups. Use objects and fingers to work out quickly how many there are, up to 10. 	<ul style="list-style-type: none"> Number bonds to 10 and 20. Use the fact family to support inverses: <ul style="list-style-type: none"> $15 + 5 = 20$ $20 - 5 = 15$ $20 - 15 = 5$ Counting backwards in multiples of 10 from a given number e.g. $37 - 20 = 17$. 	<ul style="list-style-type: none"> Number bonds to 10, 20 and 100. Find the difference between two numbers (see example above). Understand that number is the same but partitioned differently and can be applied to subtraction. e.g. $7 = 5 + 2$ so... $85 - 7 = 85 - 5 - 2 = 78$

Stage 4

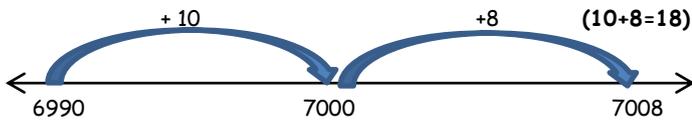
Stage 5

Number lines

Find the difference between two nearby numbers:

$$7008 - 6990 = 18$$

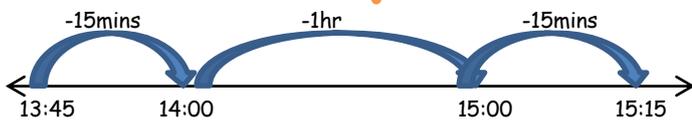
Counting on to the nearest 10, 100 or 1000.



Solving time problems:

Ben got off the coach at 15:15, his journey was 1hr 30mins long. What time did Ben get on the coach?

Counting on to the nearest hour.



$$496 - 328 =$$

$$\begin{array}{r} 4 \overset{8}{\cancel{9}} \overset{16}{6} \\ - 3 \ 2 \ 8 \\ \hline 1 \ 6 \ 8 \end{array}$$

We exchange the 10, for 10 units

Whole numbers

$$43.65 - 21.76 =$$

$$\begin{array}{r} 4 \overset{2}{\cancel{3}} \overset{15}{\cancel{6}} \overset{15}{5} \\ - 2 \ 1 \ . \ 7 \ 6 \\ \hline 2 \ 1 \ . \ 8 \ 9 \end{array}$$

Decimal numbers

$$13.6 - 9.421 =$$

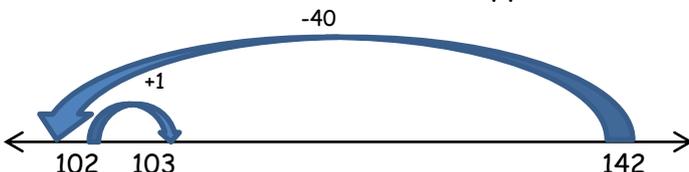
$$\begin{array}{r} \overset{5}{\cancel{1}} \overset{9}{\cancel{3}} \ . \ \overset{10}{\cancel{6}} \ \overset{10}{\cancel{0}} \\ - \ 9 \ . \ 4 \ 2 \ 1 \\ \hline \ 4 \ . \ 1 \ 7 \ 9 \end{array}$$

If you have a different number of digits after the decimal point in your two numbers, then you need to add a zero as required e.g. 13.6 becomes 13.600.

Partitioning

Mental Strategies

- Secure decimal place value.
- Understand the concept of exchange across decimal point.
- Subtract a near multiple of 10 and adjust:
 - e.g. $142 - 39 = 142 - 40 + 1$
 - (Although this would not be taught as a formal written method, a number line can be used to demonstrate this for visual support.)



- Decimal bonds to 1 e.g:
 - $0.2 + 0.8 = 1$
 - $0.8 + 0.2 = 1$
 - $1 - 0.2 = 0.8$
 - $1 - 0.8 = 0.2$
- Subtracting 10, 100 and 1000 and adjust when subtracting near multiples of them e.g. A ball costs £6.99 what is the change from £20?
 - $£20 - £7 = £13 + 1p$

Multiplication



In preparation for stage 1

- To start to double numbers e.g. If I order a double Big Mac at Mcdonalds how many burgers would I expect to see?
- I order a double scoop of vanilla ice cream. How many scoops will I get?
- I have two apples, if we double them how many will I have?

Practical maths ideas to practise multiplication

- Work with children to chant number patterns or sing along to times table CD's, counting in: 2s, 10s and 5s to begin with.
- In the supermarket, if a Twix has two chocolate sticks, how many chocolate sticks would I have if I bought 3 packets?
- Looking together at practical problems: there are 4 apples in each pack. Mrs Hopkinson buys 3 packs of apples. How many apples does she buy altogether?
- When going to the cinema: each cinema ticket costs £3.50. What will be the cost of 4 tickets?
- When travelling in the car, quick fire questions to your child, starting with simple multiplications e.g. $5 \times 3 =$ moving on to 50×3 etc.
- Can children fill in missing boxes e.g. $6 \times \blacksquare = 24$, $\blacksquare \times 7 = 21$.

Multiplication Vocabulary



Within different situations your child will come across a range of vocabulary for multiplication:

From Reception and Year 1

Double

From Year 2

Lots of, groups of, x, times, multiply, multiplied by, multiple of, three times larger, ten times larger, repeated addition, array

From Year 3

All of the above as well as: multiplication, product

From Year 4, Year 5 and Year 6

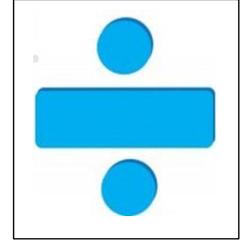
All of the above.

Multiplication

	Stage 1	Stage 2	Stage 3							
Arrays & Number lines	<p>$4 \times 2 =$</p> <p> $2 + 2 + 2 + 2 = 8$ $4 \text{ lots of } 2 = 8$ $2 \times 4 = 8$ </p>	<p>$5 \times 3 =$</p> <p>Drawing an array (3 rows of 5, or 3 columns of 5) gives children an image of the answer. It also helps them to understand that 3×5 has the same answer as 5×3.</p> <p>$3 \times 4 =$</p>	<p><u>Partitioned array</u></p> <p>$13 \times 2 =$</p> <p>$10 \times 2 = 20$ $3 \times 2 = 6$ $(20 + 6 = 26)$</p> <p><u>Number Line</u></p> <p>$14 \times 6 =$</p> <p>+60 +24</p>							
Partitioning		<p>$14 \times 4 = 56$</p> <p>$10 \times 4 = 40$ $4 \times 4 = 16$ $(40 + 16 = 56)$</p>	<p><u>Grid Method</u></p> <p>$13 \times 3 =$</p> <table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td>X</td> <td>10</td> <td>3</td> <td rowspan="2">30 + 9 = 39</td> </tr> <tr> <td>3</td> <td>30</td> <td>9</td> </tr> </table>	X	10	3	30 + 9 = 39	3	30	9
X	10	3	30 + 9 = 39							
3	30	9								
Mental Strategies	<ul style="list-style-type: none"> Counting in: 2s, 5s and 10s. Doubles of numbers to 10 e.g. double 8. Number rhymes that involve counting forwards in steps of equal size. Understanding that multiplication is repeated addition. 	<ul style="list-style-type: none"> Counting in: 2s, 5s and 10s. Begin counting forwards in 3s and 4s. Doubles of numbers to 20 e.g. double 16. Use the family facts to support the inverse e.g. <p> $6 \div 2 = 3$ $6 \div 3 = 2$ $3 \times 2 = 6$ $2 \times 3 = 6$ </p>	<ul style="list-style-type: none"> Partition HTU e.g. $456 = 400 + 50 + 6$ Count forwards in steps of: 2, 3, 4, 5, 6, 7, 8, 9, 10 X by 10 and multiples of 10 e.g. $40 \times 5 =$ X by 5 by using the strategy x 10 and then halve it. Double larger numbers using known facts. 							

	Stage 4	Stage 5																																																																										
Arrays & Number lines																																																																												
Partitioning	<p><u>Grid Method</u> $43 \times 32 =$</p> <table border="1"> <tr> <td>X</td> <td>40</td> <td>3</td> </tr> <tr> <td>30</td> <td>1200</td> <td>90</td> </tr> <tr> <td>2</td> <td>80</td> <td>6</td> </tr> </table> <p><u>Vertical addition</u> $= 1290$ $= 86$ $\underline{1376}$ $\underline{\quad 1}$</p> <p>What is $4 \times 3 = 12$ So what is $40 \times 3 = 120$ So what is $40 \times 30 = 1200$</p> <p>It is possible to do either vertical addition or column addition.</p> <p><u>Column addition</u></p> <table> <tr> <td>1</td> <td>2</td> <td>0</td> <td>0</td> </tr> <tr> <td></td> <td></td> <td>9</td> <td>0</td> </tr> <tr> <td></td> <td></td> <td>8</td> <td>0</td> </tr> <tr> <td></td> <td></td> <td></td> <td>6</td> </tr> <tr> <td></td> <td></td> <td></td> <td><u>6</u></td> </tr> <tr> <td>1</td> <td>3</td> <td>7</td> <td>6</td> </tr> <tr> <td></td> <td></td> <td></td> <td><u>6</u></td> </tr> <tr> <td></td> <td></td> <td></td> <td>1</td> </tr> </table>	X	40	3	30	1200	90	2	80	6	1	2	0	0			9	0			8	0				6				<u>6</u>	1	3	7	6				<u>6</u>				1	<p><u>Long Multiplication</u></p> <table> <tr> <td></td> <td>3</td> <td>6</td> </tr> <tr> <td>X</td> <td>5</td> <td>4</td> </tr> <tr> <td></td> <td>1</td> <td>4</td> </tr> <tr> <td></td> <td></td> <td>2</td> </tr> <tr> <td></td> <td>1</td> <td>8</td> </tr> <tr> <td></td> <td></td> <td>0</td> </tr> <tr> <td></td> <td></td> <td>0</td> </tr> <tr> <td></td> <td></td> <td>3</td> </tr> <tr> <td></td> <td>1</td> <td>9</td> </tr> <tr> <td></td> <td></td> <td>4</td> </tr> <tr> <td></td> <td></td> <td>4</td> </tr> </table> <p>$6 \times 4 = 24$ (carry 2) $4 \times 3 = 12$ (+ 2) As we are multiplying by a 10's number, put 0 down as a place holder. $5 \times 6 = 30$ (carry 3) $5 \times 3 = 15$ (+3) Followed by column addition of the two numbers.</p> <p>When multiplying by decimal numbers, complete long multiplication as above without the decimal numbers being in place. Then count the digits after the decimal point e.g. $1.2 \times 0.6 =$ both of these numbers has 1 digit after the decimal point, making two digits after the decimal point. Write the answer with two digits after the decimal point. So $1.2 \times 0.6 = 0.72$.</p>		3	6	X	5	4		1	4			2		1	8			0			0			3		1	9			4			4
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Mental Strategies	<ul style="list-style-type: none"> Count forwards in: 2,3,4,5,6,7,8,9 and 10 X by 10, 100 and multiples of 10, 100 X by 5 by using the strategy x 10 then halve it X by 50 by using the strategy x 100 then halve it Double larger numbers using known facts. 	<ul style="list-style-type: none"> As stage 4, plus increasing to ThHTU and decimals e.g. A magazine costs £3.50. What is the cost of 6 magazines? 																																																																										

Division



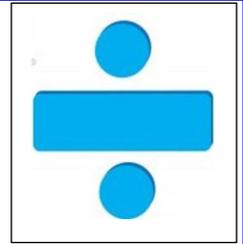
In preparation for stage 1

- To start to share numbers equally. Can you share these grapes equally between mum and dad?
- Can you share the sweets between yourself and your sister?
- Use the vocabulary of half, quarter etc. to help familiarity.

Practical maths ideas to practise division

- We have a bowl with 15 strawberries and there are 3 of us altogether, how many will we each get?
- I need to split this £4 between you and your brother so how much will you each get?
- If these two bags of apples cost £2.50, how much is one bag?
- Practical examples of how halving a half gets you to a quarter and then halving that quarter gives you an eighth. eg a cake, pizza, ribbon etc.
- Our journey is 260km so how far will we have travelled when we have done a quarter of the distance? Now we are three quarters ($\frac{3}{4}$) of the way, how far have we come?
- The film starts at 2pm, it is 2 hours and 10 minutes long. We have a break half way through. How much of the film will we have seen? What time will it be then?
- If Dad is 48 and his brother, Tom, is $\frac{3}{4}$ his age how old is he? Their sister is half Tom's age so how old is she?
- We have 3.5 litres of squash and each of the smaller jugs holds one seventh of that amount. How much does each jug hold?

Division Vocabulary



Within different situations your child will come across a range of vocabulary for division:

From Reception and Year 1

Halve, share

From Year 2

Share equally (one each, two each, three each); group in: pairs, threes, fours; equal groups of, \div , divide, divided by, divided into

From Year 3

All of the above as well as: division, remainder

From Year 4, Year 5 and Year 6

All of the above as well as: factor, divisible by, inverse

Division

	Stage 1	Stage 2	Stage 3
Number lines and manipulatives	<p>$12 \div 4 =$</p> <p>$10 \div 3 = 3$ with 1 remainder</p>	<p>Number lines</p> <p>$35 \div 5 = 7$ (7 'jumps' of 5)</p> <p>$39 \div 6 = 6$ remainder 3 (6 'jumps' of 6 remainder 3)</p>	<p>Number lines</p> <p>$75 \div 6 = 12$ remainder 3</p> <p>Instead of lots of small jumps of 6 we have moved back 10×6 in one go to make the calculation quicker. Number lines can be used division regardless of the size of the number.</p>
Partitioning, chunking & written methods	<p>$8 \div 2 =$</p> <p>$10 \div 4 = 2$ remainder 2</p>	<p>Written methods</p> <p>Repeated subtraction</p> <p>$15 \div 3 = 5$</p> $\begin{array}{r} 15 \\ - \quad 3 \quad (1) \\ \hline 12 \\ - \quad 3 \quad (1) \\ \hline 9 \\ - \quad 3 \quad (1) \\ \hline 6 \\ - \quad 3 \quad (1) \\ \hline 3 \\ - \quad 3 \quad (1) \\ \hline 0 \end{array}$ <p>We have taken away 5 lots of 3</p>	<p>Chunking</p> <p>$75 \div 6 = 12 \text{ r } 3$</p> $\begin{array}{r l} & 75 \\ \hline 10 \times 6 & - 60 \\ & \hline & 15 \\ 2 \times 6 & - 12 \\ & \hline & 3 \end{array}$
Mental Strategies	<ul style="list-style-type: none"> Count back in 2s, 5s and 10s from their multiples eg back in 2s from 8; back in 5s from 25. Nursery rhymes which involve counting backwards. Know that the part of a set which is left is called the remainder. Check the answers using the inverse eg $4 \times 2 = 8$ so $8 \div 4 = 2$ and $8 \div 2 = 4$ Understand that division is repeated subtraction. 	<ul style="list-style-type: none"> Count back in 3s and 4s from their multiples. Count back in 2s, 3s, 4s, 5s, 10s from any number eg back in 5s from 32 = 32, 27, 22, 17, 12, 7, 2 Missing number sentences eg $28 \div ? = 7$ 	<ul style="list-style-type: none"> Count back in 2-10s from any number. Count back in multiples of 10 eg back from 175 in 50s Know the 10th multiple of the divisor. Make a sensible estimate of the answer, using known facts.

	Stage 4	Stage 5																																
Chunking and fractions	<p>$245 \div 4 = 60 \text{ r } 1$</p> <table style="border-collapse: collapse; margin-left: 100px;"> <tr> <td style="border-right: 1px solid black; padding-right: 10px;">40×4</td> <td style="border-bottom: 1px solid black; padding-left: 10px;">245</td> </tr> <tr> <td style="border-right: 1px solid black; padding-right: 10px;">20×4</td> <td style="padding-left: 10px;">$- 160$</td> </tr> <tr> <td style="border-right: 1px solid black; padding-right: 10px;">1×4</td> <td style="padding-left: 10px;">85</td> </tr> <tr> <td style="border-right: 1px solid black; padding-right: 10px;"></td> <td style="padding-left: 10px;">$- 80$</td> </tr> <tr> <td style="border-right: 1px solid black; padding-right: 10px;"></td> <td style="padding-left: 10px;">5</td> </tr> <tr> <td style="border-right: 1px solid black; padding-right: 10px;"></td> <td style="padding-left: 10px;">$- 4$</td> </tr> <tr> <td style="border-right: 1px solid black; padding-right: 10px;"></td> <td style="padding-left: 10px;">1</td> </tr> </table> <p>Known facts: $10 \times 4 = 40$ (doubled) $20 \times 4 = 80$ $30 \times 4 = 120$ $40 \times 4 = 160$</p> <p>$947 \div 28 = 35 \text{ r } 7$</p> <table style="border-collapse: collapse; margin-left: 100px;"> <tr> <td style="border-right: 1px solid black; padding-right: 10px;">28×30</td> <td style="border-bottom: 1px solid black; padding-left: 10px;">947</td> </tr> <tr> <td style="border-right: 1px solid black; padding-right: 10px;">28×5</td> <td style="padding-left: 10px;">$- 840$</td> </tr> <tr> <td style="border-right: 1px solid black; padding-right: 10px;"></td> <td style="padding-left: 10px;">147</td> </tr> <tr> <td style="border-right: 1px solid black; padding-right: 10px;"></td> <td style="padding-left: 10px;">$- 140$</td> </tr> <tr> <td style="border-right: 1px solid black; padding-right: 10px;"></td> <td style="padding-left: 10px;">7</td> </tr> </table> <p>What is $28 \times 3 = 84$ Then we multiply $84 \times 10 = 840$</p> <p>We know that $28 \times 10 = 280$, so we can halve 280 to tell us what $28 \times 5 =$</p> <p>Known facts: $10 \times 28 = 280$ (doubled) $20 \times 28 = 560$ $30 \times 28 = 840$ (doubled) $40 \times 28 = 1,120$</p>	40×4	245	20×4	$- 160$	1×4	85		$- 80$		5		$- 4$		1	28×30	947	28×5	$- 840$		147		$- 140$		7	<p>The bus stop method $78 \div 6 = 13$</p> <table style="margin-left: 100px;"> <tr> <td style="border-right: 1px solid black; padding-right: 10px;">6</td> <td style="padding-left: 10px;">13</td> </tr> <tr> <td style="border-right: 1px solid black; padding-right: 10px;"></td> <td style="padding-left: 10px;">$6 \overline{) 78}$</td> </tr> </table> <p>$465 \div 6$</p> <table style="margin-left: 100px;"> <tr> <td style="border-right: 1px solid black; padding-right: 10px;">6</td> <td style="padding-left: 10px;">077.5</td> </tr> <tr> <td style="border-right: 1px solid black; padding-right: 10px;"></td> <td style="padding-left: 10px;">$6 \overline{) 4645.30}$</td> </tr> </table> <p>Division using fractions</p> <p>There are 6 pizzas which need to be shared amongst 12 people. So $6 \div 12 = \frac{1}{2}$</p> <p>Over the week John spends 3 hours travelling 6 times to and from work. How long does each journey take? $6 \text{ hours} \div 6 \text{ trips} = \frac{1}{2} \text{ hour}$ or 30 minutes each.</p> <p>There are 8 kilograms of potatoes which are needed for 32 meals. How many potatoes should be used for each meal? $8 \text{ kg} \div 32 = 0.25 \text{ kg}$ or $\frac{1}{4} \text{ kg}$.</p>	6	13		$6 \overline{) 78}$	6	077.5		$6 \overline{) 4645.30}$
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Mental Strategies	<ul style="list-style-type: none"> Divide by 10, 100 and 1,000 by keeping the decimal point in the same place and moving the digits to the right. eg $234 \div 10 = 23.4$, $234 \div 100 = 2.34$, $234 \div 1,000 = 0.234$ 	<ul style="list-style-type: none"> Be able to use division in word problems and understand and explain how and why the remainder affects the answer: I have 68 tennis balls and can put 12 in each box. How many boxes can I fill? $68 \div 12 = 5$ full boxes (with 8 left over) There are 240 children going on a school trip. Each coach can take 50 children. How many coaches will be needed? $240 \div 50 = 4$ with 40 left so 5 coaches will be needed. Count back in decimal steps eg back from 4.5 in steps of 0.3 																																



We hope that you have found this document a useful resource and that it will support us all at Dore Primary School with developing pupils who enjoy maths and who have the confidence to involve themselves and challenge themselves across all areas of mathematics.

We want to make children appreciate that maths is part of day-to-day life and not just something that they do on a morning in their maths books. We hope that with your continuous support that we can achieve this.

This document is intended as an additional support, therefore if you do have any additional questions then your child's class teacher will be more than happy to speak with you.

*Produced by the maths team at Dore Primary School (2013),
with advice sought from Toley Primary School.*