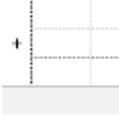


	National Curriculum Statement	All students		
		Fluency	Reasoning	Problem Solving
Decimals	Solve problems which require answers to be rounded to specified degrees of accuracy.	<ul style="list-style-type: none"> 437 children are going on a school trip. <ul style="list-style-type: none"> a) 1 adult is needed for every 12 children. How many adults must go on the trip? b) Each coach can seat up to 52 people. How many coaches are needed? There are 1145 pupils at a school. Each classroom has enough desks for 32 pupils. What is the smallest number of classrooms needed for the pupils? Calculate and round to 1 decimal place: $127 \div 6$ $345 \div 8$ 	<ul style="list-style-type: none"> Yasmin and Henry are solving this problem. <div style="border: 1px solid blue; border-radius: 15px; background-color: #4a7ebb; color: white; padding: 10px; margin: 10px 0;"> Ian is building a wall measuring 74m. He wants to divide the wall into 7 sections. How long will each section be? Give your answer to 1dp. </div> <p>Yasmin has written the answer 10.5 Henry has written the answer 10.6 Who is correct? Explain your reasoning.</p> <ul style="list-style-type: none"> Would it be more accurate to give your answer to the nearest whole pound or ten pence in the question below? $(\pounds 34.56 + \pounds 2.24 + \pounds 54.43 + \pounds 14.67) \div 2$ <p>Explain your answer. Is this always the case?</p>	<ul style="list-style-type: none"> 245 people attend a coffee morning. 536 cups of coffee and 324 cups of tea are drunk at the coffee morning. On average, how many cups does each person drink? Round your answer to the nearest half cup. Each cup holds approximately 0.35 litres of liquid. How much coffee and tea is drunk in ml? Give your answer to 1 decimal place. At the same coffee morning, 56 chocolate cakes are cut into eighths and 37 strawberry cakes are cut into sixths. <p>How many slices does each person eat to the nearest whole slice?</p> 

	National Curriculum Statement	All students		
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Four Operations	Use estimation to check answers to calculations and determine in the context of a problem, an appropriate degree of accuracy.	<ul style="list-style-type: none"> Circle the odd one out: $345 + 452 \approx 800$ $691 + 113 \approx 800$ $368 + 482 \approx 800$ Hannah goes to the shop. She has got a £5.00 note. As she goes round the shop she estimates how much she has spent to make sure she has enough money. Below is a list of what Hannah bought- estimate what she has spent- has she got enough? Chocolate bar- 79p Can of pop- 65p Magazine- £1.50 Crisps- 45p Puzzle book - £1.80 <p>Would it be better for Hannah to overestimate or underestimate her answer? Explain why.</p>	<ul style="list-style-type: none"> Do the following estimates sound about right? Explain your reasoning. <ol style="list-style-type: none"> Last month the energy costs in my lab were £560. I estimate that my energy costs per year will be £7000. Today I ate a 30g packet of crisps at morning break time, as I always do, so I estimate that I eat almost 11kg of crisps a year. My round trip to work each day is about 22 miles, but I can claim mileage from work. I estimate that I can claim for 8000 miles each year. 	<ul style="list-style-type: none"> Play a game in pairs. Use the addition grid, the aim is to make a total as close to 1000 as possible. <div style="text-align: center;">  </div> <p>Take turns to throw the dice and decide which of your cells to fill. This can be done in two ways: either fill in each cell as you throw the dice, or collect all your numbers and then decide where to place them. Whoever has the sum closest to 1000 wins.</p>

	National Curriculum Statement	All students						
		Fluency	Reasoning	Problem Solving				
Place Value	Round any whole number to a required degree of accuracy.	<ul style="list-style-type: none"> Round the following number to the nearest tenth: 0.286 Work out the missing number. 362.29 rounded to nearest _____ is 362 A number rounded to the nearest 100 is 600. What is the smallest possible number it could be? 	<ul style="list-style-type: none"> Tim says "If I round 26.63 to the nearest 10, I do not need to look at the tenths or hundredths." Do you agree? Explain your reasoning. Give an example of a six digit number which rounds to the same number when rounded to the nearest 10000 and 100000. Explain why this has happened. Spot the mistake! Calvin rounded 215678 to the nearest ten thousand and wrote 220678. Can you explain to Calvin what mistake he has made and why he has done it? 	<ul style="list-style-type: none"> Two numbers each with two decimal places round to 41.3 to one decimal place. The total of the numbers is 82.6. What could the numbers be? How many different ways can you find? Mr Langfield gives out the following four cards: <table border="1" style="margin-left: 20px;"> <tr> <td style="background-color: yellow;">59.96</td> <td style="background-color: lightgreen;">59.94</td> </tr> <tr> <td style="background-color: lightorange;">60.26</td> <td style="background-color: lightpurple;">62.32</td> </tr> </table> <p>Four children each take a card and give a clue to what their number is: Alice says "My number is 60 when rounded to the nearest 10." Beth says "My number has exactly 6 tens in it." Charlie says "My number is 59.9 to the nearest tenth." Daniel says "My number is 60 to the nearest tenth." Can you work out which child has which card? Explain your choices.</p> Two numbers when added together make 100 but when rounded one number rounds to 0 and the other rounds to 100. How many different combinations of numbers can you find? 	59.96	59.94	60.26	62.32
59.96	59.94							
60.26	62.32							