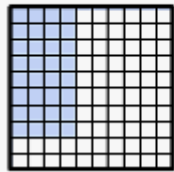
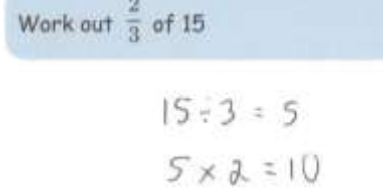
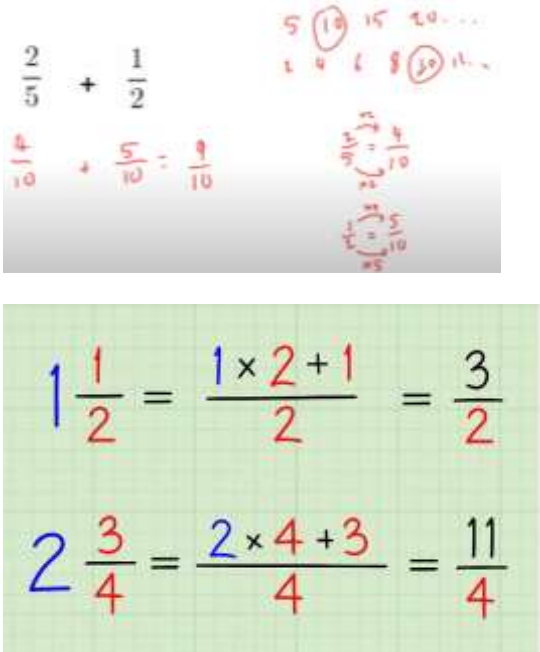


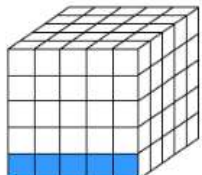







Using Numbers (Place Value and Decimals)	<i>Example pupil may be given</i> Digit – used to refer to the individual numbers, e.g. the digits 2,3,and 4 make up the number two hundred and thirty four (234)
Recognise, read and write numbers beyond 99,999, including 2 and then 3 decimal places	<i>Read a number from digits to words, e.g. 325,647.65 –three hundred and twenty five thousand, six hundred and forty seven and sixty five hundredths</i>
Recognise that the position of a digit indicates its value	<i>In 7,82<u>3</u>,548 the ‘3’ is worth 3000</i>
Order a set of (increasing and decreasing) numbers with up to three decimal places	<i>Write these numbers in order, starting with the smallest 23,254.21, 23,205.01 and 23,054.12</i>
Round numbers within 99 999 to the nearest 10 000, 1000, 100 and 10.	<i>Round 672 to the nearest 10 = 670 Round 6524 to the nearest 100 = 6500 Round 26,742 to the nearest 1000 = 27,000</i>
Approximate and round numbers with up to 3 decimal places to nearest whole, 1 or 2 decimal places	<i>Round 672.35 to the nearest 10 = 670 Round 672.35 to the nearest tenth = 672.40 Round 672.356 to the nearest hundredth = 672.36</i>
Estimate & calculate percentage increase or decrease in price, using written method and calculator	<i>A bag costing £24, is reduced by 25% in a sale. How much is the bag now?</i> <i>Convert percentage to fraction: 25%=1/4 Find fraction of total: £24 ÷ 4 = £6 Subtract this From Original Price: £24- £6 = £18 Ans: £18</i>
Mentally calculate multiples of 10% of quantities	<i>Find 30% of 140 as (10% of 140) x 3 = 14 x 3 = 42</i>

Mentally calculate %s of multiples and factors of 100	<i>Find 18% of 300 as 18% 100 = 18, so 18 x 3 = 54</i>																		
Relate 2 decimal place numbers to hundredths, and three decimal place (d.p.) numbers to thousandths.	<div><div><div><div>32</div><div>100</div></div><div></div></div><div>= 0.32</div></div>																		
Mentally find what must be added to 1 d.p. number to make the next whole number	<i>23.6 + ?? = 24 Ans: 0.4 34.65 + ?? = 35 Ans: 0.35</i>																		
Know number before, between and after 2, then 3 decimal place numbers	<i>23.75, 23.76, -----, 23.78 30.128, 30.129, -----, 30.131 65.97, 65.98, 65.99, -----</i>																		
Mentally multiply or divide any number with up to 3 decimal places by 10 or 100.	<table><tr><th>H</th><th>T</th><th>ones</th><th>$\frac{1}{10}$</th><th>$\frac{1}{100}$</th><th>$\frac{1}{1000}$</th></tr><tr><td></td><td>4</td><td>2</td><td>8</td><td></td><td></td></tr><tr><td></td><td></td><td></td><td><div>÷100</div>4</td><td>2</td><td>8</td></tr></table>	H	T	ones	$\frac{1}{10}$	$\frac{1}{100}$	$\frac{1}{1000}$		4	2	8						<div>÷100</div> 4	2	8
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	4	2	8																
			<div>÷100</div> 4	2	8														

Fractions	<i>Example pupil may be given</i>	written method and calculator	<i>Convert percentage to fraction: 25%=1/4</i>
Mentally find simple fractions of quantities using known division and multiplication facts			<i>Find fraction of total: £24 ÷ 4 = £6</i> Subtract this From Original Price: £24- £6 = £18 <i>Ans: £18</i>
Add and subtract fractions and mixed numbers with different denominators using knowledge of equivalence.	 https://www.wikihow.com/Add-Mixed-Numbers	Mentally calculate multiples of 10% of quantities Mentally calculate %s of multiples and factors of 100 Mentally find what must be added to 1 d.p. number to make the next whole number	<i>Find 30% of 140 as (10% of 140) x 3 = 14 x 3 = 42</i> <i>Find 18% of 300 as 18% 100 = 18, so 18 x 3 = 54</i> 23.6 + ?? = 24 <i>Ans: 0.4</i> 34.65 + ?? = 35 <i>Ans: 0.35</i>
	Mentally find what must be added to a fraction to make the next whole number. 7/8 + ?? = 1 <i>Ans: 1/8</i>	Financial Capability	
Percentages		Discuss and assess value for money when making choices when shopping (e.g. deciding whether to choose “3 for the price of 2” or “buy one get a second at half price”)	Choose the best deal to buy 6 pens @ 70p each: 3 for 2 (2.80 total) Or buy one get a second at half price (£3.15 total)
Estimate & calculate percentage increase or decrease in price, using	A bag costing £24, is reduced by 25% in a sale. How much is the bag now?	Understand the concept of earning, and managing spending through budgeting. Use understanding of different ways of funding large purchases to	Discuss with children how the budget is balanced at home. Verbalise the decision to buy ‘X’ instead of ‘Y’ because it is more manageable / economic / better deal, etc. As far as parents are comfortable sharing sensitive financial information, discuss how ‘big’ items of expenditure are possible, e.g. saving for a holiday.

decide on most cost effective choice e.g. calculating total cost of a holiday using different payment schemes.		Understand the effect of the order of operations, including using brackets in calculations.	<table><tr><td>B</td><td>Brackets</td><td>$10 \times (4 + 2) = 10 \times 6 = 60$</td></tr><tr><td>O</td><td>Order</td><td>$5 + 2^2 = 5 + 4 = 9$</td></tr><tr><td>D</td><td>Division</td><td>$10 \div 6 \div 2 = 10 \div 3 = 13$</td></tr><tr><td>M</td><td>Multiplication</td><td>$10 - 4 \times 2 = 10 - 8 = 2$</td></tr><tr><td>A</td><td>Addition</td><td>$10 \times 4 + 7 = 40 + 7 = 47$</td></tr><tr><td>S</td><td>Subtraction</td><td>$10 \div 2 - 3 = 5 - 3 = 2$</td></tr></table>	B	Brackets	$10 \times (4 + 2) = 10 \times 6 = 60$	O	Order	$5 + 2^2 = 5 + 4 = 9$	D	Division	$10 \div 6 \div 2 = 10 \div 3 = 13$	M	Multiplication	$10 - 4 \times 2 = 10 - 8 = 2$	A	Addition	$10 \times 4 + 7 = 40 + 7 = 47$	S	Subtraction	$10 \div 2 - 3 = 5 - 3 = 2$
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PROPERTIES OF NUMBERS																					
Know, understand, and use square, cube and triangular numbers.	<p><i>Square Numbers, e.g. find area of a 4cm square piece of paper</i></p> <div><div>16</div><div></div><div>4^2 or $4 \times 4 = 16$</div></div> <div><div>25</div><div></div><div>5^2 or $5 \times 5 = 25$</div></div> <p><i>Cube Numbers, e.g. find volume of 5cm cube</i></p> <div><div></div><div>$5 \times 5 \times 5 = 125$</div><div>so $5^3 = 125$</div></div> <p><i>Triangular Numbers (pictorial only)</i></p> <div><div></div><div></div><div></div><div></div><div></div><div>1</div><div>3</div><div>6</div><div>10</div><div>15</div></div>	<p>Multiplication and division</p> <div><div>Find doubles of any 3 digit number and corresponding halves</div><div><div>Double 196= Double 100=200 Double 96=192 200 + 192=392</div><div>Half of 178= Half of 100=50 Half of 78 =39</div></div></div> <div><div>Mental strategies for multiplying and dividing</div><div>Partitioning Doubling and halving Multiplying by near multiples of 10 and 100-Eg 99,101,49 Use factors to multiply</div><div><div>Partitioning</div><div>$6 \times 37 =$ $6 \times 30 = 180$ $6 \times 7 = 42$ $180 + 42 = 222$</div><div>Near multiples of 10/100 $99 \times 34 =$ $100 \times 34 = 3400 - 34 = 3366$</div><div>Doubling and halving $15 \times 14 =$ $30 \times 7 = 210$</div><div>Factors $18 \times 23 =$ $6 \times 3 \times 23$ $6 \times 69 = 414$</div></div></div>																			
Use negative numbers in calculations in everyday contexts.	<p>Temperature in Rasharkin at 8am: Tues 4 °C, Wed -6.5 °C By how many degrees did the temperature change?</p>																				

<p>Written multiplication and division Use standard written and calculator methods to multiply and divide numbers of any size by up to two digits, including decimals (long multiplication). Estimate before calculating. Be able to express a remainder as a whole number, decimal or fraction depending on context.</p>	<div> $\begin{array}{r} 21.35 \\ \times 8 \\ \hline 170.80 \end{array}$ </div> <div> $\begin{array}{r} 6.3 \\ \times 2.9 \\ \hline 567 \\ + 1260 \\ \hline 18.27 \end{array}$ </div> <div> $\begin{array}{r} 11.17 \\ \times 4 \\ \hline 44.68 \end{array}$ </div> <p>Estimate = $21 \times 8 = 168$ Estimate = $6 \times 3 = 18$</p> <p>Think carefully about how you should express your remainder.</p> <p>a) 3212 football fans were asked to sit in 5 stands. How many people were in each stand? Was it possible to split them equally? 642 remainder 2, therefore 642 in 4 stands and 644 in one</p> <p>b) There were 8 tanks of water at the ice-lolly factory. The manager wanted to share 2164 litres equally between the tanks. How much should he put in each tank?</p> <p>c) The pancake shop bought 2501kg of chocolate spread to share between its 4 stands at the festival. How much chocolate spread should be delivered to each stand to make it completely fair? 625 $\frac{1}{4}$ kg</p> <p>What is the mass of the remaining tennis balls altogether at the end of the game?</p> <ol style="list-style-type: none"> The cafe have 51 sausages left. If they need 4 sausages per portion, how many portions can they serve? The cafe has served 70 slices of chocolate cake today. If each whole cake was cut into 6 slices, how many cakes did they cut up? Exactly how many weeks are in 31 days? Write a fraction as part of your answer. 80 are travelling to an athletics event. Each minibus will take 12 athletes. How many minibuses are needed?
<p>Solve a range of multiplication and division problems using both written and mental methods.</p>	
<p>Addition and subtraction</p>	
<p>Mental addition and subtraction</p>	<p>$478 + 360$ $400 + 300 = 700$ $70 + 60 = 130$</p>
<p>Mentally add or subtract a 2 or 3 digit multiple of 10 to/from any 3 digit number</p>	<p>$700 + 130 = 830 + 8 = 838$ $478 - 160 =$ $400 - 100 = 300$ $70 - 60 = 10$ $8 - 0 = 8$ $300 + 10 + 8 = 318$ <i>Please note: Different mental strategies will be introduced to the children but they will decide which one they prefer to use. Some children also have different strategies than ones taught and that is acceptable.</i></p>
<p>Written addition and subtraction Use standard written and calculator methods to add and subtract numbers of any size including decimal numbers to 3 decimal places.</p>	<div> $\begin{array}{r} 0.75 + 2.106 + 8.2 \\ \hline 0.750 \\ 2.106 \\ 8.200 \\ \hline 11.056 \end{array}$ </div> <div> $\begin{array}{r} 4.23 - 1.9 \\ \hline 4.23 \\ - 1.90 \\ \hline 2.33 \end{array}$ </div> <p>https://ccea.org.uk/learning-resources/help-your-child-maths/improve-your-childs-maths-skills/help-your-child</p>
<p>Useful Links Maths Dictionary http://www.amathsdictionaryforkids.com/qr/qr.html</p> <p>Helpful videos on a range of areas https://corbettmathsprimary.com/content/</p>	