

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.

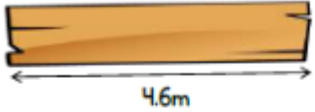

Counting

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





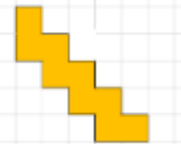
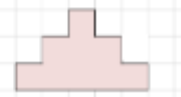


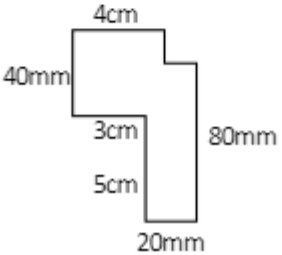
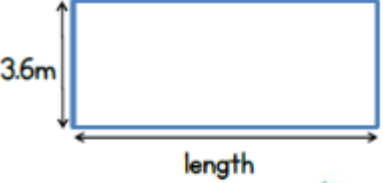

Year 4 MTP – Phase 3

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8
Main Sessions	<u>Measures</u> Convert between different units of measure measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres convert between different units of measure (using perimeters)			<u>Geometry - Angles</u> identify acute and obtuse angles and compare and order angles up to two right angles by size	<u>Fractions</u> find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths (use place value sliders) recognise and write decimal equivalents of any number of tenths or hundredths recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ round decimals with one decimal place to the nearest whole number compare numbers with the same number of decimal places up to two decimal places count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten			<u>Measures – Area</u> find the area of rectilinear shapes by counting squares
S & D sessions								

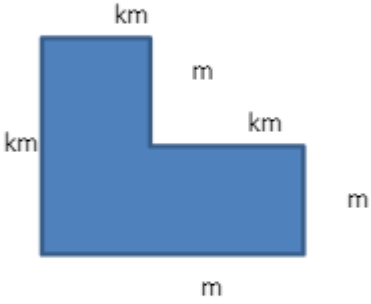
Year 4 MTP – Phase 3

Domain	NC Objectives	Example tasks fluency	Example tasks reasoning	Example tasks problem solving
Measures (length, mass and capacity)	convert between different units of measure	<ul style="list-style-type: none"> Complete the statements: $100\text{cm} = \underline{\quad} \text{m}$ $1\text{km} = \underline{\quad} \text{m}$ $1500\text{ml} = \underline{\quad} \text{l}$ $3.5\text{kg} = \underline{\quad} \text{g}$ Use the word and number cards to complete the statements. To change from cm to mm $\underline{\quad}$ by $\underline{\quad}$ To change from kg to g $\underline{\quad}$ by $\underline{\quad}$ To change from ml to l $\underline{\quad}$ by $\underline{\quad}$ 	<ul style="list-style-type: none"> The answer is 475 metres. What could the question be? Hamid says 'To convert kilometres to metres, add three zeros' on to the end of the number.' E.g $2\text{km}=2000\text{m}$ Do you agree with Hamid? Explain why. Laura is 2.72m tall. She is 59cm taller than her sister. How tall is her sister? Give your answer in centimetres. Put these amounts in order starting with the largest. Half of 5 litres Quarter of 8 litres 700 ml Explain your thinking. 	<ul style="list-style-type: none"> A plank of wood is 4.6m long.  Two lengths are cut from the wood.  How much wood is left? James and Sita do a sponsored walk for charity. They walk 1.2km altogether. James walks double the amount that Sita walks. How far does Sita walk? They each raise 75p for every 100m they walk. How much money do they each make? James $\underline{\quad}$ Sita $\underline{\quad}$
		<ul style="list-style-type: none"> Are these statements true or false? $1000\text{m} = 1\text{km}$ $1000\text{cm} = 1\text{m}$ $1000\text{ml} = 1\text{l}$ $1000\text{g} = 1\text{kg}$ $1000\text{mg} = 1\text{g}$ 		


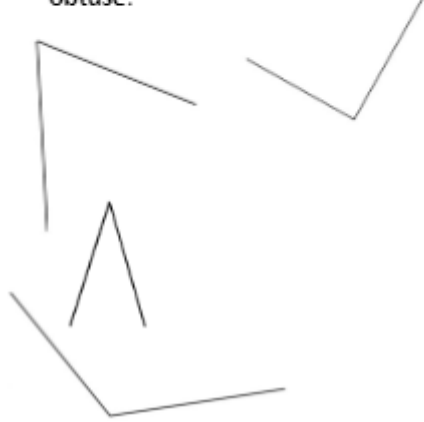
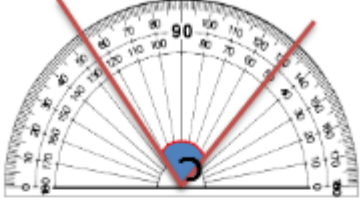
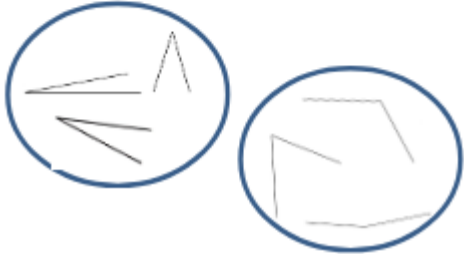




Domain	NC Objectives	Example tasks fluency	Example tasks reasoning	Example tasks problem solving
Measures (perimeter)	measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres	<ul style="list-style-type: none"> Find the perimeter of the rectangle. <div style="display: flex; justify-content: space-around; align-items: flex-start; margin-top: 10px;"> <div style="text-align: center;"> <p>8cm</p>  <p>3cm</p> </div> <div style="text-align: center;"> <p>80m</p>  <p>30m</p> </div> </div> <div style="display: flex; justify-content: space-around; align-items: flex-start; margin-top: 10px;"> <div style="text-align: center;"> <p>0.8m</p>  <p>30cm</p> </div> <div style="text-align: center;"> <p>$\frac{8}{10}$ m</p>  <p>$\frac{3}{10}$ m</p> </div> </div> Draw and find the perimeter of the shapes in centimetres. <div style="display: flex; justify-content: space-around; margin-top: 10px;">   </div> 	<ul style="list-style-type: none"> The perimeter of a square is 16cm. How long is each side? <div style="text-align: center; margin-top: 10px;">  </div> Here is a rectilinear shape. All the sides are the same length and are a whole number of centimetres. <div style="text-align: center; margin-top: 10px;">  </div> <p>Which of these lengths could be the perimeter of the shape?</p> <p>48cm 36cm 80cm 120cm 66cm</p> Find the missing lengths on the shape and calculate the perimeter. <div style="text-align: center; margin-top: 10px;">  </div> 	<ul style="list-style-type: none"> The perimeter of the rectangle is 33m. <div style="text-align: center; margin-top: 10px;">  </div> <p>What is the length of the rectangle?</p> The width of a rectangle is 2 metres less than the length. <p>The perimeter of the rectangle is between 20m and 30m.</p> <div style="text-align: center; margin-top: 10px;">  </div> <p>What could the dimensions of the rectangle be?</p> <p>Draw all the rectangles that fit these rules. Use 1cm=1m.</p>



Domain	NC Objectives	Example tasks fluency	Example tasks reasoning	Example tasks problem solving
Converting measures	convert between different units of measure (using perimeters)	<ul style="list-style-type: none"> Complete the statements: $\underline{\quad}$ cm = 2 metres $4\text{km} = \underline{\quad}$ m $\underline{\quad}$ ml = 3.5 litres $\underline{\quad}$ kg = 7500g Convert the measures to the same unit and then complete the calculation. $3\text{km} + \boxed{\quad} = 6500\text{m}$ $800\text{m} - \boxed{\quad} = 0.3\text{km}$ Can you draw rectangles to represent the calculations below? $4\text{cm} + 30\text{mm} + 30\text{mm} + 4\text{cm} =$ $85\text{mm} + 85\text{mm} + 2.5\text{cm} + 2.5\text{cm} =$ Complete each calculation. What have you found? 	<ul style="list-style-type: none"> The answer is 550 metres. What could the question be? Tilly says 'To convert millimetres to centimetres, take one zero off the end of the number.' E.g 30 millimetres = 3 centimetres Will Tilly's rule always work? What is the same and what's different about these measures? Half of 3000 metres Quarter of 6 kilometres 150,000 centimetres Explain your thinking. 	<ul style="list-style-type: none"> This shape has a perimeter of 5500m. Three of the sides are given in kilometres. Three of the sides are given in metres.  <p>Can you fill in each measurement to make the sides add up to the correct perimeter? Can you fill in the sides in more than one way?</p>


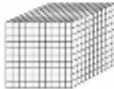


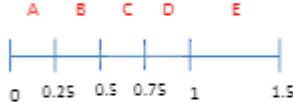
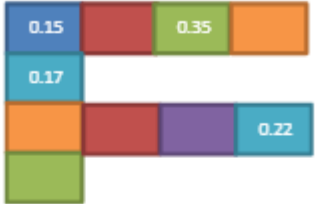

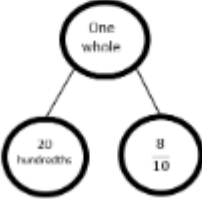


Domain	NC Objectives	Example tasks fluency	Example tasks reasoning	Example tasks problem solving
<p>Geometry - angles</p>	<p>identify acute and obtuse angles and compare and order angles up to two right angles by size</p>	<ul style="list-style-type: none"> Label the angles below as acute, right or obtuse.  <ul style="list-style-type: none"> Order the angles from smallest to largest. Label them acute, right or obtuse. 	<ul style="list-style-type: none"> Here is an angle on a protractor.  <p>Sam says "The angle is obtuse because it is more than 90°" Gita says "The angle is acute because it is less than 90°" Who is correct? Explain your thinking.</p> <ul style="list-style-type: none"> Tim is sorting angles. Can you label the groups? Can you circle the odd one out? 	<ul style="list-style-type: none"> How many acute and obtuse angles can you find in the diagram below?  <p>Label the acute angles (a) and the obtuse angles (o).</p> <ul style="list-style-type: none"> Pair the lines below to make an acute angle, a right angle and an obtuse angle. You can't change the orientation of the lines.  <p>Can you do it in more than one way?</p>



Domain	NC Objective	Example tasks fluency	Example tasks reasoning	Example tasks problem solving																																																		
Fractions - Decimals	recognise and write decimal equivalents of any number of tenths or hundredths	<ul style="list-style-type: none"> Complete the table: <table border="1" style="margin: 10px auto;"> <thead> <tr> <th>Fraction</th> <th>Decimal</th> </tr> </thead> <tbody> <tr> <td>$\frac{6}{10}$</td> <td></td> </tr> <tr> <td></td> <td>0.2</td> </tr> <tr> <td>$\frac{37}{100}$</td> <td></td> </tr> <tr> <td></td> <td>0.68</td> </tr> </tbody> </table> Match the fraction to the correct decimal. <table style="margin: 10px auto; border-collapse: separate; border-spacing: 10px;"> <tr> <td style="border: 1px solid black; padding: 5px;">$\frac{6}{10}$</td> <td style="border: 1px solid black; padding: 5px;">6.1</td> </tr> <tr> <td style="border: 1px solid black; padding: 5px;">$\frac{6}{100}$</td> <td style="border: 1px solid black; padding: 5px;">0.06</td> </tr> <tr> <td style="border: 1px solid black; padding: 5px;">$\frac{53}{100}$</td> <td style="border: 1px solid black; padding: 5px;">0.6</td> </tr> <tr> <td></td> <td style="border: 1px solid black; padding: 5px;">0.53</td> </tr> <tr> <td></td> <td style="border: 1px solid black; padding: 5px;">5.3</td> </tr> </table> What fraction has been made in the ten frame? What decimal has been made? <table border="1" style="margin: 10px auto; text-align: center;"> <tr> <td style="background-color: #00aaff; width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table> 	Fraction	Decimal	$\frac{6}{10}$			0.2	$\frac{37}{100}$			0.68	$\frac{6}{10}$	6.1	$\frac{6}{100}$	0.06	$\frac{53}{100}$	0.6		0.53		5.3											<ul style="list-style-type: none"> Give the children 2 ones in place value counters. <div style="display: flex; align-items: center; margin-top: 10px;"> <div> <p>Explain that we are going to try and divide them by 10. Show we need to exchange our 2 ones for 20 tenths.</p> <p>Now when we share between 10 groups we have 0.2. This proves that $\frac{2}{10} = 0.2$.</p> </div> </div> <p>Can the children use this to prove that $\frac{5}{10} = 0.5$</p> Helen, Adam and Sam are talking about which fractions are equivalent to 0.4. Who is correct? Justify your answer. <div style="margin-top: 10px;"> <div style="border: 1px solid black; border-radius: 15px; padding: 5px; margin-bottom: 10px; display: inline-block;">Adam: $\frac{4}{10}$ is equivalent to 0.4</div> <div style="border: 1px solid black; border-radius: 15px; padding: 5px; margin-bottom: 10px; display: inline-block;">Helen: $\frac{40}{100}$ is equivalent to 0.4</div> <div style="border: 1px solid black; border-radius: 15px; padding: 5px; display: inline-block;">Sam: $\frac{1}{4}$ is equivalent to 0.4</div> </div> 	<ul style="list-style-type: none"> Use the five digit cards to complete the statement below. <div style="margin-top: 10px; text-align: center;"> <table style="display: inline-table; border-collapse: separate; border-spacing: 5px;"> <tr> <td style="border: 1px solid black; padding: 5px;">0</td> <td style="border: 1px solid black; padding: 5px;">0</td> <td style="border: 1px solid black; padding: 5px;">1</td> <td style="border: 1px solid black; padding: 5px;">6</td> <td style="border: 1px solid black; padding: 5px;">6</td> </tr> </table> <table style="display: inline-table; border-collapse: separate; border-spacing: 10px;"> <tr> <td style="border: 1px solid black; width: 30px; height: 30px;"></td> <td style="font-size: 2em;">=</td> <td style="border: 1px solid black; width: 30px; height: 30px;"></td> <td style="font-size: 2em;">.</td> <td style="border: 1px solid black; width: 30px; height: 30px;"></td> </tr> </table> </div> Fill in the missing numbers below so the fractions and decimals are equivalent in each row of the table. One has been done for you. <table border="1" style="margin: 10px auto; text-align: center;"> <thead> <tr> <th>Fraction</th> <th>Decimal</th> </tr> </thead> <tbody> <tr> <td>$\frac{35}{100}$</td> <td>0.35</td> </tr> <tr> <td>$\frac{4}{100}$</td> <td>0.2_</td> </tr> <tr> <td>$\frac{1}{10}$</td> <td>_.4</td> </tr> <tr> <td>$\frac{50}{100}$</td> <td>0. _</td> </tr> </tbody> </table> 	0	0	1	6	6		=		.		Fraction	Decimal	$\frac{35}{100}$	0.35	$\frac{4}{100}$	0.2_	$\frac{1}{10}$	_.4	$\frac{50}{100}$	0. _
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Domain	NC Objectives	Example tasks fluency	Example tasks reasoning	Example tasks problem solving
<p>Fractions</p>	<p>count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten</p>	<ul style="list-style-type: none"> Count up from 0 on the number line to find the value of the missing amounts.  Continue the sequences: 2.45, 2.46, 2.47, ____, ____, ____ $\frac{25}{100}$, $\frac{26}{100}$, $\frac{27}{100}$, ____, ____, ____ 4.32, 4.31, 4.30, ____, ____, ____ If this block is worth 1 whole  Work out the value of:   	<ul style="list-style-type: none"> Convince me that 4.27 is halfway between 4.22 and 4.32 Write down a fraction that could go in each section of the number line.  Jasper says <div style="border: 1px solid black; border-radius: 15px; padding: 10px; display: inline-block;"> If I multiply ten by ten I get one hundred so if I multiply tenths by ten I get hundredths </div> Do you agree? Explain your answer; use a place value grid to help. 	<ul style="list-style-type: none"> Fill in the gaps to find the missing numbers.  If the arrow is pointing to 4.56, what could the start and end numbers be? Can you find more than one option?  True or false? Explain why.  <p>Create your own part whole models.</p>

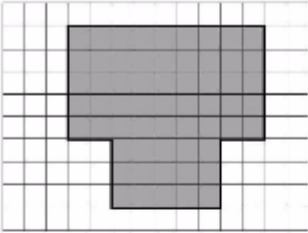
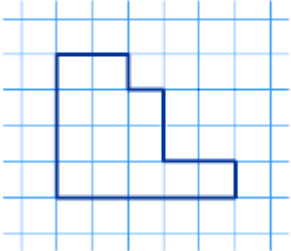


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Fractions - Decimals	recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$	<ul style="list-style-type: none"> Fill in the table: <table border="1" style="margin: 10px auto; border-collapse: collapse;"> <thead> <tr> <th style="padding: 5px;">Fraction</th> <th style="padding: 5px;">Decimal</th> </tr> </thead> <tbody> <tr> <td style="text-align: center; padding: 5px;">$\frac{1}{2}$</td> <td style="width: 50px;"></td> </tr> <tr> <td style="text-align: center; padding: 5px;">$\frac{1}{4}$</td> <td></td> </tr> <tr> <td style="text-align: center; padding: 5px;">$\frac{3}{4}$</td> <td></td> </tr> </tbody> </table> Match the fraction to the correct decimal. <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;">$\frac{3}{4}$</div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;">0.34</div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;">$\frac{1}{2}$</div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;">0.3</div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;">$\frac{1}{4}$</div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;">0.75</div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;">$\frac{1}{4}$</div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;">0.5</div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;">$\frac{1}{4}$</div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;">0.4</div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;">$\frac{1}{4}$</div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;">0.25</div> </div> Write the fraction that matches to each decimal. <ul style="list-style-type: none"> <input type="radio"/> 0.25 = <input type="radio"/> 0.5 = <input type="radio"/> 0.75 = 	Fraction	Decimal	$\frac{1}{2}$		$\frac{1}{4}$		$\frac{3}{4}$		<ul style="list-style-type: none"> Using place value counters, show that 1 divided into 2 equal parts is 0.5 Can you show that 1 divided into 4 equal parts is the same as 0.25? Write an explanation for a friend. Harry has written the decimal equivalents to a half and a quarter. Can you explain to him what he has done wrong? What could you use to show him? Harry: $\frac{1}{2} = 1.2$ $\frac{1}{4} = 1.4$ 	<ul style="list-style-type: none"> Use the number cards 0 - 5 below to complete the number sentence. $\frac{\square}{\square} = \square \cdot \square$ Which number did you have left over? Complete the number sentence below using the number cards 0 - 5: $\frac{\square}{\square} = \square \cdot \square \square$ Which number did you have left over? Was it the same number as before? Which extra number would you need to make a number sentence that used your left over number?
Fraction	Decimal											
$\frac{1}{2}$												
$\frac{1}{4}$												
$\frac{3}{4}$												



Domain	NC Objective	Example tasks fluency	Example tasks reasoning	Example tasks problem solving															
<p>Fractions - Decimals</p>	<p>find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths (use place value sliders)</p>	<ul style="list-style-type: none"> Complete the table below: <table border="1" data-bbox="591 328 891 512" style="margin-left: 20px;"> <thead> <tr> <th>Starting number</th> <th>÷ 10</th> <th>÷ 100</th> </tr> </thead> <tbody> <tr> <td>34</td> <td></td> <td></td> </tr> <tr> <td>57</td> <td></td> <td></td> </tr> <tr> <td>60</td> <td></td> <td></td> </tr> <tr> <td>7</td> <td></td> <td></td> </tr> </tbody> </table> Divide  by 10 Complete the calculations <ul style="list-style-type: none"> ○ $42 \div 10 =$ ○ $42 \div 100 =$ ○ $9 \div 10 =$ ○ $9 \div 100 =$ <p>What do you notice?</p> 	Starting number	÷ 10	÷ 100	34			57			60			7			<ul style="list-style-type: none"> I divide a number by 100 and the answer is 0.5. What number did I start with? Prove how you know True or False A two digit number divided by 10 always gives an answer with one decimal place. E.g. $52 \div 10 = 5.2$ Prove it. Jessie and Tammy are dividing numbers by 10 and 100. They start with the same 1 digit number. <div style="border: 1px solid black; border-radius: 15px; padding: 5px; width: fit-content; margin: 10px auto;"> <p>My number has 0 ones and 4 tenths</p> </div> <div style="text-align: center; margin: 10px auto;">  </div> <div style="border: 1px solid black; border-radius: 15px; padding: 5px; width: fit-content; margin: 10px auto;"> <p>My number has 0 ones, 0 tenths and 4 hundredths</p> </div> <p>What number did they start with? Prove it.</p> 	<ul style="list-style-type: none"> Katya has multiplied a number by 100. Her answer is between 40 and 45. What number could she have multiplied? How many possibilities can you find? Use the number cards below to fill in the missing digits. <p>□ $0 \div 10 =$ □</p> <p>□ $.4 \times 10 = 3$ □</p> <p>□ 8 □ $\div 100 = 1$ □ 6</p> <p>5. □ $2 \times 100 =$ □ 7 □</p> <div style="display: flex; flex-wrap: wrap; justify-content: center; gap: 10px; margin-top: 20px;"> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; width: 30px; text-align: center;">9</div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; width: 30px; text-align: center;">7</div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; width: 30px; text-align: center;">3</div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; width: 30px; text-align: center;">2</div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; width: 30px; text-align: center;">1</div> </div> <div style="display: flex; flex-wrap: wrap; justify-content: center; gap: 10px; margin-top: 10px;"> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; width: 30px; text-align: center;">8</div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; width: 30px; text-align: center;">4</div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; width: 30px; text-align: center;">9</div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; width: 30px; text-align: center;">5</div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; width: 30px; text-align: center;">6</div> </div>
Starting number	÷ 10	÷ 100																	
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Domain	NC Objectives	Example tasks fluency	Example tasks reasoning	Example tasks problem solving
Measures (area)		<ul style="list-style-type: none">Find the area of these shapes:  Draw a rectangle that is 6 centimetres long and 4 centimetres wide on squared paper. What is the area of the rectangle?	<ul style="list-style-type: none">A shape has an area of 31cm^2. Could the shape be a rectangle? Explain your answer.True or False? The area of any square has an even number of squares. Prove it.Always, sometimes, never The bigger the perimeter of a shape, the bigger the area. Convince me.	<ul style="list-style-type: none">A twelve sided shape has an area of nine squares. Draw the shape on squared paper.How many shapes can you draw that have an area of 12 square centimetres?Jack has drawn a shape that has 6 sides. All the angles are right angles. It has an area of more than 12 centimetre squares and less than 16 centimetre squares. Draw a shape that Jack could have drawn. Can you find any others?



Berrywood
Primary School

Mastery Mathematics
Medium Term Planning
Year 4 PHASE 3