

HIAS MOODLE+ RESOURCE

Year 4 Unit Plan 4.4

Fractions and Geometry

Autumn term

HIAS Maths Team
September 2026
Final version

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Overview

This document contains...

Year 4 Unit Plans linked to the Hampshire Medium Term Overview

Points to consider when using this resource:

These unit plans provide an example of how medium-term planning could be developed into units of work. These unit plans will need to be adapted to meet the needs of pupils. The unit plan provides an outline of a possible learning journey with suggestions of types of tasks that could be used. They also identify required prior learning, some common misconceptions and an indication of key skills pupils need to secure competency. It is assumed that teachers will make use of appropriate mathematical representations (manipulatives, visuals and symbolic) to support conceptual understanding for pupils alongside procedural fluency.

National Curriculum Links:

Fractions

Pupils should be taught to:

- Recognise and show, using diagrams, families of common equivalent fractions
- Count up and down in hundredths; recognise that hundredths arise when dividing an object by 100 and dividing tenths by 10
- 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
- Add and subtract fractions with the same denominator
- Recognise and write decimal equivalents of any number of tenths or hundreds
- Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$ and $\frac{3}{4}$
- 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
- Round decimals with 1 decimal place to the nearest whole number
- Compare numbers with the same number of decimal places up to 2 decimal places
- Solve simple measure and money problems involving fractions and decimals to 2 decimal places

Geometry (properties of shape and position and direction)

Pupils should be taught to:

- Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes
- Identify acute and obtuse angles and compare and order angles up to 2 right angles by size
- Identify lines of symmetry in 2-D shapes presented in different orientations
- Complete a simple symmetric figure with respect to a specific line of symmetry
- Describe positions on a 2-D grid as coordinates in the first quadrant
- Describe movements between positions as translations of a given unit to the left/right and up/down
- Plot specified points and draw sides to complete a given polygon

<p>This Year 4 unit builds pupils' understanding of decimals and shape, linking number and geometry. Pupils learn how tenths and hundredths arise through equal partitioning and division, and use this knowledge to count, compare, and write decimals to two decimal places. They apply these skills to divide one- and two-digit numbers by 10 and 100 and solve simple decimal problems. The unit also develops geometric reasoning, as pupils recognise, describe and classify 2-D and 3-D shapes, identify shapes on the faces of 3-D objects, and work with shapes in different orientations. Pupils explore lines, symmetry, and coordinates in the first quadrant, strengthening spatial awareness.</p>	<p>Notional Time: 20 sessions</p>	
<p>Check and Refresh - <i>skills and knowledge that pupils need to know</i></p>	<p>Verbal coding- <i>precise mathematical language to model during worked examples</i></p>	<p>Mastering Key Facts in Key Stage 2 – developing fluency and automaticity</p>
<p>Understanding place value within whole numbers and tenths before moving onto deepening knowledge of decimals. Pupils should be confident in identifying common 2-D and 3-D shapes and recalling basic properties. Recognising simple patterns and position on grids.</p>	<p>When I divide ___ by 10 / 100 the digits move ___ place(s) to the ____. When I divide by 10 or 100, the value becomes ___ times smaller because the digits move ___ places. This number/shape is ___ because it has ___ (properties), so I can compare it with ____. I know this is ___ because I can see ____, even when it is turned or in a different position.</p>	<ul style="list-style-type: none"> • Y2 & 3 Recap: Recall multiples of 2, 3, 4, 5, 8 and 10 up to 12 in any order, including missing numbers and related division facts fluently. • Recall multiples of 6 up to 12 x 6 in any order, including missing numbers and related division facts with growing fluency.
<p>Mathematical Concepts- <i>important pieces of information learners should take away from the unit</i></p>	<p>Watch out for</p>	<p>DfE Ready -to- progress criteria</p>
<p>Understanding of decimals and place value Pupils develop a secure understanding of tenths and hundredths, including dividing by 10 /100, comparing decimals, and solving simple decimal problems.</p> <p>Geometric awareness and classification Pupils strengthen geometric understanding by recognising, describing and classifying 2-D and 3-D shapes, including faces, orientation and symmetry.</p> <p>Spatial reasoning and position skills Pupils build spatial awareness, identifying line relationships and using coordinates in the first quadrant to describe position accurately.</p>	<p>Pupils may misunderstand the size of tenths and hundredths, often thinking 1/100 is larger than 1/10 because 100 is bigger than 10.</p> <p>Pupils may say “add a zero” or “move the decimal point” without understanding what happens when dividing by 10/100.</p> <p>Pupils might confuse tenths and hundredths in decimal form.</p> <p>Pupils may believe shape properties change with orientation.</p> <p>Pupils may reverse the order of co-ordinates (going up first instead of across).</p>	<p>4MD-1 4F-1 4G-1</p> <p>Formative assessment questions - <i>key questions to support pupil reasoning and teacher assessment</i></p> <ul style="list-style-type: none"> • What is the same and what is different? • What if I change...? • Can you give me an example of... and another...and another? • Which is harder and which is easier...? • If I know this, then what else do I know?

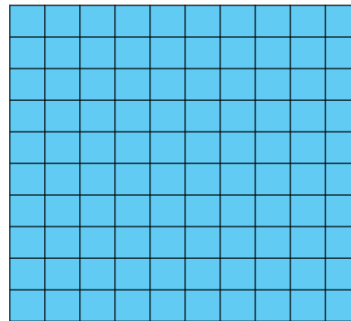
Visual coding: key representations

Ones				-ths	
1000s	100s	10s	1s	$\frac{1}{10}$ s	$\frac{1}{100}$ s
			4	•	
			0	•	4
			0	•	0
					4

$\div 10$
 $\div 100$

Ones				-ths	
1000s	100s	10s	1s	$\frac{1}{10}$ s	$\frac{1}{100}$ s
		1	4	•	
			1	•	4
			0	•	1
					4

$\div 10$
 $\div 100$



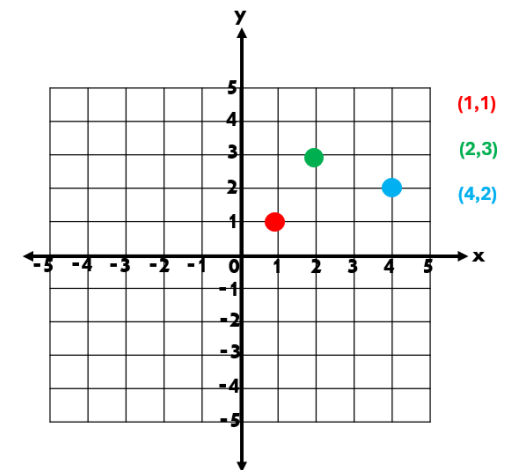
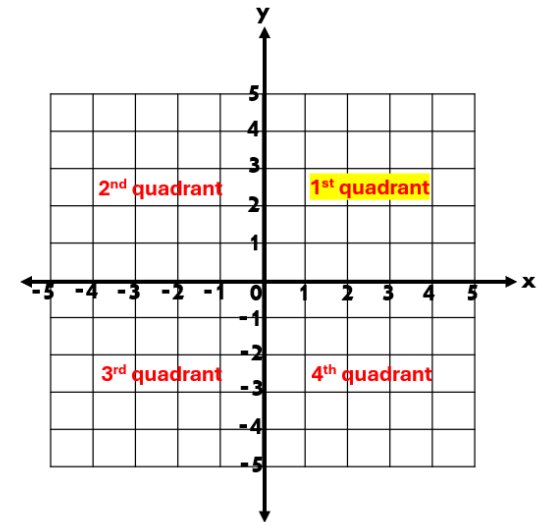
Represents one whole



Represents one tenth



Represents one hundredth



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Learning Journey – Fractions			
Autumn unit 4.4 (3 weeks)	Spring unit 4.6 (2 weeks)	Summer 4.9 (1 week)	Summer unit 4.14 (1 week)
I can count up and down in tenths.			
I can count up and down in hundredths.			
<p>I can recognise that tenths arise from dividing an objects into 10 equal parts and in dividing one-digit numbers or quantities by 10.</p> <p>I can recognise that hundredths arise when dividing an object by 100.</p> <p>I can recognise that hundredths arise when dividing tenths by ten.</p> <p>I can divide a one-digit number by 10 and 100.</p> <p>I can divide a two-digit number by 10 and 100.</p> <p>I can compare numbers with the same number of decimal places up to two decimal places.</p> <p>I can recognise and write decimal equivalents of any number of tenths.</p> <p>I can recognise and write decimal equivalents of any number of hundredths.</p> <p>I can solve simple problems involving decimals to two decimal places.</p>	<p>I can recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.</p> <p>I can recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators.</p> <p>I can solve problems involving fractions to calculate quantities.</p> <p>I can compare and order unit fractions and fractions with the same denominators.</p> <p>I can recognise and show, using diagrams, equivalent fractions with small denominators.</p> <p>I can add fractions with the same denominator.</p> <p>I can subtract fractions with the same denominator.</p> <p>I can recognise and show families of common equivalent fractions.</p> <p>I can recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$ and $\frac{3}{4}$.</p>	<p>I can round decimals with one decimal place to the nearest whole number.</p> <p>I can solve simple measure and money problems involving fractions and decimals to two decimal places.</p>	<p>I can recognise and show families of common equivalent fractions.</p> <p>I can recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$ and $\frac{3}{4}$.</p> <p>I can add and subtract fractions with the same denominator.</p> <p>I can solve problems involving fractions to calculate quantities.</p> <p>I can solve simple measure and money problems involving fractions and decimals to two decimal places.</p>

Learning Journey – Geometry

Autumn unit 4.4 (1 week)	Spring unit 4.6 (1 week)	Summer unit 4.12 (2 weeks)
<p>I can recognise 3-D shapes in different orientations and describe them.</p> <p>I can identify 2-D shapes on the surface of 3-D shape.</p> <p>I can compare and classify geometric shapes.</p> <p>I can identify horizontal and vertical lines, and pairs of perpendicular and parallel lines.</p> <p>I can identify line symmetry in a vertical line.</p> <p>I can identify lines of symmetry in 2-D shapes presented in different orientations.</p>	<p>I can recognise angles as a property of shape or a description of a turn.</p> <p>I can identify right angles.</p> <p>I can identify whether angles are greater than or less than a right angle.</p> <p>I can identify acute and obtuse angles.</p> <p>I can compare and order angles up to two right angles by size.</p>	<p>I can compare and classify geometric shapes.</p> <p>I can identify acute and obtuse angles and compare and order angles up to two right angles by size.</p> <p>I can identify lines of symmetry in 2-D shapes presented in different orientations.</p> <p>I can complete a simple symmetric figure with respect to a specific line of symmetry.</p>
<p>I can describe positions on a 2-D grid as coordinates in the first quadrant.</p>	<p>I can describe movements between positions as translations of a given unit to the left/right and up/down.</p>	<p>I can plot specified points and draw sides to complete a given polygon.</p>

Proposed lesson sequence to support development of mathematical concepts

Developing fluency and automaticity – ongoing daily practice

Mastering Key Facts in Key Stage 2	Autumn Ongoing Mental Fluency Practice <ul style="list-style-type: none"> Y2 & 3 Recap: Recall multiples of 2, 3, 4, 5, 8 and 10 up to 12 in any order, including missing numbers and related division facts fluently. Recall multiples of 6 up to 12 x 6 in any order, including missing numbers and related division facts with growing fluency.
Counting Fluency	<ul style="list-style-type: none"> I can count up and down in tenths. I can count up and down in hundredths.
I can...	Mathematical Concepts, Key Skills and Suggested Tasks

15 sessions – Fractions

I can recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10.

This step builds on prior learning in Y3 and deepens pupils' understanding that tenths come from sharing a whole into 10 equal parts. Pupils use their knowledge that each part is one tenth (0.1) and can recognise this using objects, drawings or models. Pupils also understand that dividing a one-digit number or quantity by 10 creates tenths, and can explain what the decimal represents, not just calculate it.

A key model / image to be used here to secure pupils' understanding is the place value chart. A place value chart helps pupils see powers of 10 because each column represents a value that is 10 times bigger or 10 times smaller than the one next to it.

Ones				-ths	
1000s	100s	10s	1s	1 10s	1 100s
			3	•	
			0	•	3

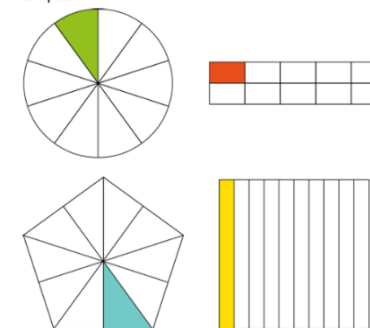
÷ 10

For example, moving from ones to tenths divides by 10 ($10^0 \rightarrow 10^{-1}$).

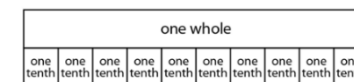
Design tasks that provide pupils to divide a range of one-digit numbers by 10 and to explain their reasoning using knowledge of place value.

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Shapes:



Bar model:



<p>I can recognise that hundredths arise when dividing an object by 100.</p>	<p>In this step, pupils recognise that when a number is divided into 100 equal parts, each part is called a hundredth. Pupils should understand that one hundredth can be written as $\frac{1}{100}$ or 0.01 and link to place value on a place value chart. This idea helps them see how splitting a whole into many equal pieces creates smaller and smaller parts.</p> <p>A key model and concrete resource to use for this step to secure pupils' understanding of hundredths is the hundred square. When the hundred square is used to represent 'one whole' then each equal part represents 'one hundredth.' Pupils can use dienes to support their understanding and to prove their mathematical thinking.</p> <div data-bbox="1563 225 2007 520" style="text-align: right;"> <p>Represents one whole Represents one tenth Represents one hundredth</p> </div>
<p>I can recognise that hundredths arise when dividing tenths by ten.</p>	<p>This step builds from the previous step where pupils learned that hundredths come from dividing a whole into 100 equal parts. Now, they deepen this by seeing that you don't have to start from a whole - you can get hundredths by subdividing tenths further. This helps them build a connected understanding of place value: each step to the right (tenths \rightarrow hundredths) means dividing by 10.</p> <p>A key model / image to be used here to secure pupils' understanding is the place value chart. A place value chart helps pupils see powers of 10 because each column represents a value that is 10 times bigger or 10 times smaller than the one next to it. For example, moving from ones to tens multiplies by 10 ($10^0 \rightarrow 10^1$), and moving from ones to tenths divides by 10 ($10^0 \rightarrow 10^{-1}$).</p> <p>This makes the pattern clear:</p> <ul style="list-style-type: none"> • Ones = 10^0 • Tens = 10^1 • Hundreds = 10^2 • Tenths = 10^{-1} • Hundredths = 10^{-2} <p>By physically moving digits left or right on the chart, pupils can see powers of 10 in action, reinforcing that each step is a multiplication or division by 10, rather than just a rule to memorise.</p> <p>Dienes is also a key concrete resource to be used here. The hundred square represents 'one whole', the tens sticks represent 'tenths' and the ones cubes represent 'hundredths.'</p>

<p>I can divide a one-digit number by 10 and 100.</p>	<p>In this step, pupils understand that dividing a one-digit number by 10 or 100 makes it 10 or 100 times smaller using place value. For example, $6 \div 10 = 0.6$ (six tenths) and $6 \div 100 = 0.06$ (six hundredths). They should see this as the digit moving into smaller place value columns, not as a trick like “adding zeros” or just shifting a decimal point. This builds on earlier learning about tenths and hundredths, helping pupils apply their understanding of these parts to real calculations.</p> <p>Key questions:</p> <ul style="list-style-type: none"> • Explain what happens to the digits when you divide 4 by 10. • What happens when you divide 4 by 100? • What is the same? What is different? <table border="1" data-bbox="1424 272 1912 464"> <thead> <tr> <th colspan="4">Ones</th> <th colspan="2">-ths</th> </tr> <tr> <th>1000s</th> <th>100s</th> <th>10s</th> <th>1s</th> <th>$\frac{1}{10}$s</th> <th>$\frac{1}{100}$s</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td>4</td> <td>•</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td>0</td> <td>•</td> <td>4</td> </tr> <tr> <td></td> <td></td> <td></td> <td>0</td> <td>•</td> <td>0</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td>4</td> </tr> </tbody> </table> <p>Provide pupils with a range of opportunities to divide all one-digit numbers by 10 and 100 and to describe patterns.</p>	Ones				-ths		1000s	100s	10s	1s	$\frac{1}{10}$ s	$\frac{1}{100}$ s				4	•					0	•	4				0	•	0						4
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<p>I can divide a two-digit number by 10 and 100.</p>	<p>This builds on from the previous step where pupils divided a one-digit number by 10 and 100. Pupils focus on a single digit moving into decimal places (e.g. $7 \rightarrow 0.7 \rightarrow 0.07$). The emphasis is on understanding tenths and hundredths and how values get smaller. Now this progresses onto pupils dividing a two-digit number by 10 and 100. Pupils now apply the same idea to numbers with more than one digit (e.g. $42 \rightarrow 4.2 \rightarrow 0.42$). This requires them to track multiple digits shifting place value positions at once.</p> <p>Key questions:</p> <ul style="list-style-type: none"> • Explain what happens to the digits when you divide 14 by 10. • What happens when you divide 14 by 100? • What is the same? What is different? <table border="1" data-bbox="1429 743 1917 935"> <thead> <tr> <th colspan="4">Ones</th> <th colspan="2">-ths</th> </tr> <tr> <th>1000s</th> <th>100s</th> <th>10s</th> <th>1s</th> <th>$\frac{1}{10}$s</th> <th>$\frac{1}{100}$s</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>1</td> <td>4</td> <td>•</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td>1</td> <td>•</td> <td>4</td> </tr> <tr> <td></td> <td></td> <td></td> <td>0</td> <td>•</td> <td>1</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td>4</td> </tr> </tbody> </table> <p>Provide pupils with a range of opportunities to divide a range of two-digit numbers by 10 and 100 and to describe patterns.</p>	Ones				-ths		1000s	100s	10s	1s	$\frac{1}{10}$ s	$\frac{1}{100}$ s			1	4	•					1	•	4				0	•	1						4
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		1	4	•																																	
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<p>I can compare numbers with the same number of decimal places up to two decimal places.</p>	<p>In this step, pupils decide which number is greater or smaller when both numbers have the same number of decimal places (e.g. 0.34 and 0.56). Key learning ideas:</p> <ul style="list-style-type: none"> • Pupils compare digits column by column, starting from the left (ones, then tenths, then hundredths) • Because both numbers have the same number of decimal places, they can focus on the value of each digit in its place • They learn that the largest digit in the first place where numbers differ decides the comparison <p>For example: Compare 0.47 and 0.52:</p> <ul style="list-style-type: none"> • Tenths: 4 vs 5 \rightarrow 5 is larger • So, $0.52 > 0.47$ <p>Encourage pupils to use a place value chart to compare numbers and to support their reasoning.</p>																																				

<p>I can recognise and write decimal equivalents of any number of tenths.</p>	<p>This step is about helping pupils connect fractions (tenths) and decimals confidently. Pupils secure their knowledge that tenths can be written as decimals:</p> <ul style="list-style-type: none"> ○ $1/10 = 0.1$ ○ $3/10 = 0.3$ ○ $7/10 = 0.7$ <p>Key learning is that the digit in the tenths place represents how many tenths there are. It is important that pupils learn how to switch fluently between fraction form and decimal form.</p> <ul style="list-style-type: none"> • It builds a strong understanding of place value in decimals • It helps pupils see decimals as numbers with meaning, not just notation • It prepares them for working with hundredths, money, and measurements <p>Use a place value chart here to secure conceptual understanding of fraction and decimal equivalents.</p>
<p>I can recognise and write decimal equivalents of any number of hundredths.</p>	<p>The progression moves from pupils understanding how tenths link to decimals (e.g. $4/10 = 0.4$) to applying the same idea to the smaller unit of hundredths (e.g. $34/100 = 0.34$). It deepens their knowledge by introducing a new place value column and builds on their earlier understanding that the digit shows how many parts there are, now extending this from tenths to hundredths. Overall, it strengthens their understanding of the place value system and the relationship between fractions and decimals.</p> <p>Checking for understanding questions: Complete and explain the pattern:</p> <ul style="list-style-type: none"> • $3/100 = 0.03$ • $12/100 = \underline{\quad}$ • $45/100 = \underline{\quad}$ <p>What do you notice about the digits?</p>
<p>I can solve simple problems involving decimals to two decimal places.</p>	<p>In this step pupils now apply their knowledge and understanding of decimals, for tenths and hundredths to a range of real-life contexts. Pupils might:</p> <ul style="list-style-type: none"> • Add or subtract decimals: $0.4 + 0.25 = 0.65$ • Work with money: $£1.20 - £0.75$ • Compare or find differences between values • Solve simple word problems involving measures (e.g. length, mass) <p>Key learning focus:</p> <ul style="list-style-type: none"> • Applying their understanding of place value (tenths and hundredths) • Keeping digits aligned in columns when calculating • Interpreting decimals in real contexts like money and measurement

5 lessons – Geometry

I can recognise 3-D shapes in different orientations and describe them.

This step is a revisit of prior Y3 learning within Unit 3.4. Pupils understand that 3-D shapes stay the same even when they are turned, tilted or viewed from a different angle. Pupils learn not to rely on a “typical” picture of a shape (for example, a cube sitting flat on a face), but to recognise it any way it is positioned.

Checking for understanding questions:

Recognising shapes in different orientations

- What is this 3-D shape? How do you know?
- Does this shape change if I turn it? Why or why not?
- Is this still a cube/cuboid even though it’s on its side/upside down?
- What clues help you recognise the shape when it looks different?

Describing properties

- How many faces does this shape have? What shape are they?
- How many edges and vertices can you see? Are some hidden?
- Can you describe this shape without naming it?
- Which properties would stay the same if I rotate the shape?

Comparing and reasoning

- How is this shape the same as that one? How is it different?
- Could this be a different shape if it was turned another way? Why?
- Which 3-D shapes can have square faces? Which cannot?
- How can you tell the difference between a cube and a cuboid when they are rotated?

I can identify 2-D shapes on the surface of 3-D shape.

This step also builds on prior learning in Y3, from Unit 3.4. Pupils understand that the flat faces of 3-D shapes are made up of familiar 2-D shapes. Rather than seeing a 3-D shape as a single object, pupils notice and name the shapes that form its surfaces. Provide pupils with a range of 3-D shapes to explore and physically handle as concrete resources.

Design tasks that develop pupils’ reasoning and use of mathematical vocabulary.

For example: **True / False? Always, sometimes, never true?**

- A pyramid always has triangular faces.
- A cylinder has a circular face.
- All 3-D shapes have rectangular faces.
- A 3-D shape can have more than one type of 2-D face.

<p>I can compare and classify geometric shapes.</p>	<p>In this step pupils learn to look at shapes closely and describe their properties, such as number of sides, angles, and types of faces. They then use this understanding to compare shapes (what is the same and different) and group or classify them based on these properties. This helps them develop mathematical reasoning and use precise vocabulary like <i>square</i>, <i>rectangle</i>, <i>triangle</i>, and <i>quadrilateral</i>.</p> <p>True or false Look at these statements about rectangles. For each statement, tick (✓) True or False. The first one is done for you.</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 80%;"></th> <th style="width: 10%; text-align: center;">True</th> <th style="width: 10%; text-align: center;">False</th> </tr> </thead> <tbody> <tr> <td>All rectangles have four sides.</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>All rectangles have four equal sides.</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>Some rectangles have no right angles.</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>All rectangles have at least one line of symmetry.</td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </tbody> </table> <p style="text-align: right;">Design tasks that provide pupils with opportunities to compare and classify a range of geometric shapes. Include examples of reasoning tasks, which develop pupils' mathematical language in explaining their thinking.</p> <p style="text-align: right; font-size: small;">Contains material developed by Standards and Testing Agency 2007 national curriculum assessments and licensed under Open Government Licence v3.0' http://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/</p>		True	False	All rectangles have four sides.	<input type="checkbox"/>	<input type="checkbox"/>	All rectangles have four equal sides.	<input type="checkbox"/>	<input type="checkbox"/>	Some rectangles have no right angles.	<input type="checkbox"/>	<input type="checkbox"/>	All rectangles have at least one line of symmetry.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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All rectangles have at least one line of symmetry.	<input checked="" type="checkbox"/>	<input type="checkbox"/>														
<p>I can identify horizontal and vertical lines, and pairs of perpendicular and parallel lines.</p>	<p>In this step pupils learn to recognise different types of lines: horizontal (side to side) and vertical (up and down). They also identify relationships between lines, understanding that parallel lines never meet and perpendicular lines meet at a right angle. This helps them describe shapes and patterns more precisely using correct mathematical vocabulary.</p> <p>Design tasks that provide pupils with opportunities to identify all of the different types of lines: horizontal, vertical, pairs of perpendicular and parallel lines.</p> <p style="text-align: right;">Look at the letters below. Circle the letter below that does not have parallel lines.</p> <p style="text-align: center; font-size: 2em; letter-spacing: 2em;">A E H M Z</p> <p style="font-size: small;">Contains material developed by Standards and Testing Agency 2024 national curriculum assessments and licensed under Open Government Licence v3.0' http://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/</p>															
<p>I can identify line symmetry in a vertical line.</p>	<p>This step builds on previous learning in Unit 3.4. Pupils understand what line symmetry is and can recognise when a shape can be split into two identical halves by a vertical line (a straight line going up and down). They should be able to find, draw or point to the vertical line of symmetry and explain that both sides match exactly when folded or reflected.</p> <p>Checking for understanding questions:</p> <ul style="list-style-type: none"> • How can you prove a shape has vertical line symmetry without folding it? • What would happen if the line of symmetry moved slightly? • Can a shape have more than one line of symmetry? • Can you draw a new shape that has vertical line symmetry? • Can you change one square on a symmetrical shape to make it not symmetrical? 															

I can identify lines of symmetry in 2-D shapes presented in different orientations.

In this step, pupils can recognise whether a 2D shape has a line of symmetry, even when the shape has been rotated, flipped, or shown in an unusual position. Key learning:

- A line of symmetry divides a shape into two identical mirror-image halves
- Shapes do not have to be upright to be symmetrical
- The line of symmetry can be vertical, horizontal, or diagonal

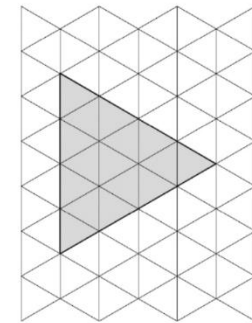
For example: a square still has 4 lines of symmetry even if it is tilted (like a diamond). Pupils must see that the symmetry comes from the shape's properties, not how it is positioned.

Design tasks that provide pupils with a range of 2D shapes to investigate that are presented in different orientations.

Here is a grid of equilateral triangles.

Draw all the lines of symmetry on the shaded triangle.

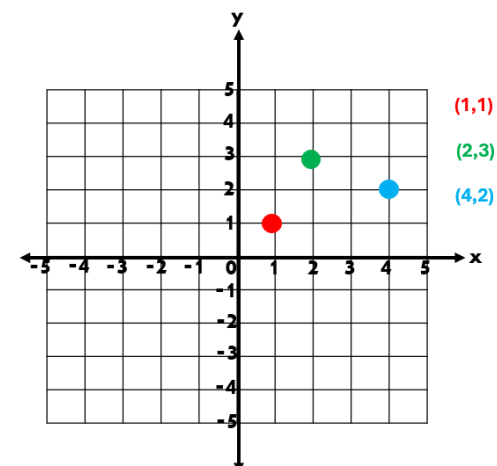
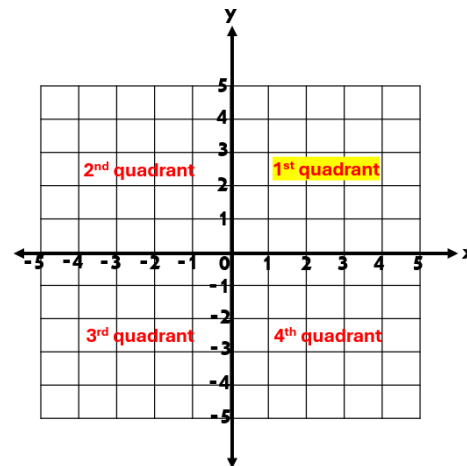
Use a ruler.



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I can describe positions on a 2-D grid as coordinates in the first quadrant.

In this step, pupils learn that coordinates are used to describe positions on a grid using two numbers written as (x, y). The first number tells how far to move across, and the second tells how far to move up. In the first quadrant, all numbers are positive, so pupils only work with positions above and to the right of zero. This helps them give precise locations and builds a foundation for more advanced coordinate work later.



HIAS Resources to support:

- Reasoning and Intelligent Practice Tasks: [Reasoning and Intelligent Practice Tasks](#)
- Faded Scaffolds and Intelligent Practice: [Faded Scaffolds and Intelligent Practice](#)
- Paired Examples: [Paired Examples](#)
- Entry and Exit tickets: [Entry and Exit Tickets](#)
- Interleaving, Recall and Retrieval: [Interleaving, Recall and Retrieval \(hants.gov.uk\)](#)
- Connect4Maths: [Connect4Maths - Primary](#)
- Moderation Documents: [Moderation Documents](#)
- KS1 Key Facts: [Key Stage 1 Key Facts Document](#)
- Mastering Times Tables: [Mastering Times Tables](#)

NCETM Resources to support:

- Exemplification of ready -to -progress criteria (RTPS): [Exemplification of ready-to-progress criteria | NCETM](#)
- NCETM Professional Development materials spine 1: [Number, Addition and Subtraction | NCETM](#) ;
- The NCETM Mastery Task booklets can be used as a source of tasks to support end of year teacher assessment for both EXS and GDS
[Teaching for Mastery Booklets Yr1-6](#)

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