

Year 4 Overview

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11
Phase 1	Place Value			Addition and Subtraction			Multiplication and division			Measures Time	
Phase 2	Geometry Shape, symmetry, position and direction			Fractions			Measures Money				
Phase 3	Fractions Decimals			Measures Converting measures	Measures Length and perimeter		Geom etry Angles	Meas ure Area			
Phase 4 (EoY)	Statistics										

Ongoing throughout the year:

Time

Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks

Multiplication facts

recall multiplication and division facts for multiplication tables up to 12×12

Children should arrive in Year 4 knowing their 2, 5, 10, 3, 4 and 8 multiplication tables. If pupils do not know these with rapid recall intervention must be put in place to secure them. Opportunities to practise and apply them should be provided regularly and frequently in Autumn 1.

Counting

count in multiples of 6, 7, 9, 25 and 1000






Year 4 MTP – Phase 2

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8
Main Sessions	<p><u>Geometry – shape and space (symmetry)</u> compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes</p> <p>identify lines of symmetry in 2-D shapes presented in different orientations</p> <p>complete a simple symmetric figure with respect to a specific line of symmetry</p> <p><u>Geometry – Position and Direction</u> describe positions on a 2-D grid as coordinates in the first quadrant</p> <p>describe movements between positions as translations of a given unit to the left/right and up/down</p> <p>plot specified points and draw sides to complete a given polygon</p>			<p><u>Fractions</u> add and subtract fractions with the same denominator</p> <p>recognise and show, using diagrams, families of common equivalent fractions</p> <p>solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number</p>		<p><u>Measurement - Money</u> Solve simple measure and money problems involving fractions and decimals to two decimal places.</p> <p>Estimate, compare and calculate different measures, including money in pounds and pence</p>		





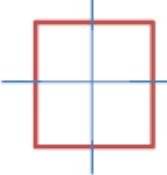
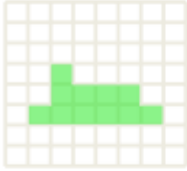
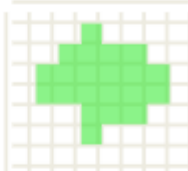



	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8
S & D sessions	<u>Addition and Subtraction</u>		<u>Multiplication and division</u>				<u>Fractions</u>	

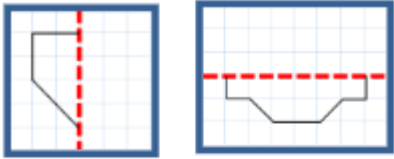
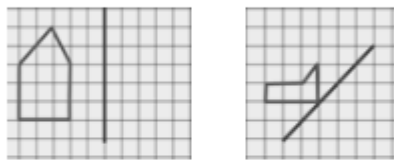
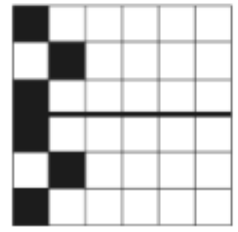
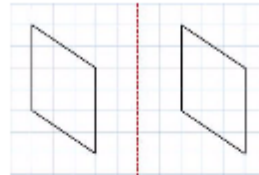
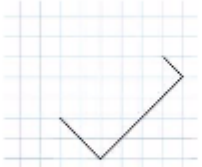

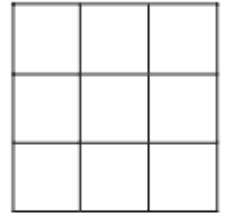
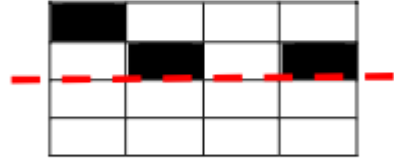
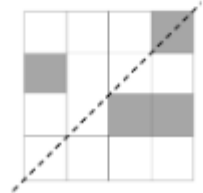


Domain	NC Objective	Example tasks fluency	Example tasks reasoning	Example tasks problem solving												
<p>Geometry</p>	<p>compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes</p>	<ul style="list-style-type: none"> Label each of the triangles isosceles, scalene or equilateral.  <ul style="list-style-type: none"> Match the quadrilaterals to their names.  <div style="display: flex; flex-direction: column; gap: 10px;"> <div style="border: 1px solid green; border-radius: 10px; padding: 5px; width: fit-content;">rectangle</div> <div style="border: 1px solid green; border-radius: 10px; padding: 5px; width: fit-content;">rhombus</div> <div style="border: 1px solid green; border-radius: 10px; padding: 5px; width: fit-content;">parallelogram</div> <div style="border: 1px solid green; border-radius: 10px; padding: 5px; width: fit-content;">trapezium</div> </div> <p>Write down the properties of each of the shapes.</p>	<ul style="list-style-type: none"> Look at these shapes. What's the same? What's different? Can you name the shapes?  <ul style="list-style-type: none"> Can you sort the shapes below into different groups? Ask other children to see if they can label your groups and work out how you have sorted your shapes.  <p>Can you add one more shape to each of your groups? Can you name each shape? Can you sort your shapes in a different way?</p>	<ul style="list-style-type: none"> Here is a square. Inside the square is an equilateral triangle. The perimeter of the triangle is 54cm. Find the perimeter of the square.  <ul style="list-style-type: none"> Can you fill in each of the boxes below with a different shape? Can you name each shape? <table border="1" data-bbox="1545 933 1937 1276"> <thead> <tr> <th></th> <th>Has a right angle</th> <th>Has no equal sides</th> </tr> </thead> <tbody> <tr> <td>Has 4 or more sides</td> <td></td> <td></td> </tr> <tr> <td>Has three sides</td> <td></td> <td></td> </tr> <tr> <td>Has an obtuse angle</td> <td></td> <td></td> </tr> </tbody> </table>		Has a right angle	Has no equal sides	Has 4 or more sides			Has three sides			Has an obtuse angle		
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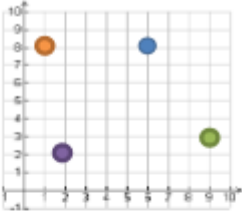

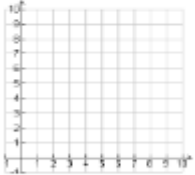



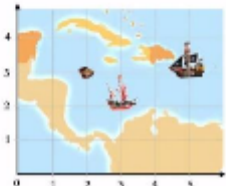
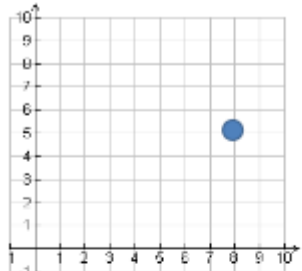
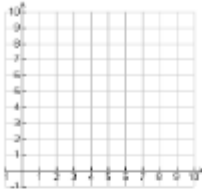
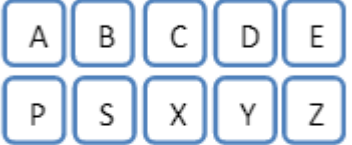


Domain	NC Objective	Example tasks fluency	Example tasks reasoning	Example tasks problem solving												
<p>Geometry</p>	<p>identify lines of symmetry in 2-D shapes presented in different orientations</p>	<ul style="list-style-type: none"> Find lines of symmetry in the shapes. <div style="text-align: center;">  </div> Sort the shapes into the groups. <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 20px;"> <div style="text-align: center;">  <p>1 line of symmetry</p> </div> <div style="text-align: center;">  <p>2 or more lines of symmetry</p> </div> </div> <div style="text-align: center; margin-top: 20px;">  </div> <p>Can you add one more shape to each group?</p> 	<ul style="list-style-type: none"> Always, sometimes, never Triangles have one line of symmetry. Prove your answer using drawings. Jasmine has drawn the lines of symmetry on the square. <div style="text-align: center; margin-top: 20px;">  </div> <p>Has she found them all? Explain how you could check.</p> Hamza says 'Lines of symmetry are always straight.' Is Hamza right? Convince me. 	<ul style="list-style-type: none"> Colour in one more square on each pattern to create a shape with a line of symmetry. <div style="display: flex; justify-content: space-around; margin-top: 10px;">   </div> Can you place one shape in each of the boxes below? <table border="1" style="width: 100%; text-align: center; margin-top: 10px;"> <tr> <td style="background-color: #d8bfd8;"></td> <td>Has an acute angle</td> <td>Has two or more lines of symmetry</td> </tr> <tr> <td>Has 4 sides</td> <td></td> <td></td> </tr> <tr> <td>Has three or less sides</td> <td></td> <td></td> </tr> <tr> <td>Has a right angle</td> <td></td> <td></td> </tr> </table> <div style="text-align: center; margin-top: 10px;">  </div> 		Has an acute angle	Has two or more lines of symmetry	Has 4 sides			Has three or less sides			Has a right angle		
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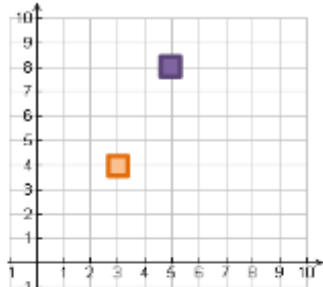
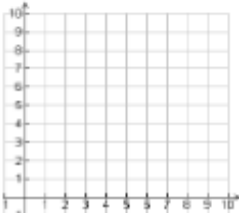
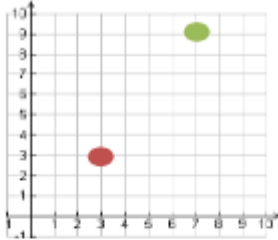
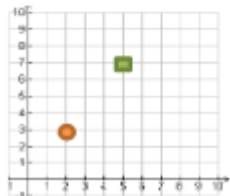
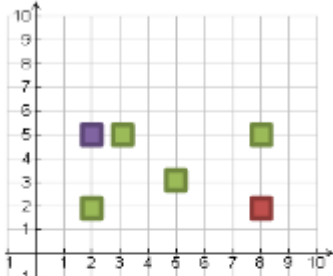
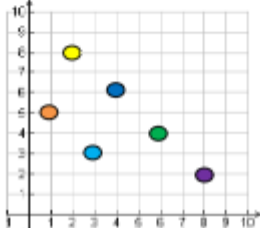


Domain	NC Objective	Example tasks fluency	Example tasks reasoning	Example tasks problem solving
<p>Geometry</p>	<p>complete a simple symmetric figure with respect to a specific line of symmetry</p>	<ul style="list-style-type: none"> Complete the shape with respect to the line of symmetry. <div style="display: flex; justify-content: space-around; align-items: center;">  </div> Reflect the shape in the mirror line <div style="display: flex; justify-content: space-around; align-items: center;">  </div> Shade in the squares to complete a symmetrical pattern. <div style="text-align: center;">  </div> 	<ul style="list-style-type: none"> Prove that the shape below is not reflected correctly. <div style="text-align: center;">  </div> Complete the shape to make a square and draw on the mirror line. <div style="text-align: center;">  </div> Caroline thinks the shape will have 6 sides altogether when it is reflected in the mirror line. <div style="text-align: center;">  </div> <p>Do you agree? Prove it.</p> 	<ul style="list-style-type: none"> How many different ways can you colour the squares below to create different symmetrical designs? <div style="text-align: center;">  </div> Colour in extra squares to complete a symmetrical pattern. <div style="text-align: center;">  </div> <div style="text-align: center;">  </div>

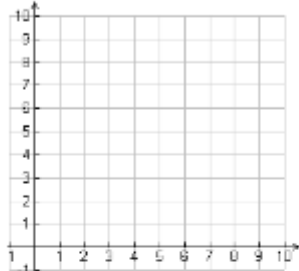
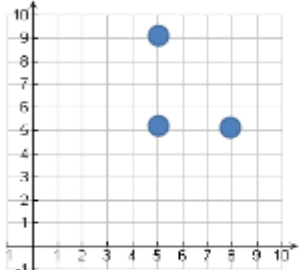
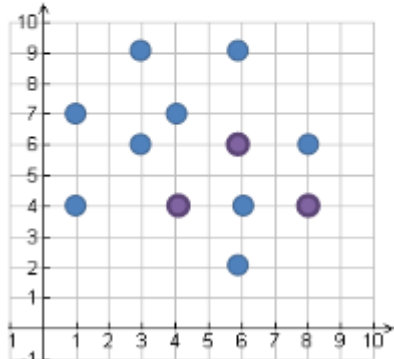


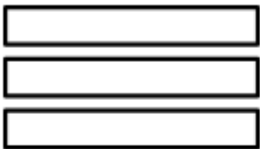

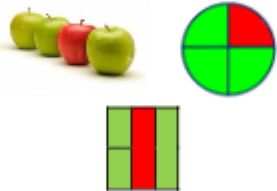

Domain	NC Objective	Example tasks fluency	Example tasks reasoning	Example tasks problem solving
<p>Geometry</p>	<p>describe positions on a 2-D grid as coordinates in the first quadrant</p>	<ul style="list-style-type: none"> Write the co-ordinates of the coloured dots.   Draw the shapes on the co-ordinates given.  <ul style="list-style-type: none">  (2, 6)  (6, 2)  (9, 0) Write the co-ordinates of the ships.  	<ul style="list-style-type: none"> Point A is marked on the grid.  <p>Henry says that point A is at (5,8) Aisha says that point A is at (8,5)</p> <p>Who is correct? Can you explain what mistake one of the children has made?</p> <ul style="list-style-type: none"> Junaid says: <div style="border: 1px solid green; border-radius: 15px; padding: 10px; margin: 10px 0;"> You can say either number first in co-ordinates, it doesn't matter. </div> <p>Do you agree with Junaid? Explain why.</p> 	<ul style="list-style-type: none"> Can you place the letters below on the grid by following the rules?   <p>The letters at (1,1), (1,2) and (1,3) are all symmetrical about a vertical line. The letter at (8,3) is not symmetrical and is made of straight and curved lines. The letters at (1,1), (2,1) and (5,1) are symmetrical about a horizontal line. The letter at (5,1) consists of just straight lines. The letters at (5,3) and (2,0) consist of just curved lines. The letters at (5,3), (5,2) and (5,1) are consecutive in the alphabet. The letters at (0,2) and (1,2) are at the two ends of the alphabet.</p>



Domain	NC Objective	Example tasks fluency	Example tasks reasoning	Example tasks problem solving
<p>Geometry</p>	<p>describe movements between positions as translations of a given unit to the left/right and up/down</p>	<ul style="list-style-type: none"> Describe the movement of the orange square to the purple square.  <ul style="list-style-type: none"> The coordinates of point A are (3,2). Point B is 2 squares left and 7 squares up from point A. What are the co-ordinates of point B? Plot point A and point B on the grid. 	<ul style="list-style-type: none"> Describe the movement from the green circle to the red circle.  <p>Describe the movement from the red circle to the green circle. What do you notice about your descriptions?</p> <ul style="list-style-type: none"> Keeley has described the movement of the orange circle to the green square as 3 squares to the left and 4 squares down.  <p>Do you agree? Explain why.</p>	<ul style="list-style-type: none"> Write a set of instructions to move the red square to the purple square without going through any green squares.  <ul style="list-style-type: none"> Write a set of instructions to move from the yellow circle to the purple circle while passing through all the other coloured circles. Compare your instructions with a friend. 



Domain	NC Objective	Example tasks fluency	Example tasks reasoning	Example tasks problem solving
<p>Geometry</p>	<p>plot specified points and draw sides to complete a given polygon</p>	<ul style="list-style-type: none"> Plot the points on the grid below to make a 2d shape. (2,9) (2,2) (5,9) (5,2)  <p>Tom draws a shape on the same grid using these co-ordinates. (2,9) (2,6) (5,9) (5,6)</p> <p>What is the same and what is different about your shape and Tom's shape?</p> <ul style="list-style-type: none"> Write co-ordinates for a friend to plot that make the following shapes: <ol style="list-style-type: none"> Triangle Trapezium Rhombus 	<ul style="list-style-type: none"> Henry plots three points on a grid. <i>Aisha says "You can make a square if you mark another point at (8, 9)"</i>  <p>Is Aisha correct?</p> <ul style="list-style-type: none"> Here are the co-ordinates of corners of a rectangle that has width of 4. (7, 2) and (14, 2) <p>What are the other two co-ordinates?</p>	<ul style="list-style-type: none"> There are 12 points marked on the grid that are all corners of squares. Can you work out where the 4 squares are? The purple dots are corners of more than one square. 



Domain	NC Objectives	Example tasks fluency	Example tasks reasoning	Example tasks problem solving
Fractions	Recognise and show using diagrams, families of common fractions and equivalents	<ul style="list-style-type: none"> Fold the strips of paper into halves, quarters and eighths. <div style="text-align: center; margin: 10px 0;">  </div> <p style="text-align: center;">Shade in one half and find the equivalent fractions for quarters and eighths.</p> Stick the bar models in your book and draw a number line for each. <div style="text-align: center; margin: 10px 0;">  </div> <p style="text-align: center;">Colour in the equivalent fractions.</p> Complete the statements: $\frac{2}{5} = \frac{\quad}{10}$ $\frac{\quad}{4} = \frac{2}{\quad}$ 	<ul style="list-style-type: none"> A pizza is cut into 8 slices. Zara says, "If I take half of the pizza, and my brother takes 4 slices, we will both have the same amount." <div style="border: 1px solid black; border-radius: 15px; padding: 10px; width: fit-content; margin: 10px 0;"> If I take half of the pizza, and my brother takes 4 slices, we will both have the same amount. </div> <p>Is she correct? Convince me by using a diagram.</p> Look at the three pictures. What's the same and what's different? <div style="text-align: center; margin: 10px 0;">  </div> Here is a part of two shapes. Which shape will be larger? <div style="display: flex; justify-content: center; gap: 20px; margin: 10px 0;"> <div style="background-color: #e67e22; padding: 5px; border: 1px solid black; text-align: center;"> $\frac{1}{10}$ </div> <div style="background-color: #3498db; padding: 5px; border: 1px solid black; text-align: center;"> $\frac{1}{8}$ </div> </div> 	<ul style="list-style-type: none"> Harry says, "$\frac{2}{4}$ is always the same as $\frac{6}{8}$." Jenny says, "$\frac{3}{4}$ is equivalent to $\frac{6}{8}$ but isn't always the same amount." <p>Use diagrams to show and prove your answer.</p> Use the digit cards to fill in the boxes below. <div style="text-align: center; margin: 10px 0;"> <div style="display: flex; justify-content: center; gap: 5px;"> <div style="border: 1px solid black; padding: 2px 10px;">1</div> <div style="border: 1px solid black; padding: 2px 10px;">2</div> <div style="border: 1px solid black; padding: 2px 10px;">3</div> <div style="border: 1px solid black; padding: 2px 10px;">4</div> <div style="border: 1px solid black; padding: 2px 10px;">6</div> <div style="border: 1px solid black; padding: 2px 10px;">8</div> </div> <div style="display: flex; align-items: center; justify-content: center; gap: 20px;"> <div style="border: 1px solid black; width: 30px; height: 30px; margin: 0 auto;"></div> <div style="font-size: 2em;">=</div> <div style="border: 1px solid black; width: 30px; height: 30px; margin: 0 auto;"></div> </div> <div style="display: flex; align-items: center; justify-content: center; gap: 20px;"> <div style="border: 1px solid black; width: 30px; height: 30px; margin: 0 auto;"></div> <div style="font-size: 2em;">=</div> <div style="border: 1px solid black; width: 30px; height: 30px; margin: 0 auto;"></div> </div> <p>How many different ways can you find?</p> </div> Print the square below several times on a sheet. Children investigate the different ways they can show $\frac{1}{2}, \frac{1}{4}, \frac{1}{8}, \frac{1}{6}$ <div style="text-align: center; margin: 10px 0;">  </div>




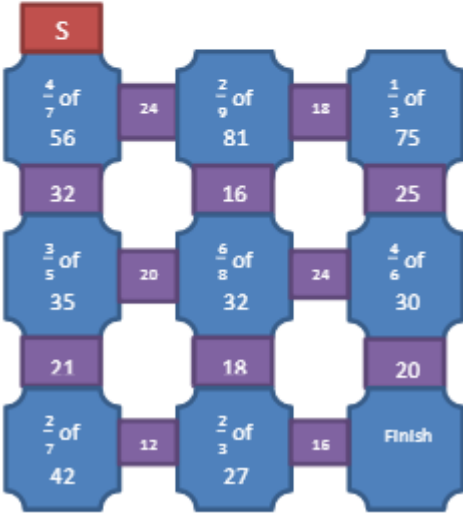
Berrywood
Primary School

Mastery Mathematics
Medium Term Planning
Year 4 PHASE 2



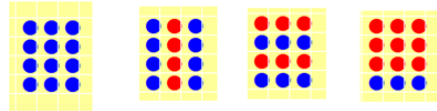
Domain	NC Objectives	Example tasks fluency	Example tasks reasoning	Example tasks problem solving
<p>Fractions</p>	<p>Add and subtract fractions with the same denominator</p>	<ul style="list-style-type: none"> Calculate: <div style="text-align: center;">  $+$ $=$ </div> Use diagrams and bar modelling to solve the problems below. <div style="text-align: center; margin-top: 10px;"> $\frac{3}{8} + \frac{2}{8} =$ $\frac{1}{6} + \frac{2}{6} =$ $\frac{7}{8} - \frac{2}{8} =$ $\frac{5}{7} - \frac{2}{7} =$ </div> Sarah eats $\frac{3}{8}$ of a bunch of grapes; Tom eats $\frac{2}{8}$ of a bunch of grapes. What fraction of the grapes have they eaten altogether? Fill in the box: <div style="margin-top: 10px;"> $\frac{5}{8} + \square = \frac{7}{8}$ $\frac{5}{6} - \square = \frac{1}{6}$ </div> 	<ul style="list-style-type: none"> Explain what fraction calculation the diagram is showing. <div style="text-align: center; margin-top: 10px;">  </div> <p>Can you make your own?</p> True or False <div style="margin-top: 10px;"> $\frac{5}{12} + \frac{3}{12} = \frac{8}{12}$ $\frac{5}{12} + \frac{3}{12} = \frac{8}{24}$ $\frac{5}{12} + \frac{3}{12} = \frac{4}{6}$ </div> <p>Explain your reasoning.</p> Describe the pattern: <div style="margin-top: 10px;"> $\frac{7}{10} - \frac{1}{10} = \frac{6}{10}$ $\frac{6}{10} - \frac{1}{10} = \frac{5}{10}$ </div> <p>Can you continue the pattern?</p> 	<ul style="list-style-type: none"> How many different ways can you complete the calculation? <div style="margin-top: 10px;"> $\frac{\square}{\square} + \frac{\square}{\square} = \frac{8}{9}$ $\frac{\square}{\square} - \frac{\square}{\square} = \frac{8}{9}$ </div> How many ways can you complete the calculation? <div style="margin-top: 10px; text-align: center;"> $\frac{2}{7} + \frac{\square}{7} = \frac{7}{7} - \frac{\square}{7}$ </div> How many ways can you complete the calculation? <div style="margin-top: 10px; text-align: center;"> $\frac{\square}{\square} + \frac{\square}{\square} - \frac{\square}{\square} = \frac{7}{9}$ </div>



Domain	NC Objectives	Example tasks fluency	Example tasks reasoning	Example tasks problem solving
<p>Fractions</p>	<p>solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number</p>	<ul style="list-style-type: none"> Emily buys a box of 24 chocolates. She eats $\frac{1}{4}$ of the chocolates and her Mum eats $\frac{1}{3}$. How many chocolates are left? George and Grace have ordered lemonade. Grace has a small lemonade which is 250ml. George has a large lemonade which is $\frac{4}{10}$ more than a small. How many millilitres does George have? If George only drinks half of his lemonade and Grace drinks three quarters of her lemonade, who drinks the most? Show your working. 	<ul style="list-style-type: none"> The school kitchen needs to buy potatoes for lunch. A large bag has 200 potatoes and a medium bag has $\frac{3}{5}$ of a large bag. <p>The school cook says</p> <div style="border: 1px solid black; border-radius: 15px; padding: 10px; width: fit-content; margin: 10px auto;"> <p>I need 150 potatoes so I will have to buy a large bag</p> </div> <p>Is she correct? Explain your reasoning.</p> <ul style="list-style-type: none"> True or False To find $\frac{3}{8}$ of a number, divide by 3 and multiply by 8. Convince me. 	<ul style="list-style-type: none"> These three squares are $\frac{1}{4}$ of a whole shape.  How many different shapes can you draw that could be the complete shape? Work out the answer to each question to make it through the maze. <div style="text-align: center;">  </div>
	Additional guidance:	<p>Relate fractions to division using arrays, use arrays to support finding fractions of quantities:</p>		



Arrays eg 12



$3 \times 4 = 12$

$4 \times 3 = 12$

$12 \div 3 = 4$

$12 \div 4 = 3$

$1/2 \text{ of } 12 = 6$

$1/4 \text{ of } 12 = 3$


$2/4 \text{ of } 12 = 6$

$3/4 \text{ of } 12 = 8$


$1/3 \text{ of } 12 = 4$

$2/3 \text{ of } 12 = 8$

$3/3 \text{ of } 12 = 12$

Domain	NC Objective	Example tasks fluency	Example tasks reasoning	Example tasks problem solving																		
Measures - money	solve simple measure and money problems involving fractions and decimals to two decimal places	<ul style="list-style-type: none"> A box of chocolates costs £1.25 Hannah and Thomas want to buy 4 boxes of chocolates. If Hannah pays £2.45, how much must Thomas pay? Emma has five pounds. She spends a quarter of her money. How much does she have left?  In the sale I bought some clothes for half price. Jumper £14 Scarf £7 Hat £2.50 T-shirt £6.50 <ul style="list-style-type: none"> How much would the clothes have been full price? How much did I spend altogether? How much did I save? 	<ul style="list-style-type: none"> A class is planning a trip to a theme park. <div style="border: 1px solid black; border-radius: 15px; padding: 10px; text-align: center;"> <p><u>Theme park prices</u></p> <p>Adult = £8</p> <p>Child = £4</p> </div> <p>How many tickets could they buy for £100. How many different ways can you find to do this?</p> Hazel buys a teddy bear for £6.00, a board game for £4.00, a cd for £5.50 and a box of chocolates for £2.50 She has some discount vouchers. She can either get £10.00 off or half price on her items. Which voucher would save her more? Explain your thinking. Yasmin is choosing a new mobile phone. One phone costs £5.50 per month. The other costs £65.50 for a year. Which is the better deal over a year? 	<ul style="list-style-type: none"> Kim bought a chocolate bar and a drink. The cost of them both together is in one of the boxes below. <table border="1" data-bbox="1624 462 1915 730"> <tbody> <tr> <td>£1.85</td> <td>75p</td> <td>£1.56</td> </tr> <tr> <td>£1.74</td> <td>£2.25</td> <td>£1.00</td> </tr> <tr> <td>£1.80</td> <td>80p</td> <td>£2.10</td> </tr> <tr> <td>£1.44</td> <td>£3.06</td> <td>£1.50</td> </tr> <tr> <td>£1.20</td> <td>£1.25</td> <td>£1.60</td> </tr> <tr> <td>£1.45</td> <td>90p</td> <td>£1.27</td> </tr> </tbody> </table> <p>Using these five clues can you work out which price in the boxes is correct?</p> <ol style="list-style-type: none"> You need more than three coins to make this amount. There would be change when using the most valuable coin to buy them. The chocolate bar cost more than 50p You could pay without using any copper coins The chocolate bar cost exactly half the amount of the drink. 	£1.85	75p	£1.56	£1.74	£2.25	£1.00	£1.80	80p	£2.10	£1.44	£3.06	£1.50	£1.20	£1.25	£1.60	£1.45	90p	£1.27
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£1.45	90p	£1.27																				
Additional guidance:	<p>Model solving addition and subtraction problems with decimals on a numberline before moving on to written methods.</p> <p>Use place value counters for tenths and hundredths to secure written methods for adding and subtracting decimals.</p>																					



Domain	NC Objective	Example tasks fluency	Example tasks reasoning	Example tasks problem solving
Measures - Money	estimate, compare and calculate different measures, including money in pounds and pence	<ul style="list-style-type: none"> Order the following amounts placing < or > between them. £25.62, 2657p, 2567p. Robbie buys a toy car for 99p, a yoyo for £1.05, three sweets for 30p each and a chocolate bar for 47p. Does he have enough money to pay with a £5 note? Martina buys a jacket for 2165p and a t shirt for £9.99. Hamid buys a coat for £32.00. Who spends the most? 	<ul style="list-style-type: none"> Which would you rather have, three quarters of £2.40 or one quarter of £6? Explain your reasoning. Which would you rather have, five 50p coins or 12 20p coins? Explain why. 1 chocolate bar costs the same as 4 sweets. 4 sweets cost the same as 2 stickers. 1 sticker costs 30p. How much does the chocolate bar cost? 	<ul style="list-style-type: none"> Choose a route through the money maze. You can only go on each square once. Can you find the route that makes the highest amount of money? Which route makes the lowest amount of money?  <ul style="list-style-type: none"> Lola and Jamal are sharing some coins. Lola gets half the amount of Jamal. Which coins could they each get? 