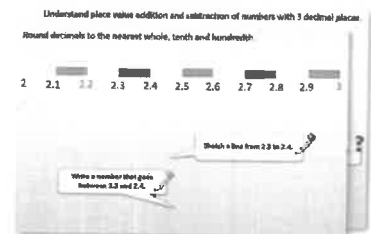


Year 4: Week 5, Day 1

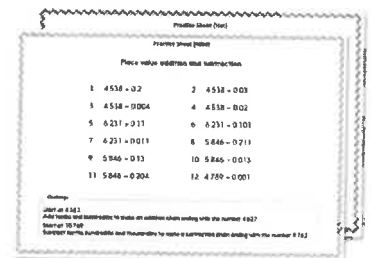
Equivalent fractions and decimals

Each day covers one maths topic. It should take you about 1 hour or just a little more.

1. Start by reading through the Learning Reminders. They come from our *PowerPoint* slides.



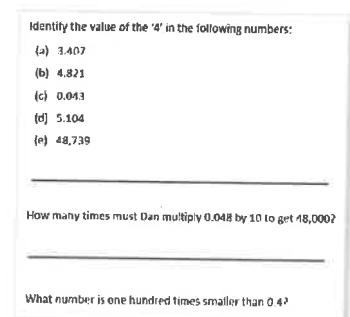
2. Tackle the questions on the **Practice Sheet**. There might be a choice of either Mild (easier) or Hot (harder)! Check the answers.



3. Finding it tricky? That's OK... have a go with a grown-up at **A Bit Stuck?**

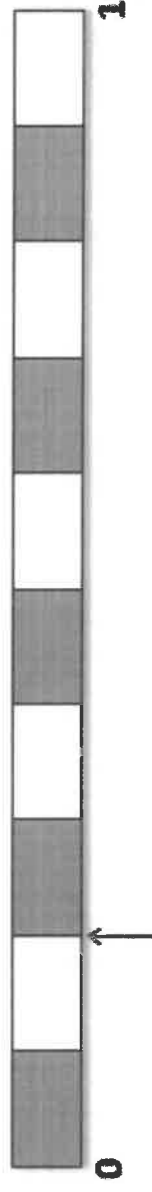


4. Have I mastered the topic? A few questions to **Check your understanding**. Fold the page to hide the answers!



Learning Reminders

Relate fractions to decimals ($0.1 = \frac{1}{10}$, $0.2 = \frac{1}{5}$).



What fraction on the counting stick is the arrow pointing to?
What other ways can you write or say that?

$\frac{2}{10}$ as a fraction or $\frac{1}{5}$ in its simplest form.

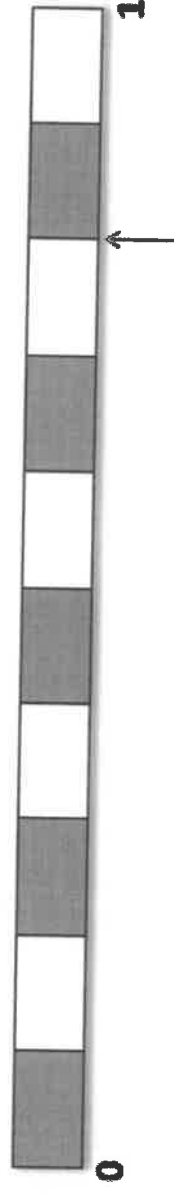
Or 0.2 as a decimal.

$$0.2 \equiv \frac{1}{5} \equiv \frac{2}{10}$$

They are each equivalent, different ways of saying the same amount!

Learning Reminders

Relate fractions to decimals ($0.1 = \frac{1}{10}$, $0.2 = \frac{1}{5}$).



$\frac{8}{10}$ as a fraction or $\frac{4}{5}$ in its simplest form.

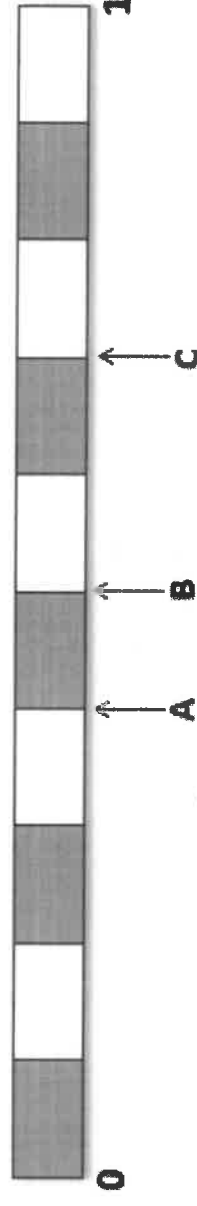
Or 0.8 as a decimal.

What fraction on the counting stick is the arrow pointing to?
What other ways can you write or say that?

$$0.8 \equiv \frac{4}{5} \equiv \frac{8}{10}$$

Learning Reminders

Relate fractions to decimals ($0.1 = \frac{1}{10}$, $0.2 = \frac{1}{5}$).



A. $0.4 \equiv \frac{2}{5} \equiv \frac{4}{10}$

B. $0.5 \equiv \frac{5}{10} \equiv \frac{1}{2}$

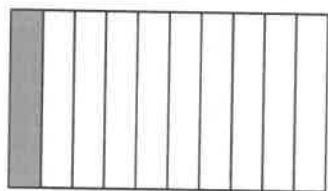
C. $0.7 \equiv \frac{7}{10}$

Now try these points.
Let's write the different
ways they can be
written.

Practice Sheet Mild

Decimals and fractions practice

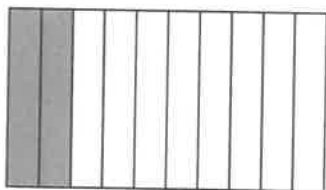
Fill in the missing fractions and decimals and provide any equivalents.



$$0.1 = \boxed{}$$

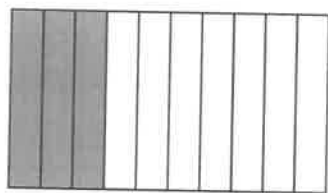
e.g.

$$0.1 + \boxed{} = 1$$

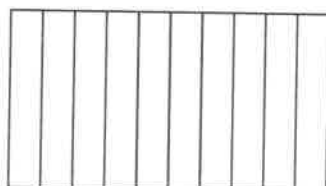


Hint: It's in the 'equivalent' symbol!

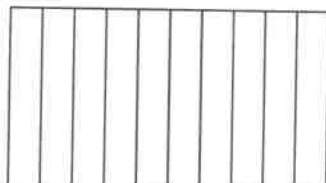
$$0.2 = \boxed{} = \boxed{}$$



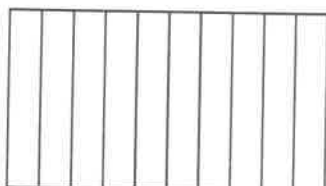
$$\boxed{} = \boxed{}$$



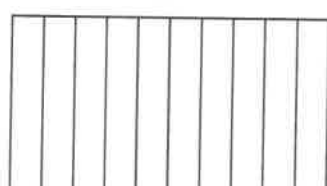
$$\boxed{} = \frac{4}{10} = \boxed{}$$



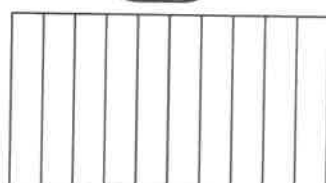
$$0.5 = \boxed{} = \boxed{}$$



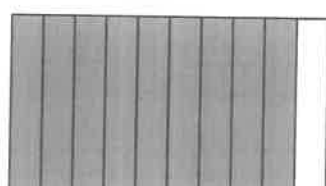
$$\boxed{} = \boxed{} = \frac{3}{5}$$



$$0.7 = \boxed{}$$



$$\boxed{} = \frac{8}{10} = \boxed{}$$



$$\boxed{} = \boxed{}$$

Practice Sheet Hot Tenths

1. $0.1 = \frac{1}{10}$

2. $0.2 = \frac{2}{10} = \frac{\boxed{}}{5}$

4. $0.9 = \frac{9}{\boxed{}}$

5. $0.\boxed{} = \frac{3}{10}$

6. $0.\boxed{} = \frac{6}{10} = \frac{\boxed{}}{5}$

3. $0.5 = \frac{5}{10} = \frac{1}{\boxed{}}$

8. $0.\boxed{} = \frac{7}{10}$

9. $0.\boxed{} = \frac{\boxed{}}{10} = \frac{4}{5}$

7. $0.4 = \frac{\boxed{}}{10} = \frac{\boxed{}}{5}$

Challenge

Here is a 1 to 2 number line:



Label the divisions on the line with as many equivalent fractions and decimals as you can.

Practice Sheet Answers

Decimals and fractions practice (Mild)



$$0.1 \equiv \frac{1}{10}$$

$$0.1 + 0.9 = 1$$



$$0.2 \equiv \frac{2}{10} \equiv \frac{1}{5}$$

$$0.2 + 0.8 = 1$$



$$0.3 \equiv \frac{3}{10}$$

$$0.3 + 0.7 = 1$$



$$0.4 \equiv \frac{4}{10} \equiv \frac{2}{5}$$

$$0.4 + 0.6 = 1$$



$$0.5 \equiv \frac{5}{10} \equiv \frac{1}{2}$$

$$0.5 + 0.5 = 1$$



$$0.6 \equiv \frac{6}{10} \equiv \frac{3}{5}$$

$$0.6 + 0.4 = 1$$



$$0.7 \equiv \frac{7}{10}$$

$$0.7 + 0.3 = 1$$



$$0.8 \equiv \frac{8}{10} \equiv \frac{4}{5}$$

$$0.8 + 0.2 = 1$$



$$0.9 \equiv \frac{9}{10}$$

$$0.9 + 0.1 = 1$$

Decimals and fractions practice (Hot)

1. $0.1 = \frac{1}{10}$

4. $0.9 = \frac{9}{10}$

7. $0.4 = \frac{4}{10} = \frac{2}{5}$

2. $0.2 = \frac{2}{10} = \frac{1}{5}$

5. $0.3 = \frac{3}{10}$

8. $0.7 = \frac{7}{10}$

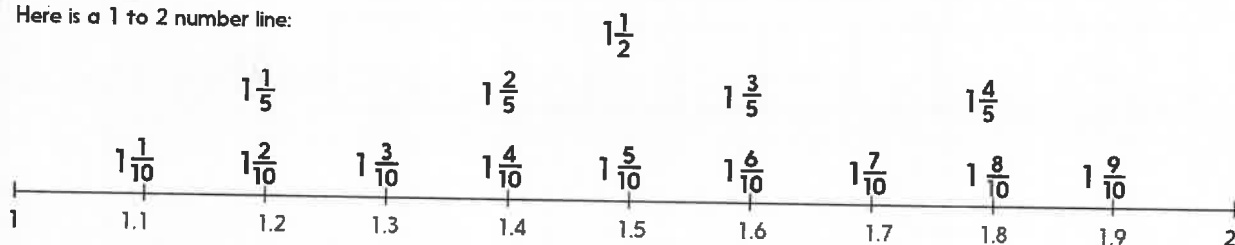
3. $0.5 = \frac{5}{10} = \frac{1}{2}$

6. $0.6 = \frac{6}{10} = \frac{3}{5}$

9. $0.8 = \frac{8}{10} = \frac{4}{5}$

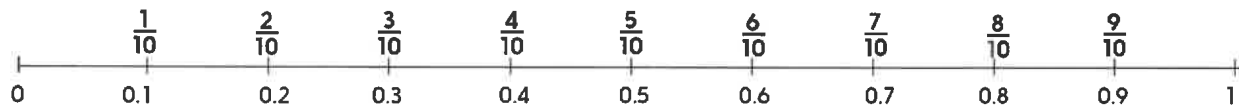
Challenge

Here is a 1 to 2 number line:



Label the divisions on the line with as many equivalent fractions and decimals as you can.

A Bit Stuck? Tenths



What to do:

- Colour the correct number of tenths of each strip.
Sometimes the tenths are written as fractions and sometimes as decimals.
Use the line above to help you.

--	--	--	--	--	--	--	--	--	--

$\frac{3}{10}$

--	--	--	--	--	--	--	--	--	--

0.1

--	--	--	--	--	--	--	--	--	--

$\frac{7}{10}$

--	--	--	--	--	--	--	--	--	--

0.4

--	--	--	--	--	--	--	--	--	--

0.5

--	--	--	--	--	--	--	--	--	--

$\frac{9}{10}$

--	--	--	--	--	--	--	--	--	--

0.2

--	--	--	--	--	--	--	--	--	--

0.6

--	--	--	--	--	--	--	--	--	--

0.8

Check your understanding: *Questions*

Write each number as a decimal:

- (i) One and four tenths
- (ii) $\frac{6}{10}$
- (iii) $10\frac{2}{10}$ (ten and two tenths)
- (iv) One half
- (v) One fifth

Choose another decimal to write in at least three different ways.

Fold here to hide answers:

Check your understanding: *Answers*

Write each number as a decimal:

- (i) One and four tenths 1.4
- (ii) $\frac{6}{10}$ 0.6
- (iii) $10\frac{2}{10}$ (ten and two tenths) 10.2
- (iv) One half 0.5
- (v) One fifth 0.2

Check on a fraction/decimal number line.

Choose another decimal to write in at least three different ways.

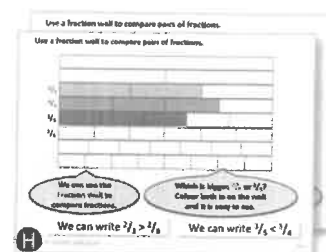
e.g. $0.4 = \frac{4}{10} = \frac{2}{5}$.

Year 4: Week 5, Day 2

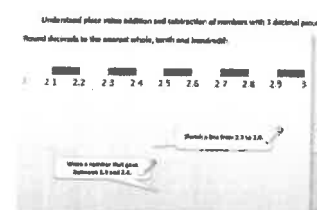
Compare numbers with 1 decimal place

Each day covers one maths topic. It should take you about 1 hour or just a little more.

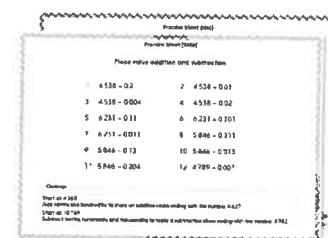
1. If possible, watch the PowerPoint presentation with a teacher or another grown-up.



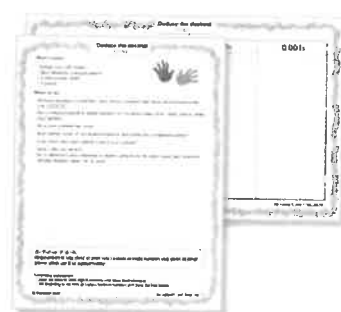
OR start by carefully reading through the Learning Reminders.



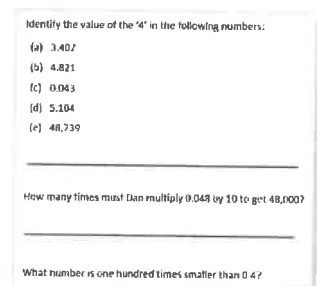
2. Tackle the questions on the Practice Sheet.
There might be a choice of either Mild (easier) or Hot (harder)!
Check the answers.



3. Finding it tricky? That's OK... have a go with a grown-up at A Bit Stuck?

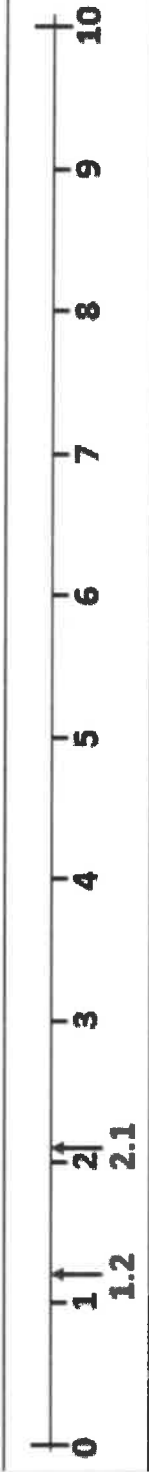


4. Have I mastered the topic? A few questions to Check your understanding.
Fold the page to hide the answers!



Learning Reminders

Compare numbers with 1 decimal place.



Which is more, 1.2 or 2.1?
What whole number lies
between?

We can place both
numbers on the
number line to check.

$$2.1 > 1.2$$

The whole number
between them is 2.

Learning Reminders

Compare numbers with 1 decimal place.

Let's play
Higher or Lower.

First roll is an 8.

Second a 6.

Next a 5.

Lastly a 2.

$\square.\square > \square.\square$

$8.\square > \square.\square$

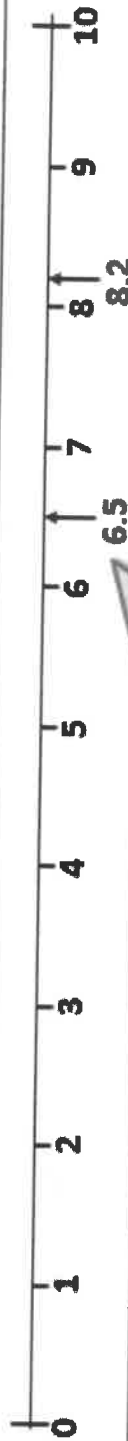
$8.\square > 6.\square$

$8.\square > 6.5$

$8.2 > 6.5$

Roll the 0-9 dice four
times and write each
digit on this grid.
Once it's placed you
can't move it!

Is our number
sentence $8.2 > 6.5$
correct?



We can check on the
number line.

Practice Sheet Mild

Decimals and fractions practice

Write $<$ or $>$ between each pair of numbers.

4.6 7.1 2.8 2.5 4.5 5.4 7.2 2.7

Now write all eight numbers in order, smallest first.

Use the digits to make a pair of numbers in the correct order.

$\square.\square > \square.\square$ $\square.\square > \square.\square$ $\square.\square < \square.\square$ $\square.\square > \square.\square$
 1, 2, 3, 4 4, 5, 2, 7 3, 5, 7, 8 9, 7, 5, 3

Write a number between each pair of numbers so that the three numbers are in order, smallest to largest or vice versa.

3.4 $\square.\square$ 5.1 8.4 $\square.\square$ 7.8 5.7 $\square.\square$ 6.2 3.9 $\square.\square$ 4.1



Challenge

Drew says '7.9 is larger than 9 because it has more digits.' Do you agree with him?

Practice Sheet (Hot)

Decimals practice

Write these groups of numbers in order, smallest first.

1. 6.7 5 7.2

2. 4.8 7.1 4.4

3. 8 6.5 5.6

4. 3.6 6.3 5

5. 5.1 0.9 2.3

Use the digits to make three numbers in the correct order.

$$\boxed{}.\boxed{} > \boxed{}.\boxed{} > \boxed{}.\boxed{}$$

2 9 4 1 6 5

$$\boxed{}.\boxed{} > \boxed{}.\boxed{} > \boxed{}.\boxed{}$$

3 2 1 9 7 7

$$\boxed{}.\boxed{} > \boxed{}.\boxed{} > \boxed{}.\boxed{}$$

7 6 2 5 3 8

$$\boxed{}.\boxed{} > \boxed{}.\boxed{} > \boxed{}.\boxed{}$$

1 9 2 7 4 2

Practice Sheet Answers

Decimals and fractions practice (Mild)

$$4.6 < 7.1 \quad 2.8 > 2.5 \quad 4.5 < 5.4 \quad 7.2 > 2.7$$

$$2.5 \quad 2.7 \quad 2.8 \quad 4.5 \quad 4.6 \quad 5.4 \quad 7.1 \quad 7.2$$

There are a number of possible answers for these inequalities, e.g.

$$3.4 > 1.2 \quad 2.7 < 4.5 \quad 5.3 < 7.8 \quad 5.3 < 9.7$$

e.g. $3.4 \boxed{4} \boxed{3} 5.1$ $2.3 \boxed{4} \boxed{3} 6.2$
 $5.7 \boxed{5} \boxed{9} 6.2$ $3.9 \boxed{4} \boxed{0} 4.1$

Decimals and fractions practice (Hot)

1. 5 6.7 7.2
2. 4.4 4.8 7.1
3. 5.6 6.5 8
4. 3.6 5 6.3
5. 0.9 2.3 5.1

Accept any three numbers in ascending or descending order using the specified digits.

A Bit Stuck? Footprints

Things you will need:

- Ruler or tape measure that measures in centimetres and millimetres



What to do:

1. Use a ruler or tape measure to measure the length of each footprint to the nearest millimetre. Write your answers in centimetres, e.g. 4.6cm. Write the length of each footprint.
2. Write all the lengths in order, shortest first.
3. Look at the first two lengths. Think of a number of centimetres with one decimal place which is between the two lengths. Check on your ruler/tape measure.
4. Repeat with some other neighbouring pairs of lengths.

S-t-r-e-t-c-h:

Now you've done lots of measuring, let's have a go at some estimating!
Either snap a straight piece of spaghetti, or draw lines with a straight edge that you estimate to be the following lengths:

10cm 5cm 8.5cm 4.2cm 12.9cm

Now measure each to check. How close were your estimates?

Learning outcomes:

- I can measure lengths to the nearest tenth of a centimetre.
- I am improving my estimates of lengths.

Check your understanding: *Questions*

Write < or > or = between each pair of numbers.

4.5 5.4

0.6 $\frac{1}{2}$

7.1 7.8

0.3 $\frac{3}{10}$

$\frac{2}{5}$ 0.5

Write a number with one decimal place *between* each pair of numbers:

3.6 5.2

4.1 4.9

6.3 5.8

Fold here to hide answers:

Check your understanding: *Answers*

Write < or > or = between each pair of numbers.

4.5 < 5.4

0.6 > $\frac{1}{2}$

7.1 < 7.8

0.3 = $\frac{3}{10}$

$\frac{2}{5}$ < 0.5

Children making frequent errors may be mixing up the > and < signs. Ask them to read aloud, do they make sense?

Write a number with one decimal place *between* each pair of numbers.

3.6 5.2 4.1 4.9 6.3 5.8

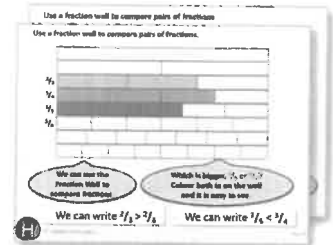
Accept any number with one decimal place which fits between each pair of numbers.

Year 4: Week 5, Day 3

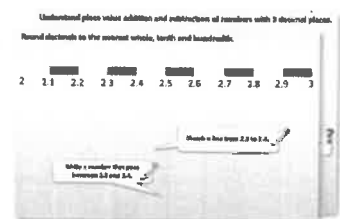
Add and subtract 0.1 and 1

Each day covers one maths topic. It should take you about 1 hour or just a little more.

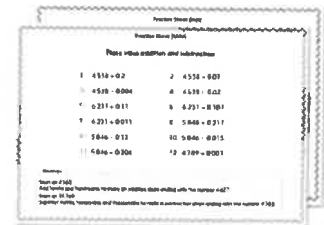
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OR start by carefully reading through the **Learning Reminders**.



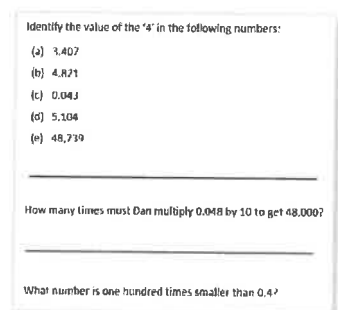
2. Tackle the questions on the **Practice Sheet**.
There might be a choice of either **Mild (easier)** or **Hot (harder)**!
Check the answers.



3. Finding it tricky? That's OK... have a go with a grown-up at **A Bit Stuck?**

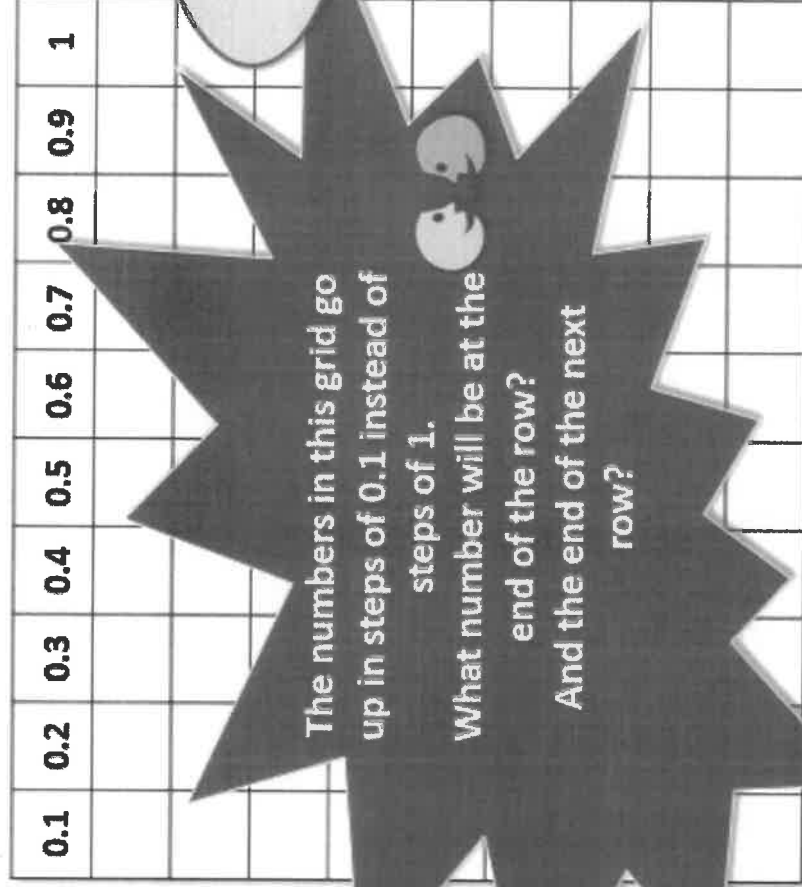


4. Have I mastered the topic? A few questions to **Check your understanding**.
Fold the page to hide the answers!



Learning Reminders

Add and subtract 0.1 and 1 to/from numbers with 1 decimal place.



Learning Reminders

Add and subtract 0.1 and 1 to/from numbers with 1 decimal place.

0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1
1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2
									3
									4
									5
									6
									7
									8
									9
									10

On a 1–100 grid, when we move down the grid we add 10. Going down, what do we add on this grid?

Learning reminders

Add and subtract 0.1 and 1 to/from numbers with 1 decimal place.

0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1
1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2
			2.4	2.5	2.6				3
				3.5					4
									5
									6
									7
									8
									9
									10

What numbers are to the right, left and below 2.5?

$$2.5 + 0.1 = 2.6$$

$$2.5 - 0.1 = 2.4$$

$$2.5 + 1 = 3.5$$

What numbers would go in the highlighted squares? How can you find them?

Check the answers below...

Answers
3.8 4.2 7.9

Practice Sheet Mild

Decimals practice

What numbers belong in each of the ringed squares?

[illegible]

Practice Sheet Hot

Decimals practice

Write the missing numbers in these sections taken from a 0.1 to 10 grid.

	4.5	

0.3		

	4.8	

		9.2

		3.9

		7.7

	5.7	

	2.8	

Challenge

Follow the same rules to complete these shapes:

		8.9

9.8		

Practice Sheet Answers

Decimals practice (Mild)

2.8,
3.2, 3.5
4.2, 4.4, 4.5, 5
5.5, 5.9, 6
6.5
7.3, 7.5, 7.6, 7.7, 7.8
8.5
9.1, 9.2, 9.3, 9.5

Decimals practice (Hot)

	3.5	
4.4	4.5	4.6
	5.5	

2.8	2.9	3
	3.9	
	4.9	

	0.3	
1.2	1.3	1.4
	2.3	

6.5	6.6	6.7
	7.6	7.7

	3.8	
4.7	4.8	4.9
	5.8	

	4.7	4.8
	5.7	
6.6	6.7	

	7.2	
8.1	8.2	8.3
	9.2	

1.8		
2.8	2.9	3
3.8		

Challenge

7.7	7.8		
	8.8	8.9	9
			10

9.8	9.9	10
10.8		11
11.8	11.9	12

A Bit Stuck?

Decimal sequences

What to do:

Place these decimals on the 0 to 5 number line:

0.7, 0.8, 0.9, 1.2, 1.4, 1.6, 2.3, 2.4, 2.6, 3.7, 3.8, 3.9, 4.1, 4.2.



Use your line to help complete each sequence:

0.5, 0.6, 0.7, _____, _____

1.2, 1.3, 1.4, _____, _____

2.2, 2.3, 2.4, _____, _____

_____, _____, 2.2, 2.3, 2.4

3.5, _____, 3.7, _____, 3.9, _____

_____, _____, 3.9, _____, _____, 4.2

Check your understanding: *Questions*

Complete each sequence of numbers.

3.7 3.8 3.9

1.3 1.2 1 0.8

0.8 1.8 4.8

9.3 9.2 8.8

10.6 9.6

Fold here to hide answers:

Check your understanding: *Answers*

Complete each sequence of numbers.

3.7 3.8 3.9 4 4.1

1.3 1.2 1.1 1 0.9 0.8

0.8 1.8 2.8 3.8 4.8 5.8

9.3 9.2 9.1 9 8.9 8.8

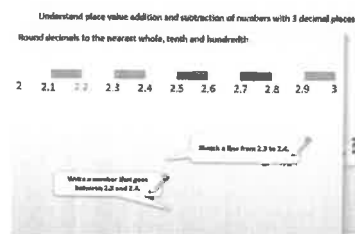
12.6 11.6 10.6 9.6 8.6

Year 4: Week 5, Day 4

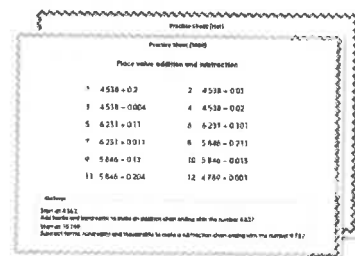
3-D shape (1)

Each day covers one maths topic. It should take you about 1 hour or just a little more.

1. Start by reading through the **Learning Reminders**. They come from our *PowerPoint* slides.



2. Tackle the questions on the **Practice Sheet**. There might be a choice of either **Mild (easier)** or **Hot (harder)**! Check the answers.



3. Finding it tricky? That's OK... have a go with a grown-up at **A Bit Stuck?**

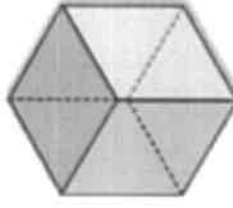


4. Think you've cracked it? Whizzed through the Practice Sheets? Have a go at the **Investigation...**

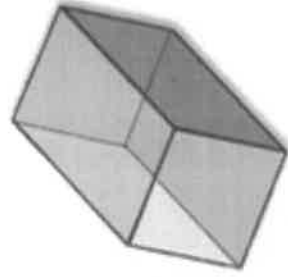
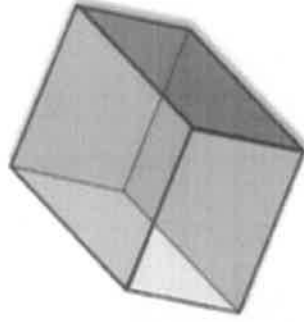
Learning Reminders

Describe and name 3-D shapes and identify their properties.

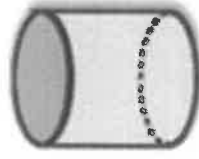
Let's revise the names of
3-D Shapes...



Cube



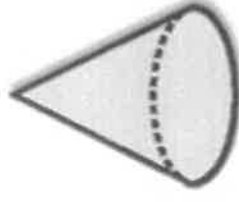
Cuboids



Cylinder



Sphere

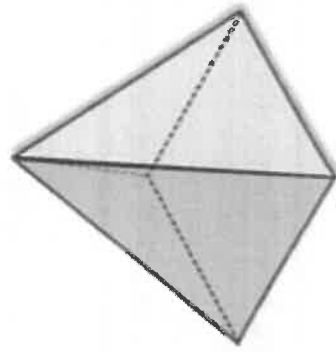


Cone

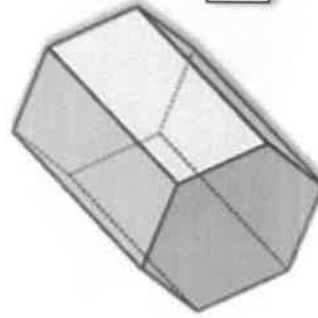
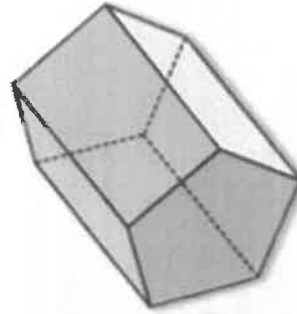
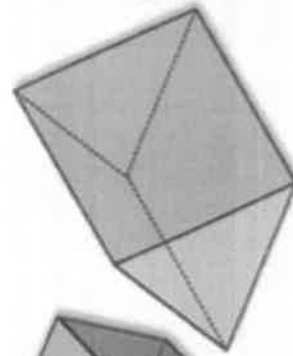
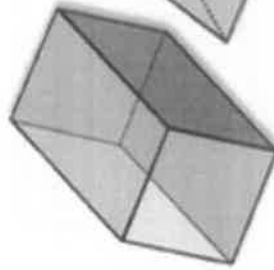
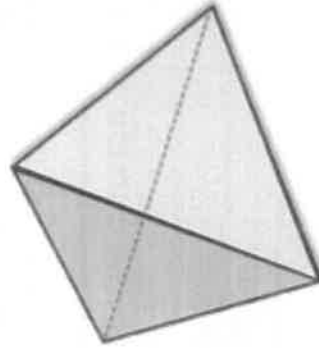
Learning Reminders

Describe and name 3-D shapes and identify their properties.

Let's revise the names of
3-D Shapes...



Pyramids

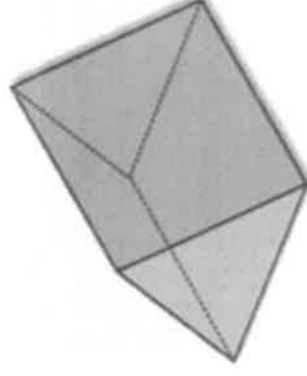


Prisms

Learning Reminders

Describe and name 3-D shapes and identify their properties.

Let's check some 3-D
shape vocabulary...



Polyhedron – a shape with polygon faces

Polyhedra have faces, edges and vertices

Faces – the 2-D shapes that make up the outside of a 3-D shape.

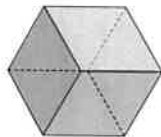
Edges – where the 2-D shapes meet along a joined side.

Vertices – the corners of the 3-D shape.

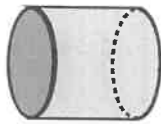
Practice Sheet Mild

Shape practice

Fill in the missing shape information.



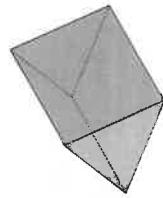
Name: _____
 Number of faces: _____
 Number of edges: 12
 Number of vertices: 8
 Shape of faces: 6 squares



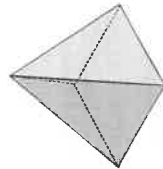
Name: _____
 Number of faces: 3
 Number of edges: _____
 Number of vertices: 0
 Shape of faces: 2 circles, 1 curved



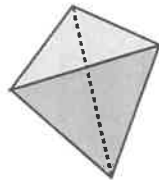
Name: cuboid
 Number of faces: 6
 Number of edges: 12
 Number of vertices: _____
 Shape of faces: _____



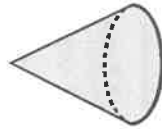
Name: triangular prism
 Number of faces: _____
 Number of edges: _____
 Number of vertices: 6
 Shape of faces: 2 triangles, 3 rectangles



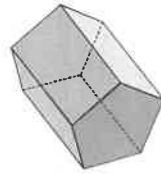
Name: _____
 Number of faces: _____
 Number of edges: _____
 Number of vertices: 5
 Shape of faces: _____



Name: _____
 Number of faces: 4
 Number of edges: 6
 Number of vertices: _____
 Shape of faces: _____



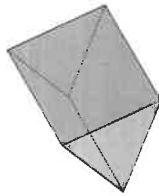
Name: _____
 Number of faces: _____
 Number of edges: 1
 Number of vertices: _____
 Shape of faces: _____



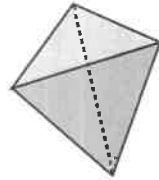
Name: pentagonal prism
 Number of faces: 7
 Number of edges: _____
 Number of vertices: _____
 Shape of faces: _____

Practice Sheet Hot Shape practice

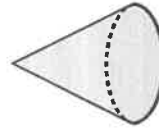
Fill in the missing shape information.



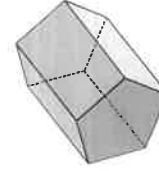
Name: triangular prism
 Number of faces: _____
 Number of edges: _____
 Number of vertices: 6
 Shape of faces: _____



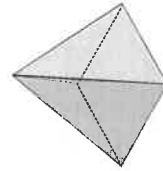
Name: _____
 Number of faces: 4
 Number of edges: 6
 Number of vertices: _____
 Shape of faces: _____



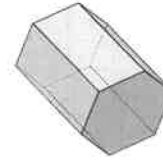
Name: _____
 Number of faces: _____
 Number of edges: 1
 Number of vertices: _____
 Shape of faces: _____



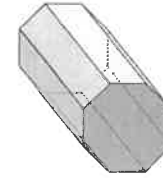
Name: pentagonal prism
 Number of faces: 7
 Number of edges: _____
 Number of vertices: _____
 Shape of faces: _____



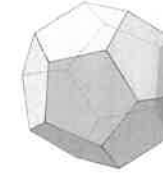
Name: _____
 Number of faces: _____
 Number of edges: _____
 Number of vertices: 5
 Shape of faces: _____



Name: _____
 Number of faces: _____
 Number of edges: _____
 Number of vertices: _____
 Shape of faces: 2 hexagons,
6 rectangles



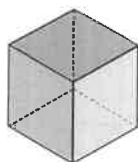
Name: octagonal prism
 Number of faces: _____
 Number of edges: _____
 Number of vertices: _____
 Shape of faces: _____



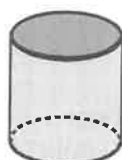
Name: dodecahedron
 Number of faces: _____
 Number of edges: _____
 Number of vertices: _____
 Shape of faces: _____

Practice Sheet Answers

Shape practice (Mild)



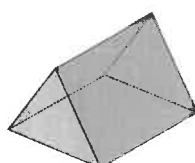
Name: cube
 Number of faces: 6
 Number of edges: 12
 Number of vertices: 8
 Shape of faces: 6 squares



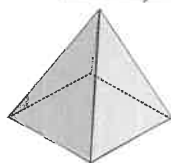
Name: cylinder
 Number of faces: 3
 Number of edges: 2
 Number of vertices: 0
 Shape of faces: 2 circles, 1 curved



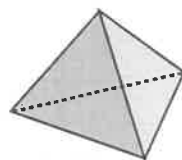
Name: cuboid
 Number of faces: 6
 Number of edges: 12
 Number of vertices: 8
 Shape of faces: 2 squares, 4 rectangles



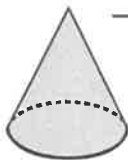
Name: triangular prism
 Number of faces: 5
 Number of edges: 9
 Number of vertices: 6
 Shape of faces: 2 triangles, 3 rectangles



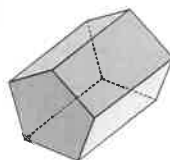
Name: square-based pyramid
 Number of faces: 5
 Number of edges: 8
 Number of vertices: 5
 Shape of faces: 1 square, 4 triangles



Name: pyramid
 Number of faces: 4
 Number of edges: 6
 Number of vertices: 4
 Shape of faces: 4 triangles

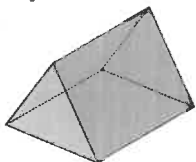


Name: cone
 Number of faces: 2
 Number of edges: 1
 Number of vertices: 1
 Shape of faces: 1 circle, 1 curved

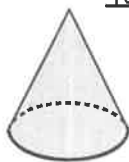


Name: pentagonal prism
 Number of faces: 7
 Number of edges: 15
 Number of vertices: 10
 Shape of faces: 2 pentagons, 5 rectangles

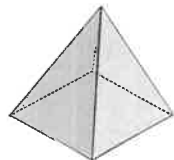
Shape practice (Hot)



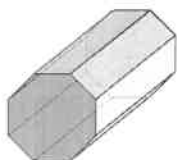
Name: triangular prism
 Number of faces: 5
 Number of edges: 9
 Number of vertices: 6
 Shape of faces: 2 triangles, 3 rectangles



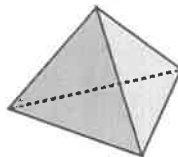
Name: cone
 Number of faces: 2
 Number of edges: 1
 Number of vertices: 1
 Shape of faces: 1 circle, 1 curved



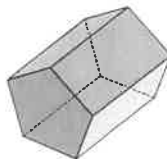
Name: square-based pyramid
 Number of faces: 5
 Number of edges: 8
 Number of vertices: 5
 Shape of faces: 1 square, 4 triangles



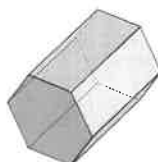
Name: octagonal prism
10
 Number of faces: 24
 Number of edges: 16
 Number of vertices: 2 octagons,
 Shape of faces: 8 rectangles



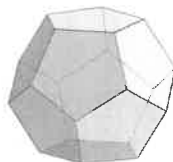
Name: pyramid
 Number of faces: 4
 Number of edges: 6
 Number of vertices: 4
 Shape of faces: 4 triangles



Name: pentagonal prism
 Number of faces: 7
 Number of edges: 15
 Number of vertices: 10
 Shape of faces: 2 pentagons, 5 rectangles



Name: hexagonal prism
 Number of faces: 8
 Number of edges: 18
 Number of vertices: 12
 Shape of faces: 2 hexagons,
6 rectangles



Name: dodecahedron
 Number of faces: 12
 Number of edges: 30
 Number of vertices: 20
 Shape of faces: 12 pentagons

A Bit Stuck? Cube nets

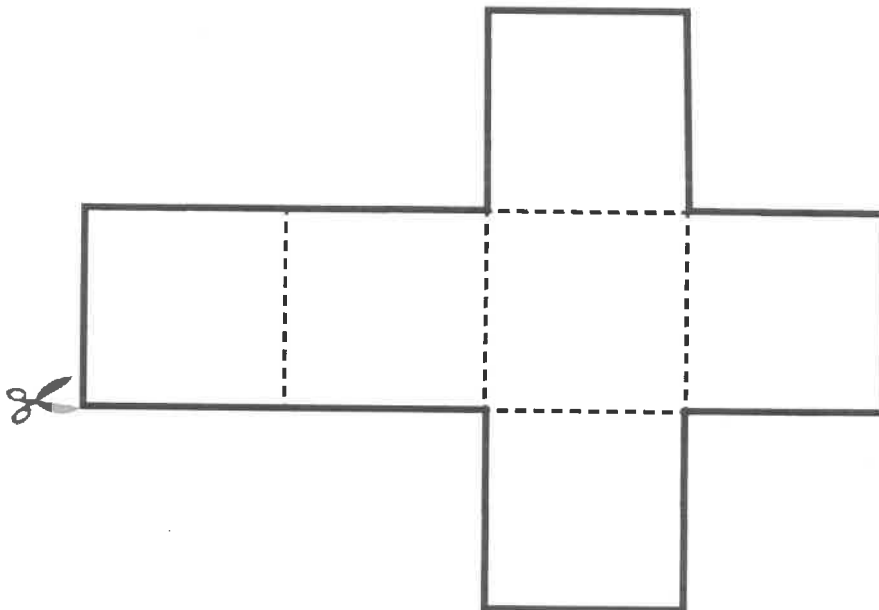
Things you will need:

- Scissors
- Sticky tape



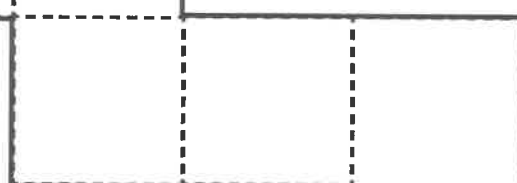
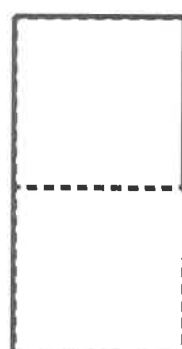
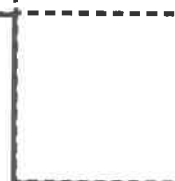
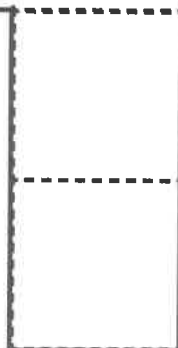
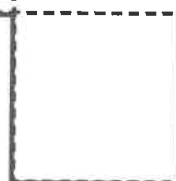
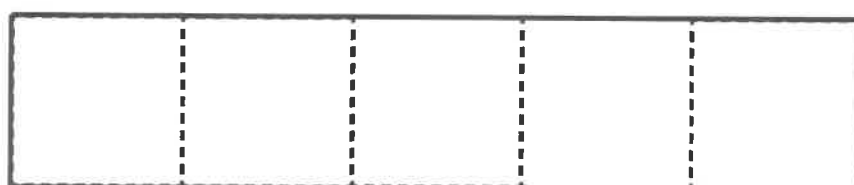
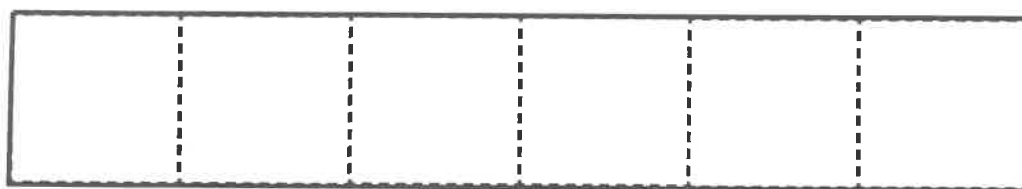
What to do:

- Cut out this shape.
It is called a net, a flat shape which folds to make a 3-D shape.
- Fold along the dotted lines, then use it to make a cube.
Tape it to hold it in shape.



- Which of the following shapes do you think are cube nets?
Cut them out and try to make them!

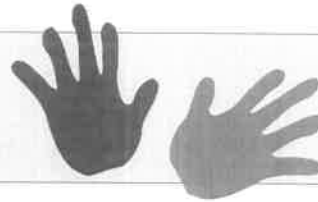
A Bit Stuck? Cube nets



Practical activity

Things you will need:

- Scissors
- Sticky tape

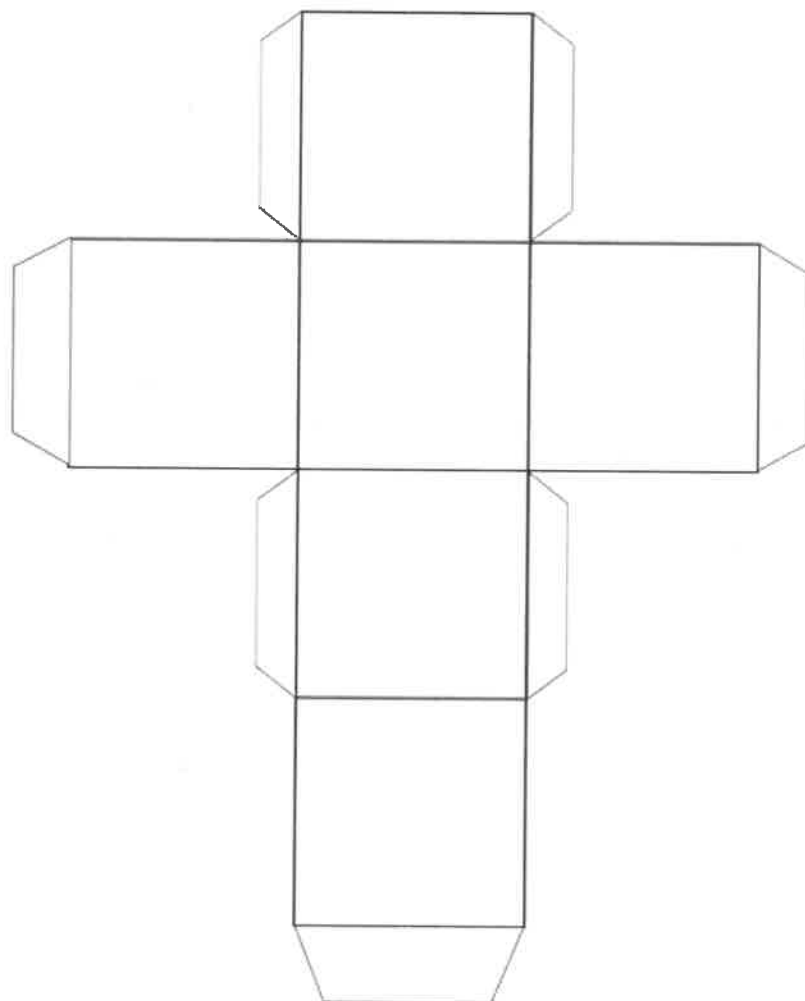


What to do:

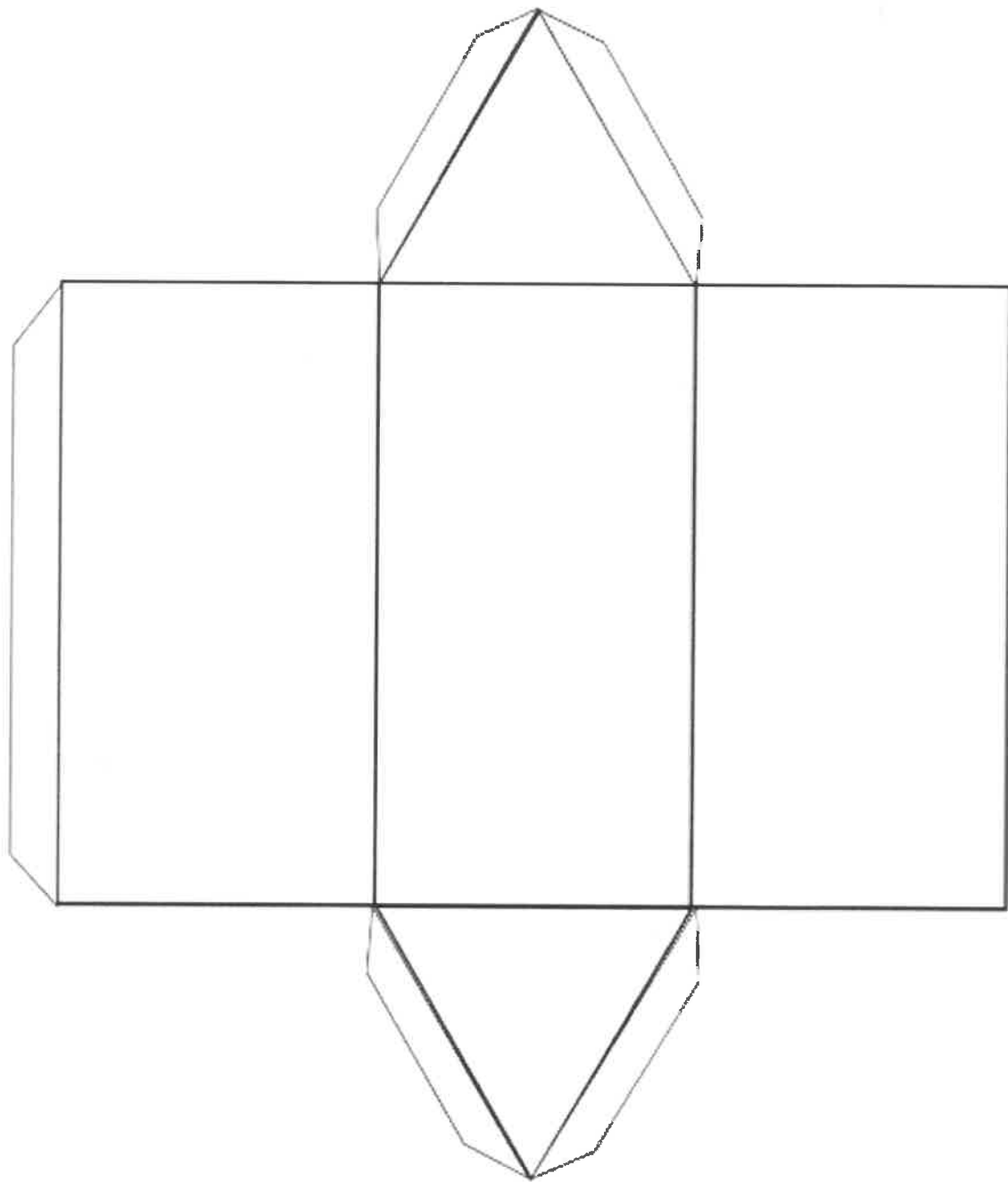
For this activity you will need a print-out of some of the nets, scissors and tape.

- Choose several of the nets to make into 3-D shapes.
Can you name each shape? Describe it to an adult.
- Choose a 3-D shape.
Can you make a different net that folds up to make the same shape?

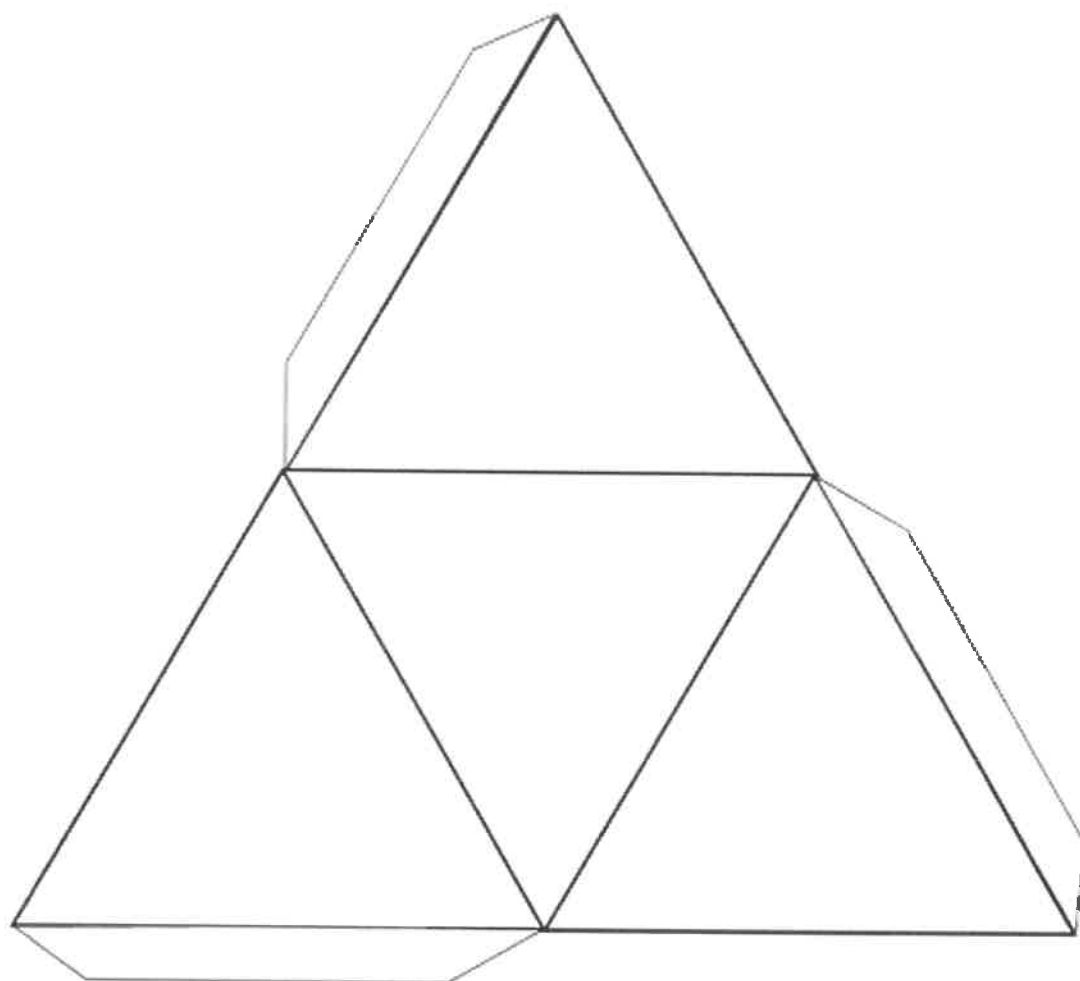
If you enjoy this, you can find some amazing nets at <https://www.polyhedra.net/en/model.php?name=octahedron>



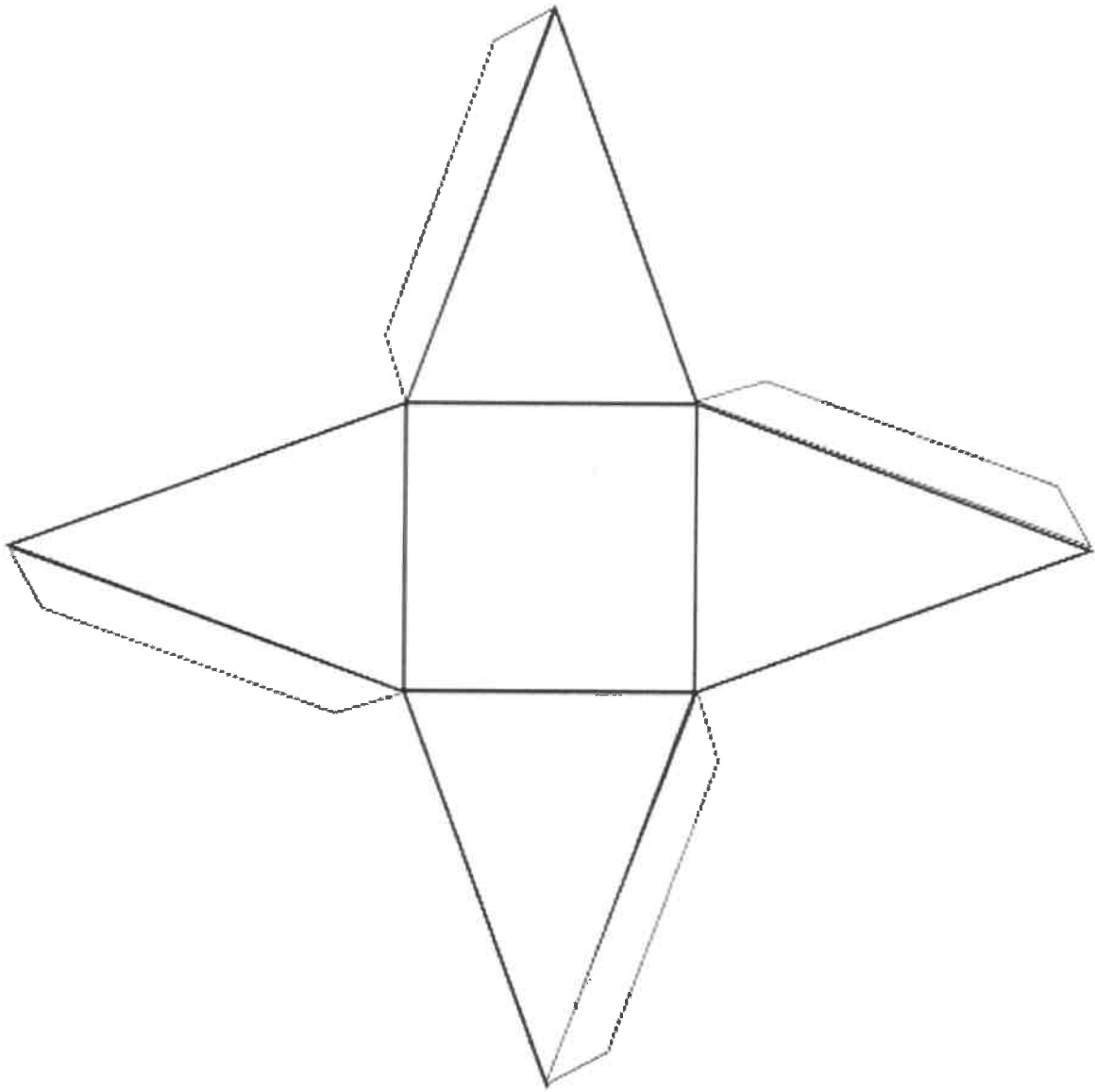
Practical activity



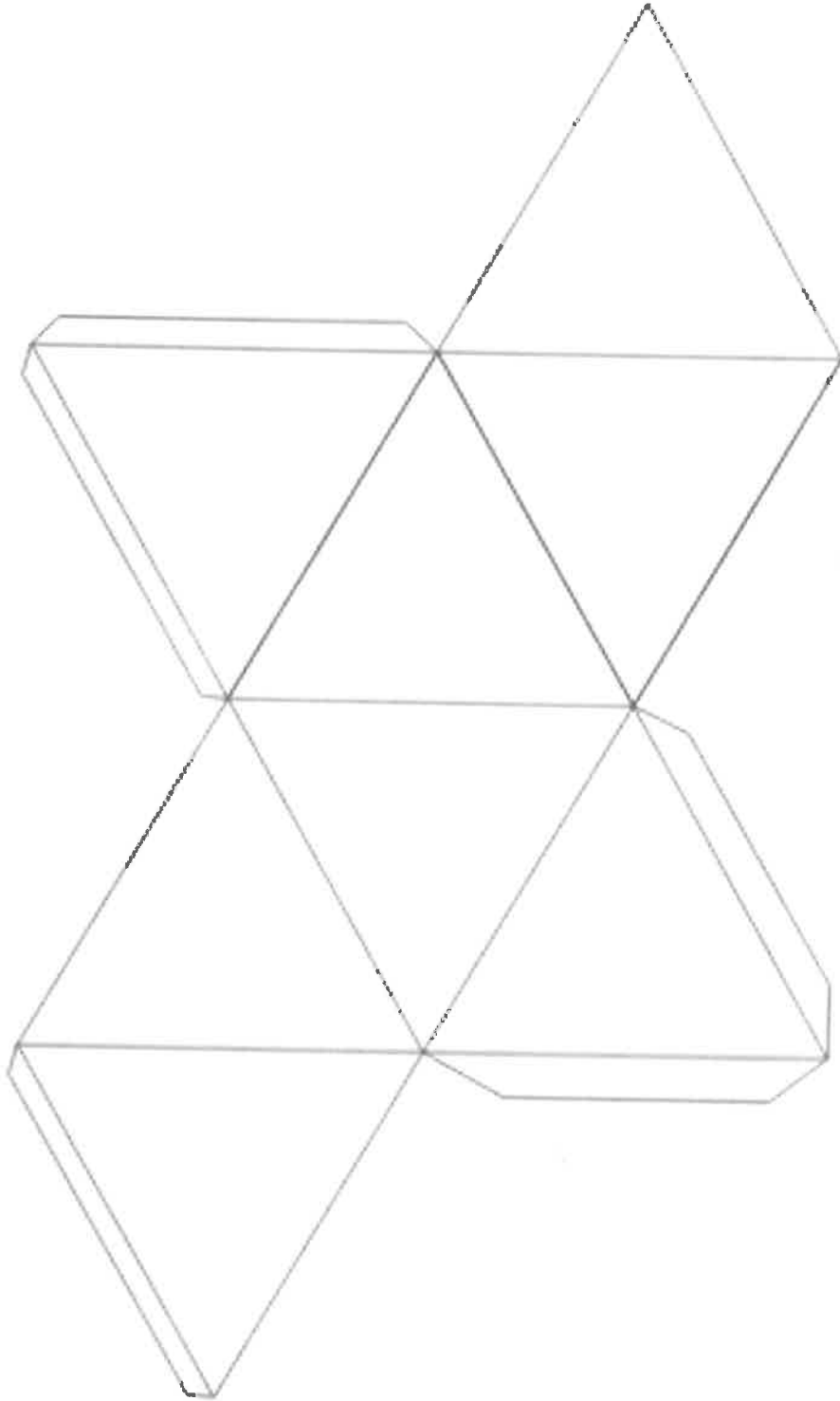
Practical activity



Practical activity



Practical activity

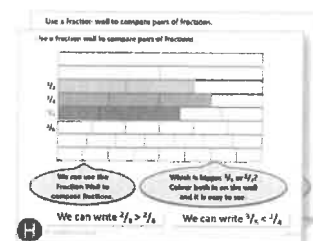


Year 4: Week 5, Day 5

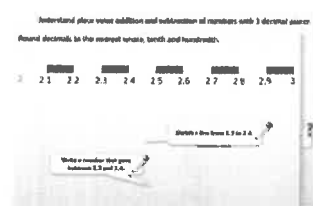
Shape (2)

Each day covers one maths topic. It should take you about 1 hour or just a little more.

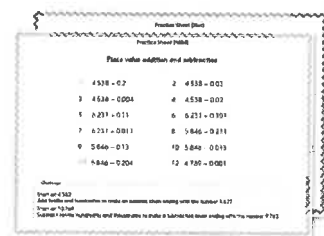
1. If possible, watch the PowerPoint presentation with a teacher or another grown-up.



OR start by carefully reading through the Learning Reminders.



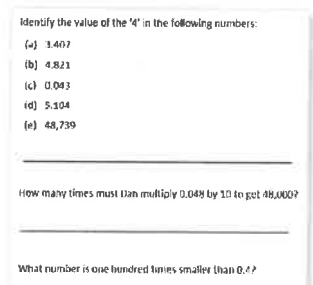
2. Tackle the questions on the Practice Sheet. There might be a choice of either Mild (easier) or Hot (harder)! Check the answers.



3. Finding it tricky? That's OK... have a go with a grown-up at A Bit Stuck?

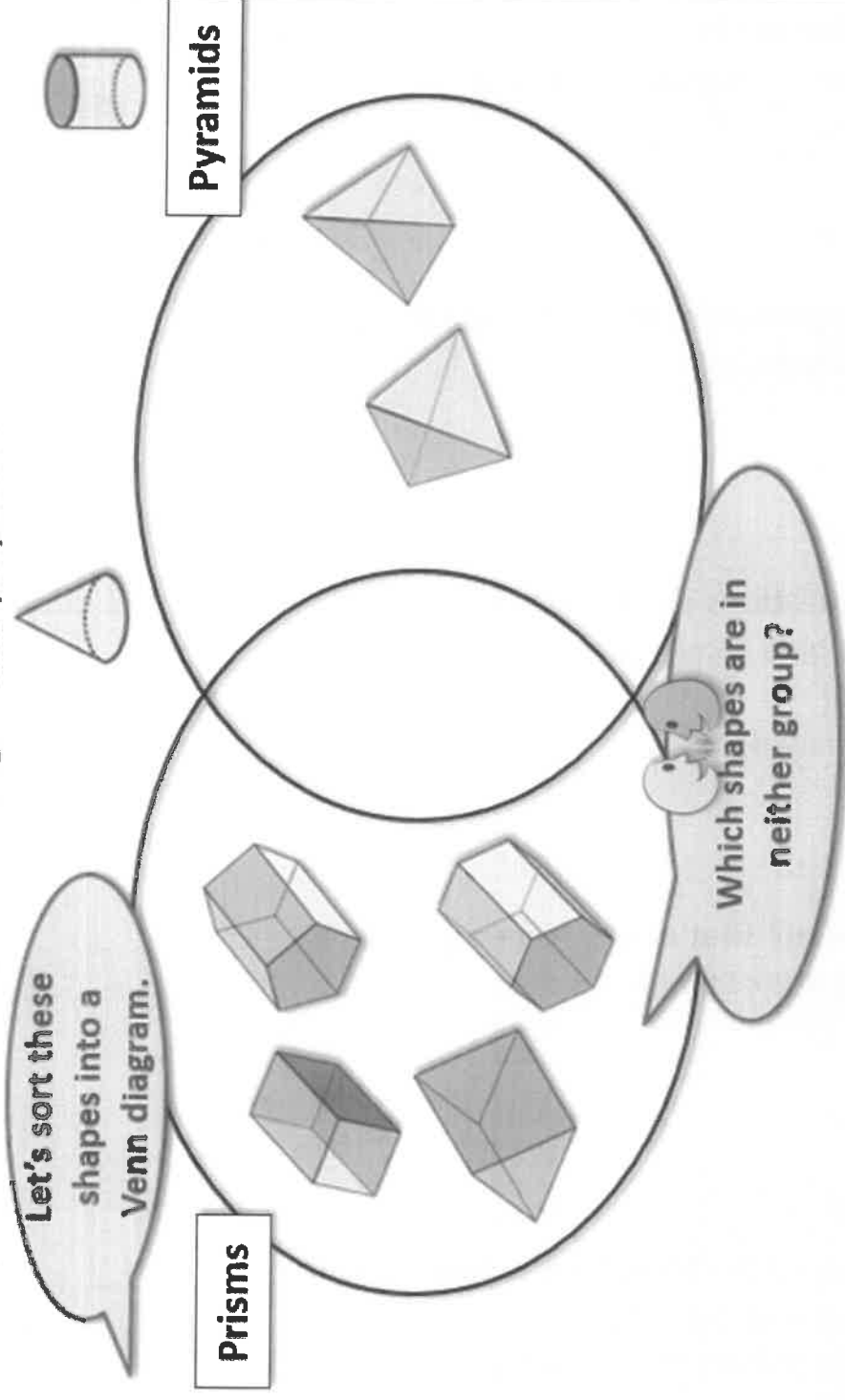


4. Have I mastered the topic? A few questions to Check your understanding. Fold the page to hide the answers!

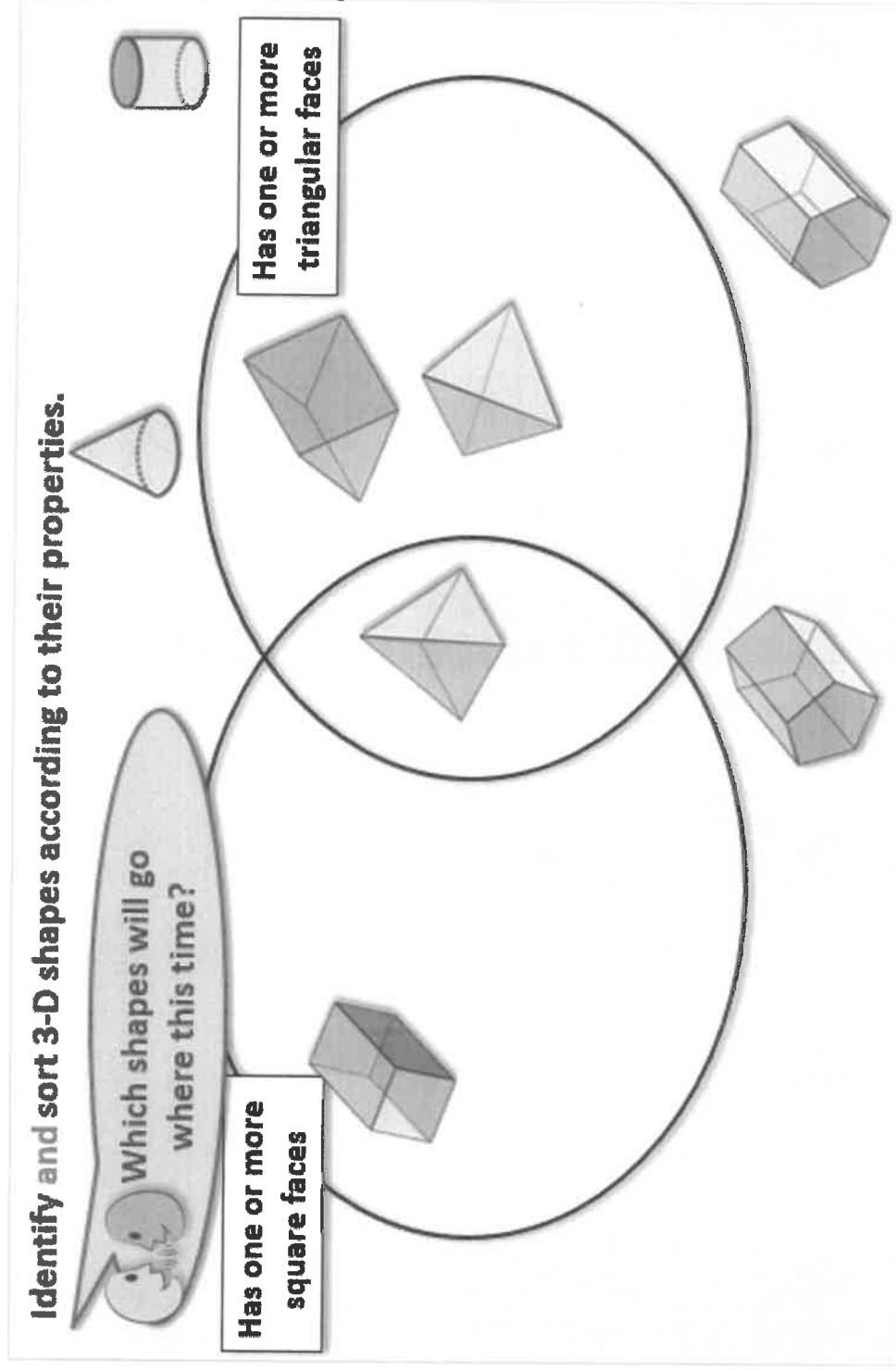


Learning Reminders

Identify and sort 3-D shapes according to their properties.



Learning Reminders

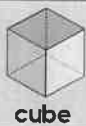
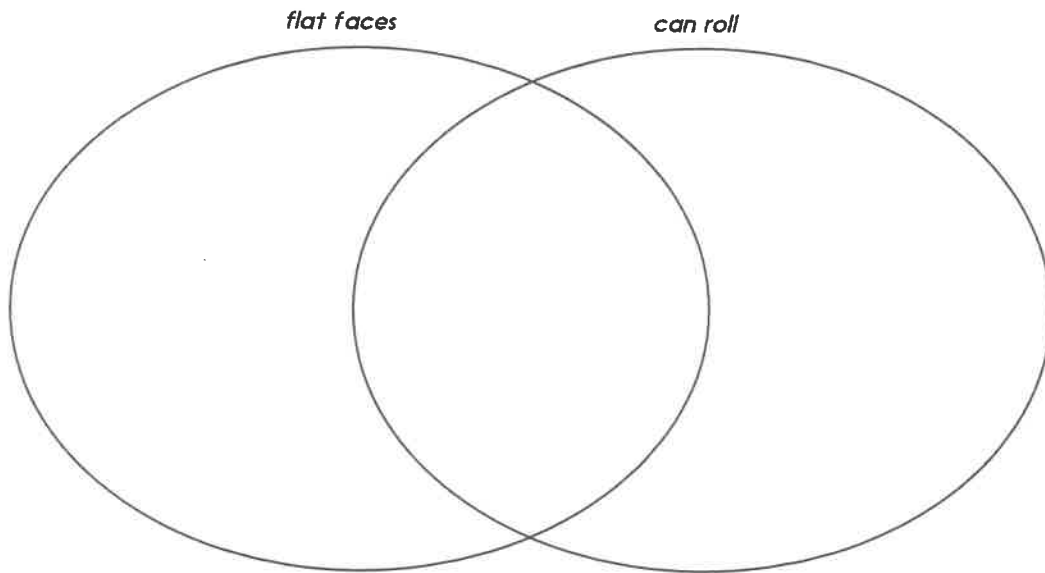


Practice Sheet Mild

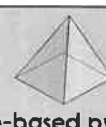
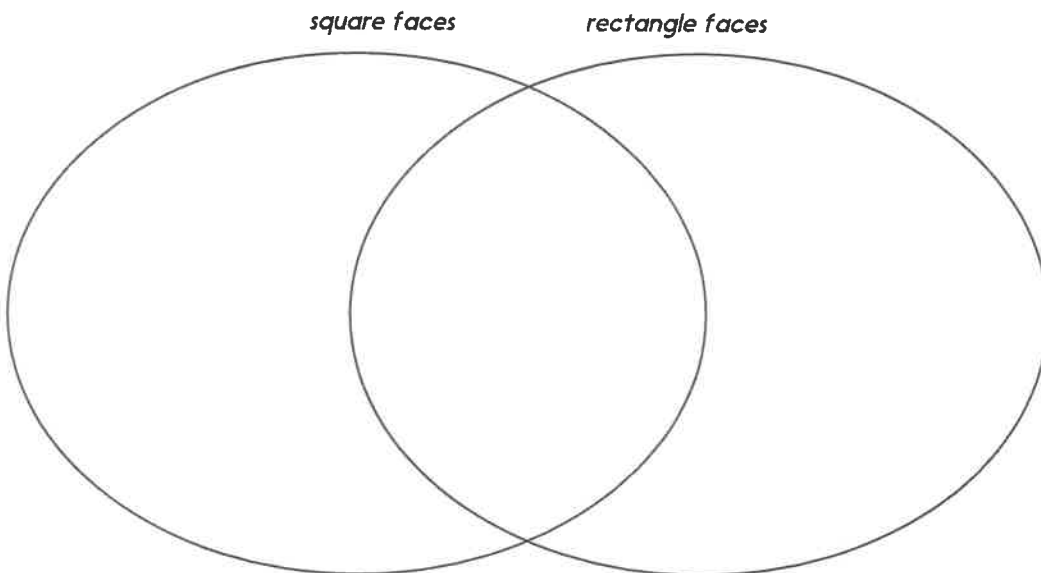
Shape practice

Write the shape names in the right place in each Venn diagram.

1.



2.



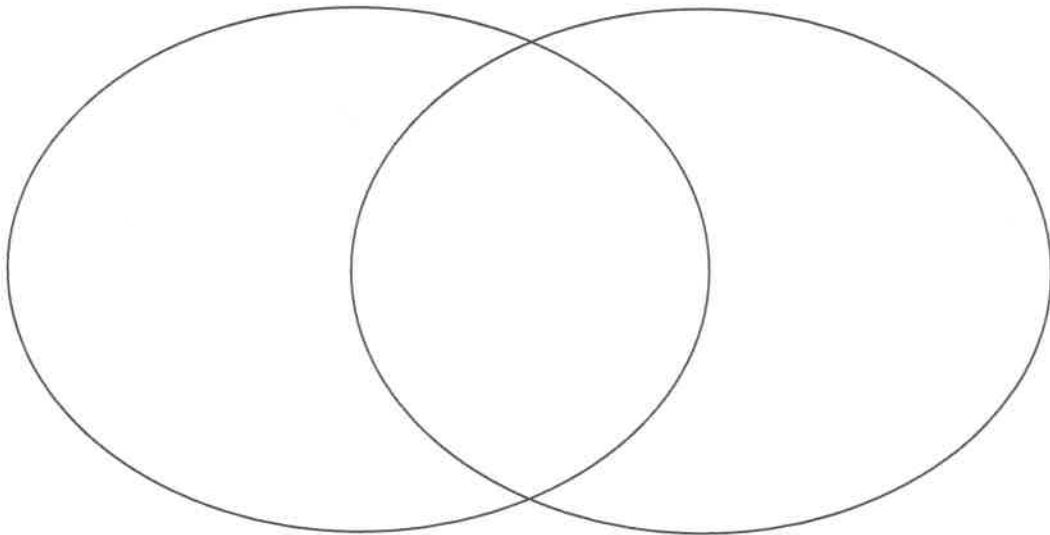
Practice Sheet Mild

Shape practice

3.

rectangle faces

6 faces



hexagonal prism



cuboid



triangular prism



cube

Challenge

Create your own Venn diagram to sort these shapes: cone, cylinder, sphere, hemisphere.

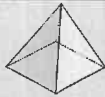
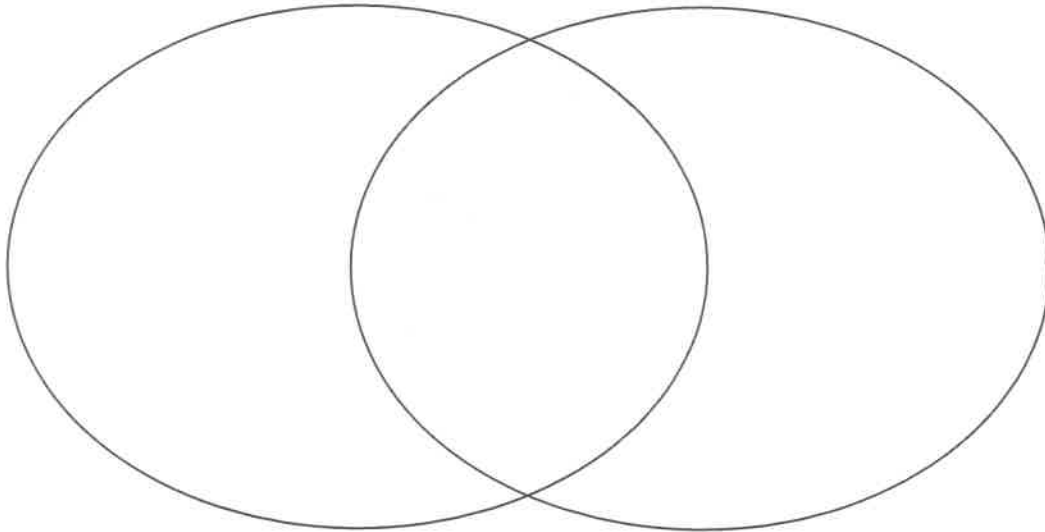
Practice Sheet Hot Shape practice

Write the shape names in the right place in each Venn diagram.

1.

triangle faces

odd number of faces



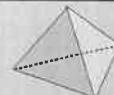
square-based pyramid



pentagonal prism



triangular prism

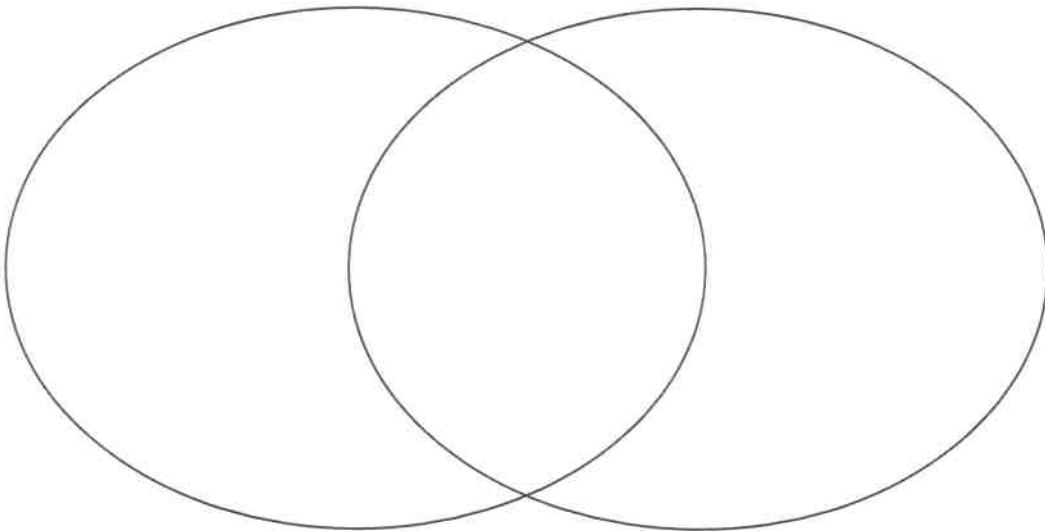


tetrahedron

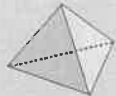
2.

even number of vertices

even number of edges



triangular prism



tetrahedron



square-based pyramid



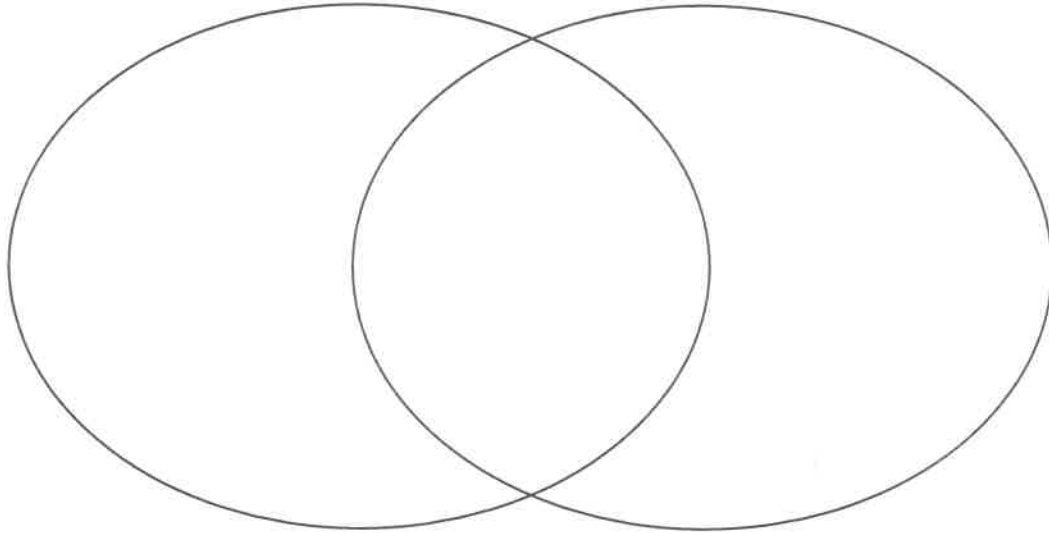
pentagonal prism

Practice Sheet Hot Shape practice

3.

triangle faces

6 or more vertices



triangular prism



tetrahedron



square-based pyramid

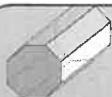
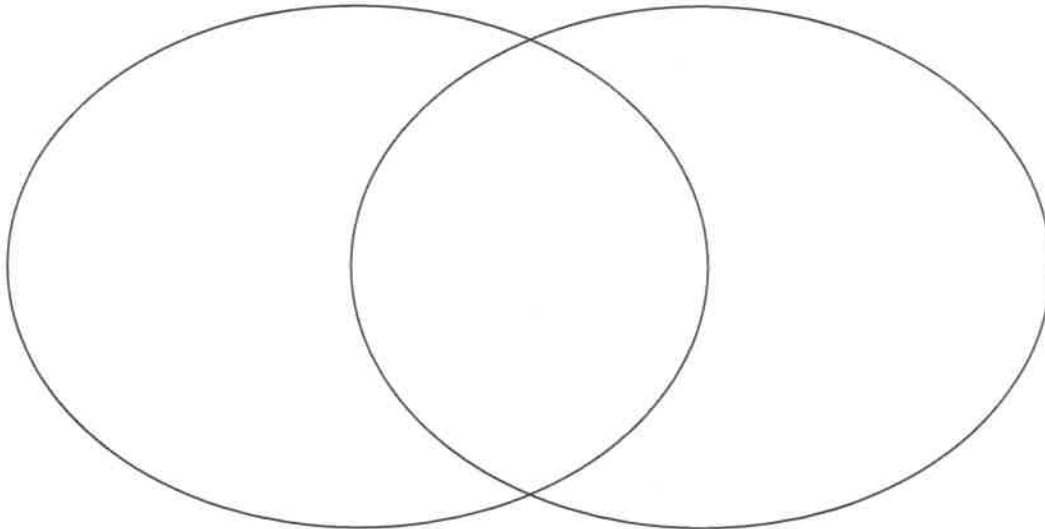


cube

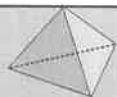
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triangle faces

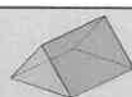
prism



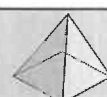
octagonal prism



tetrahedron



triangular prism

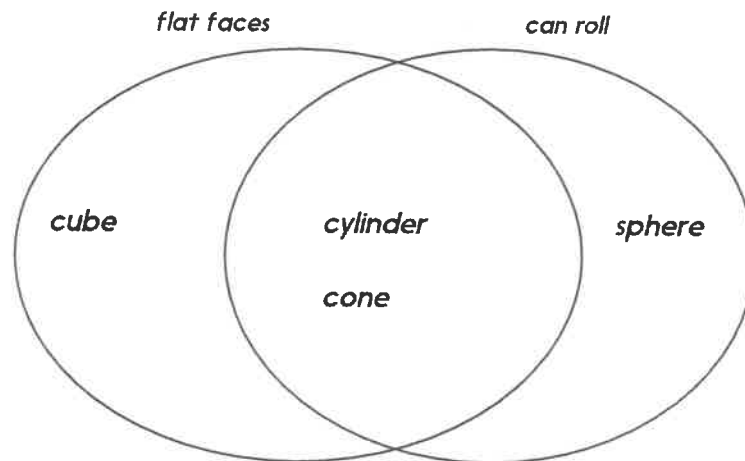


square-based pyramid

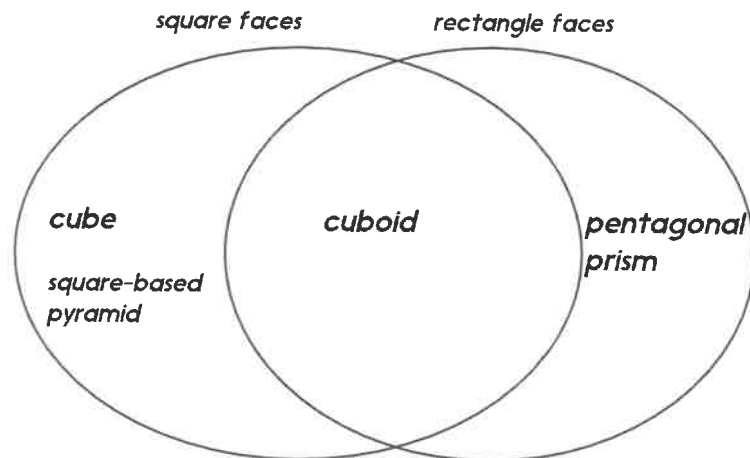
Practice Sheet Answers

Shape practice (Mild)

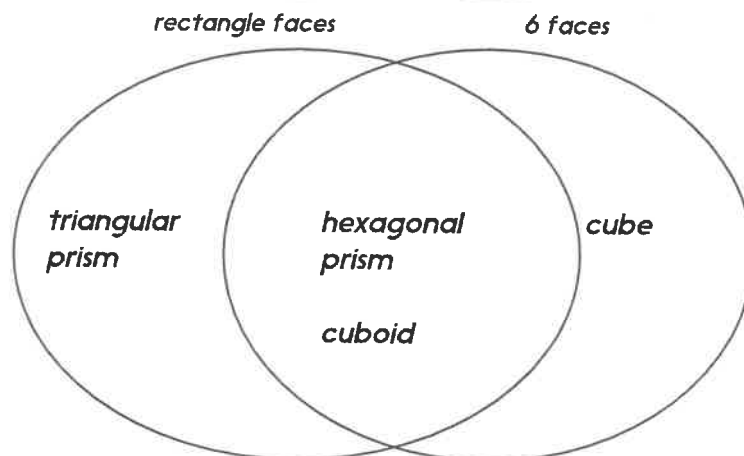
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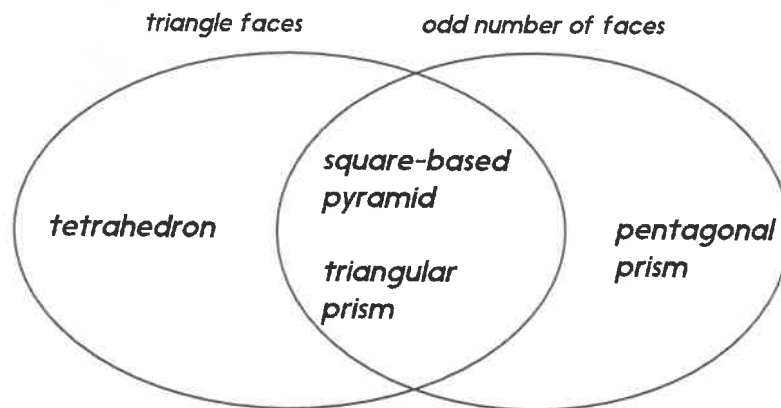


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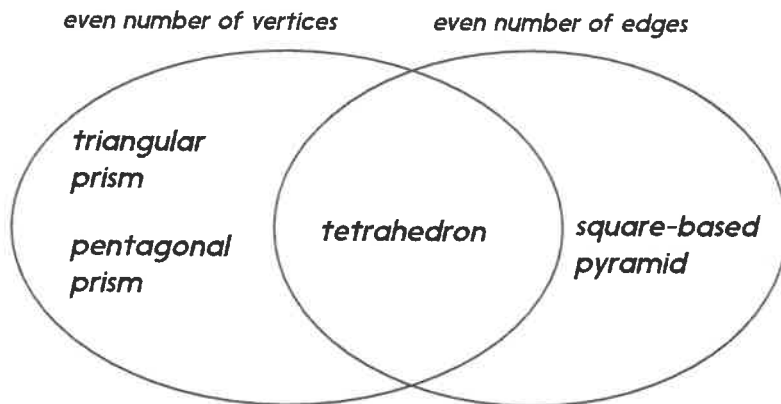


Shape practice (Hot)

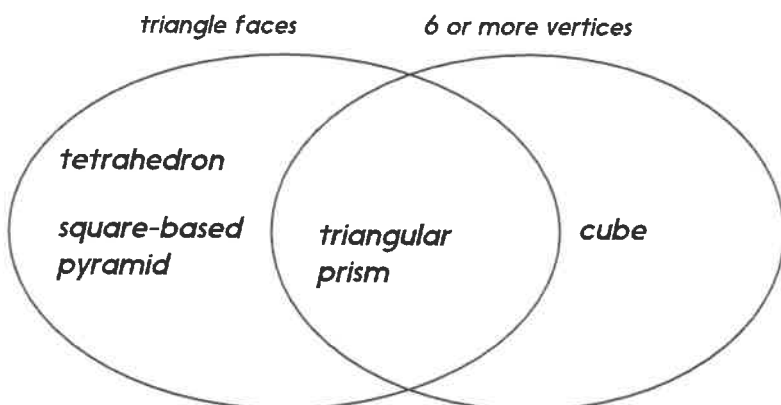
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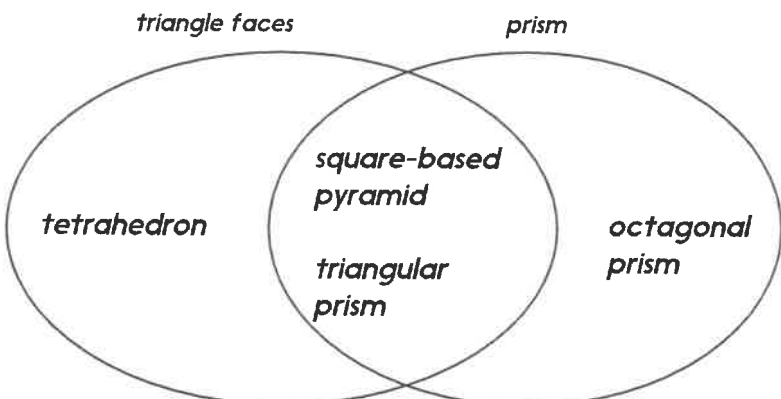
2.



3.



4.



A Bit Stuck? Packaging

Things you will need:

- Different items of packaging
(search the kitchen cupboards or recycling bin!)
- Sticky notes



What to do:

- Find at least 5 different shape packets/boxes/tins,
e.g. cube, different cuboids, different cylinders.
You may be lucky and be able to find a cone, a prism or a pyramid!
- Choose a shape.
Write its name and a description of its properties on a sticky note and stick on the box.
- Repeat until all boxes have descriptions.
- How could you sort the shapes into two sets?
- Is there another way of sorting them?
- Which shape(s) are commonly used for food packaging?
Why do you think that is?
- Which 3-D shapes are less common?
Why might that be?

Check your understanding:

Questions

Create a net for a tetrahedron.

Fold it up to ensure that it works. Is this the only way to draw a net for a tetrahedron?

Imagine a 3 by 3 by 3 cube hanging in front of you *with just the front face facing you...*

The cube is made up of three 3 by 3 layers, that is 27, small cubes.

You drill a hole through the four corner cubes, which are facing you, all the way through to the back.

A friend looks down on the cube, from above, and they also drill four holes through their four corner cubes all the way through to the bottom.

You and your friend then examine all the 27 small cubes.

How many small cubes will then have holes drilled in them?

Adapted from '[Start cube drilling](https://nrich.maths.org)' from nrich.maths.org

Find out what a dodecahedron is. Look for pictures on the internet, then write a description of it - using all your best mathematical shape language – for someone who has never seen one...

Answers on next sheet

Check your understanding:

Answers

Create a net for a tetrahedron.

Fold it up to ensure that it works. Is this the only way to draw a net for a tetrahedron?

The net of a tetrahedron consists of 4 equilateral triangles. For them to fold up correctly they must be either arranged as a larger equilateral triangle or in a line:



Imagine a 3 by 3 by 3 cube hanging in front of you *with just the front face facing you...*

The cube is made up of three 3 by 3 layers, that is 27, small cubes.

You drill a hole through the four corner cubes, which are facing you, all the way through to the back.

A friend looks down on the cube, from above, and they also drill four holes through their four corner cubes all the way through to the bottom.

You and your friend then examine all the 27 small cubes.

How many small cubes will then have holes drilled in them?

Adapted from 'Start cube drilling' from nrich.maths.org

16 – Each person has drilled through 12 cubes but 8 of those (the corner ones) are in common. There are 4 cubes unique to each person.

An alternative way of visualising this is to think about which cubes have not been drilled through (11) and subtracting from 27.

Find out what a dodecahedron is. Look for pictures on the internet, then write a description of it - using all your best mathematical shape language – for someone who has never seen one...

A dodecahedron is a 3-D solid with 12 regular pentagon faces. It can be used as a 12-sided dice.

What to do today

IMPORTANT Parent or Carer – Read this page with your child and check that you are happy with what they have to do and any weblinks or use of internet.

1. Listen to a story

- Listen to the reading of *The Great Kapok Tree* by Lynne Cherry.
<https://www.youtube.com/watch?v=J1Teb-jTyI>
- What do you like about this story? Is there anything that you dislike?
What patterns can you spot?
- Read the First Page. What type of words are in bold on this page?

2. Revise verbs

- Use the Revision Card to remind yourself about verbs.
- Read the Second Page. Highlight the verbs that you can find on this page.

3. Now for some writing

- Complete *Changing Verbs*. Write the verbs in the present tense and think of synonyms (other words that mean something similar).
- Now write some sentences that use these verbs and synonyms. Try a mix of sentences in the present and past tense.

Well done. Share your sentences with a grown-up, who can check that they make sense. You can check your Second Page highlighting at the end of this pack.

Try the Fun-Time Extras

- Find out more about Kapok trees. You could start by watching this video:
<https://www.youtube.com/watch?v=nCftbqisA3A>
- Start a list of unusual verbs. Look in your reading books or ask somebody in your house.



First Page

Two men **walked** into the rain forest.

Moments before the forest had been

alive with the sounds of

squawking birds and howling



monkeys. Now all was quiet as the

creatures **watched** the two men and

wondered why they had come.

The larger man **stopped** and **pointed**
to a great Kapok Tree. Then he **left**.

Revision Card - Verbs

Verbs tell us that someone or something is doing, feeling or being.

The men arrived.

The creatures worried.

The forest is silent.



Verbs have tense. They tell us **when** the action happened.

In the past

The men arrived in the forest.

We watched.

The man slept.

In the present

The men arrive in the forest.

We watch.

The man sleeps.

Second Page

The smaller man took the axe he carried and struck the trunk of the tree. Whack! Whack! Whack!

The sounds of the blows rang through the forest.

The wood of the tree was very hard. Chop! Chop!

Chop! The man wiped off the sweat that ran down

his face and neck.

Whack! Chop!

Whack! Chop!

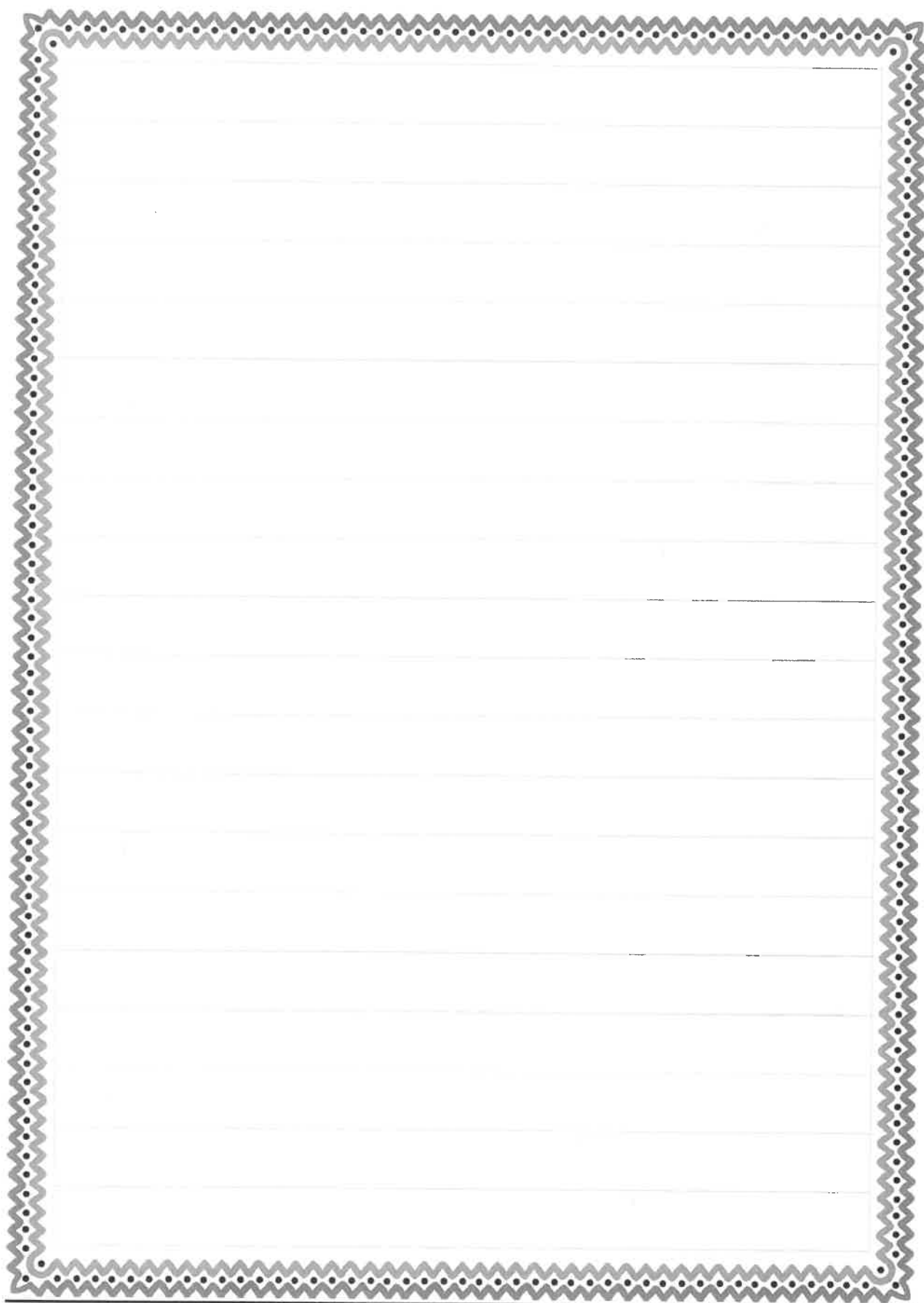


Soon the man grew tired. He sat down to rest at the foot of the great Kapok tree. Before he knew it, the heat and hum of the forest lulled him to sleep.

Changing verbs

Past tense	Present tense	Synonyms
he took	takes	grabs, picks-up, grasps
he carried	carries	
he struck		
sounds rang		
it was		
he wiped		
that ran		
he grew		
he sat		
he knew		
heat lulled him		

Sentences



A large rectangular box with a decorative border of small black dots and a zigzag line. Inside the box are 20 horizontal lines for writing sentences.

Second Page – Verbs Highlighted

The smaller man took the axe he carried and struck the trunk of the tree. Whack! Whack! Whack! The sounds of the blows rang through the forest. The wood of the tree was very hard. Chop! Chop! Chop! The man wiped off the sweat that ran down his face and neck. Whack! Chop! Whack! Chop!

Soon the man grew tired. He sat down to rest at the foot of the great Kapok tree. Before he knew it, the heat and hum of the forest lulled him to sleep.

What to do today

IMPORTANT Parent or Carer – Read this page with your child and check that you are happy with what they have to do and any weblinks or use of internet.

If you didn't watch this yesterday, you need to listen to it today: The Great Kapok Tree by Lynne Cherry. <https://www.youtube.com/watch?v=J1Teb- iTyI>

1. Read what the animals said to the man in The Great Kapok Tree.

- Read *Talking Animals*.
- Which animal is the most persuasive in your opinion? Why?

2. Revise the Present Perfect Form

- Use the **PowerPoint** about the present perfect form and listen to the teaching. If this is not possible, remind yourself using the *Revision Card*.
- Complete *What might they say?* Choose verbs to match the animals and then write a sentence in the present perfect form.

3. Now for some writing

- Read *Rainforest Animals 1*. Write what these animals might say to the man as he slept. Try to include a sentence in the present perfect form.
- Challenge yourself to complete *Rainforest Animals 2*.

Well done. Share your writing with a grown-up. Show them the sentences that you have written in the present perfect form.

Try the Fun-Time Extras

- Research and write about some of the rainforest animals in this pack.
- Find out about canopies in the rainforest and make a labelled diagram to explain how they work.

Talking Animals



The **boa constrictor** is a large snake that constricts its prey.
 “Senhor, this tree is a tree of miracles. It is my home, where generations of my ancestors have lived. Do not chop it down.”



This type of **bee** stores pollen and honey and has no sting.
 “Senhor, my hive is in this Kapok tree, and I fly from tree to tree and flower to flower collecting pollen. In this way I pollinate the trees and flowers throughout the rain forest. You see, all living things depend on one another.”



Squirrel monkeys can live in massive groups, of up to 500 members!
 “Senhor, we have seen the ways of man. You chop down one tree, then come back for another and another. The roots of these great trees will wither and die, and there will be nothing left to hold the earth in place. When the heavy rains come, the soil will be washed away and the forest will become a desert.”



Toucans mostly eat fruit, lizards and small insects.
 “Senhor! You must not cut down this tree. We have flown over the rain forest and seen what happens once you begin to chop down the trees. Many people settle on the land. They set fires to clear the underbrush, and soon the forest disappears. Where once there was life and beauty only black and smouldering ruins remain.”



The **red-eyed tree frog** is threatened by forestry and pollution.
 “Senhor, a ruined rain forest means ruined lives... many ruined lives. You will leave many of us homeless if you chop down this great Kapok tree.”



The **jaguar** has a very powerful bite compared to the other big cats.

"Senhor, the Kapok tree is home to many birds and animals. If you cut it down, where will I find my dinner?"



Tree porcupines are much lighter than other kinds of porcupine.

"Senhor, do you know what we animals and humans need in order to live? Oxygen. And, Senhor, do you know what trees produce? Oxygen! If you cut down the forests you will destroy that which gives us all life."



This **anteater** has very strong front claws used to break insect nests.

"Senhor, you are chopping down this tree with no thought for the future. And surely you know that what happens tomorrow depends on what you do today. The big man tells you to chop down a beautiful tree. He does not think of his own children, who tomorrow must live in a world without trees."



Three-toed sloths are the size of a big cat and are agile swimmers.

"Senhor, how much is beauty worth? Can you live without it? If you destroy the beauty of the rain forest, on what would you feast your eyes?"

Present Perfect Form – Revision Card

Present Perfect Form

The present perfect form is created by using **two** verbs: the present form of 'have' with the past participle of the main verb.

The monkeys have come to the man.

The man has not woken.

They have chattered to him.



present tense form of
have (helping verb)

past participle of main verb
(completed/perfected)



Present perfect form and past tense



Past tense

The birds flew over the forest.

They cleared the underbrush.

People settled on the land.

Present Perfect form

The birds have flown over the forest.

They have cleared the underbrush.

People have settled on the land.



Perfect form

The perfect form of the past tense suggests that a **past action is still affecting the present.**

Past tense

The animals persuaded me.

I dreamt such a dream.

I changed my mind.

Perfect form

The animals *have* persuaded me.

I *have* dreamt such a dream.

I *have* changed my mind.

The animals **persuaded** me and I am *still* persuaded.

I **dreamt** and I am *still* thinking about my dream.

I **changed** my mind and it is *still* changed.

What might they say?

animal	verb	Sentence in present perfect form
frogs	sheltered	We <u>have</u> sheltered under the cover of the Kapok Tree.
jaguar	hunted	We have hunted ...
porcupines	shuffled	
anteaters		
sloth		
child		

Rainforest Animals 1



The Brazilian tapir is found near water and sleeps on riverbanks.



The blue morpho butterfly has enormous wings, around 15 cm across!



The ocelot is nocturnal. It will fight fiercely to defend its territory.

Rainforest Animals 2



The moustached tamarin eats fruits, tree gum and insects.



Coatis use their long tail for balance and signalling.



The red-legged honeycreeper builds a small cup nest in a tree.

What to do today

IMPORTANT Parent or Carer – Read this page with your child and check that you are happy with what they have to do and any weblinks or use of internet.

1. Look closely at an illustration.

- Look at *Illustration 1*.
- What can you notice in the picture? Try to make a note about ten things that you can see.
- Where in the story does this come? How would you explain it to somebody else in three sentences?
- Look at *Illustration Verbs*. Can you make up sentences about the illustration that use these verbs? Speak your sentences out loud.

2. Practise Present Perfect Form

- Use the *Revision Card* to remind yourself about the present perfect form.
- Complete the *Cloze Activity* and then read out loud the sentences you have written. They are in the present perfect form.

3. Now for some writing.

- Imagine that the man is writing to his family to explain why he has left his job. What will he say to them?
- Write a *Postcard* from the man to his family. Try to include at least one sentence in the present perfect form.

Well done. Share your writing with a grown-up. Show them the sentence that you have written in the present perfect form.

Try the Fun-Time Extras

- Design the picture side of the man's postcard.
- Write a postcard to send to somebody that you haven't seen for a while.

Illustration 1



Illustration Verbs

realised

heard

listened

thought

understood

slept

dreamt

decided

chosen

dropped

Present Perfect Form – Revision Card

Present Perfect Form

The present perfect form is created by using **two** verbs: the present form of 'have' with the past participle of the main verb.

The monkeys have come to the man.

The man has not woken.

They have chattered to him.



present tense form of
have (helping verb)

past participle of main verb
(completed/perfected)

Present perfect form and past tense



Past tense

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They cleared the underbrush.

People settled on the land.

Present Perfect form

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Perfect form



The perfect form of the past tense suggests that a **past action is still affecting the present.**

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I *have* changed my mind.

The animals **persuaded** me and I am *still* persuaded.

I **dreamt** and I am *still* thinking about my dream.

I **changed** my mind and it is *still* changed.

Cloze Activity

The man has _____ that he should protect the forest.

He has _____ the animals speak to him

He has _____ to the child.

He has _____ about the things he heard.

He has _____ the message of the animals.

The man has _____ in the rainforest.

He has _____ an amazing dream!

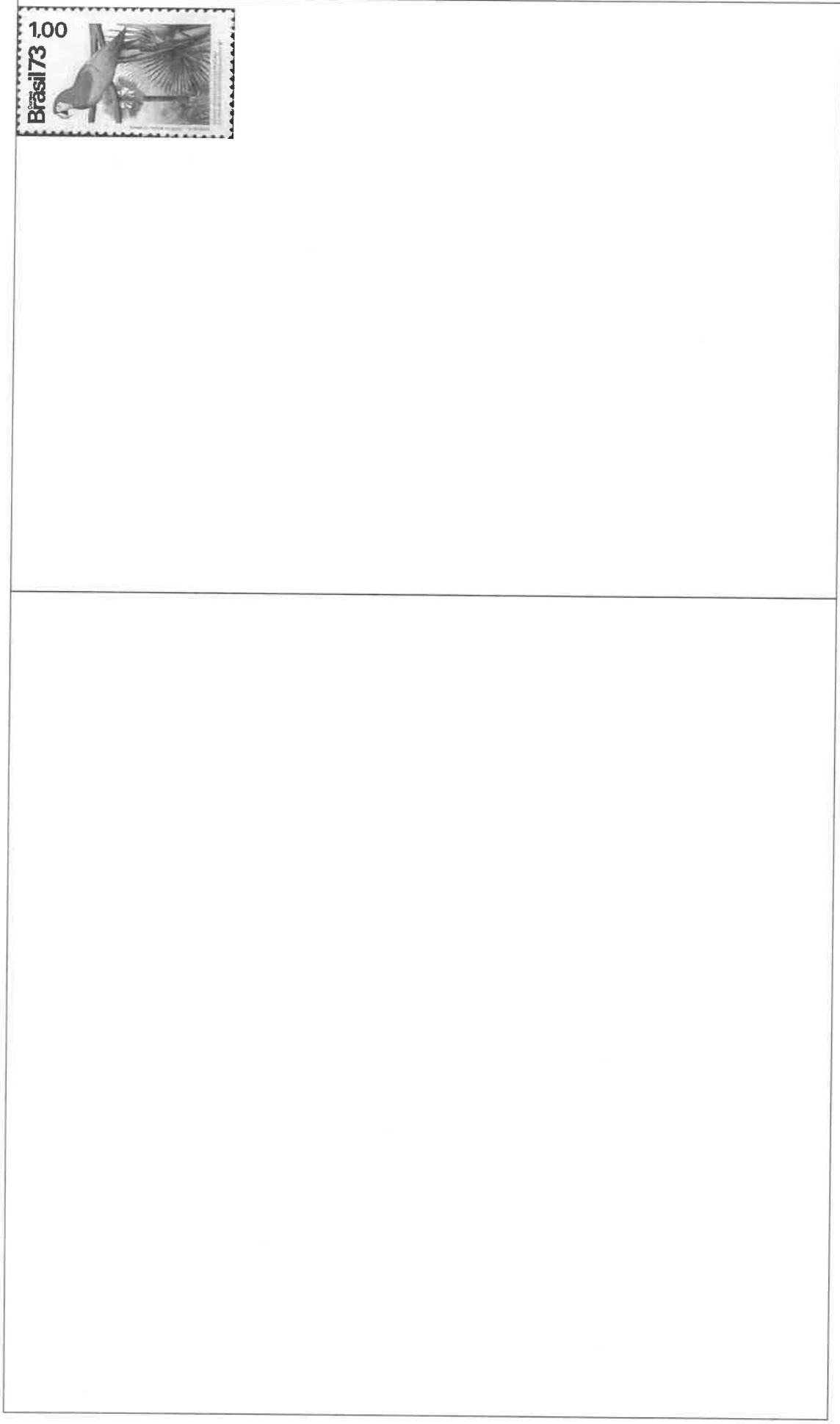
He has _____ not to chop the axe.

He has _____ not to do as he was told.

He has _____ his axe.

decided	slept	chosen	dreamt	dropped
realised	thought	understood	listened	heard

Postcard



Cloze Activity - Answers

The man has realised that he should protect the forest.

He has heard the animals speak to him

He has listened to the child.

He has thought about the things he heard.

He has understood the message of the animals.

The man has slept in the rainforest.

He has dreamt an amazing dream!

He has decided not to chop the axe.

He has chosen not to do as he was told.

He has dropped his axe.

decided	slept	chosen	dreamt	dropped
realised	thought	understood	listened	heard

What to do today

IMPORTANT Parent or Carer – Read this page with your child and check that you are happy with what they have to do and any weblinks or use of internet.

1. Read a poem.

- Read *Willow Pattern* by Tony Mitton. What do you like about the poem? Can you notice any patterns or puzzles?
- Now watch <https://www.youtube.com/watch?v=4VwAYc7dsUE> How does the poem match the plate?

2. Summarise the story

- Use *Plate Picture* and add captions to tell the story.
- Now make a plan for telling the story on *Story Plan*.

3. Now for some writing

- Read *Descriptive Language* and add your own ideas for descriptive sentences to tell the story.
- Try writing the story. Use your *Story Plan* and *Descriptive Language* to help you as you do.

Well done. Read your story to a grown-up. Can you test them to check that they remember what happened?

Try the Fun-Time Extra

- Watch these versions of the Willow Pattern Story. How are they similar to yours? How are they different? What do you like most about each? Which is your favourite? Why?
www.youtube.com/watch?v=Lj5uTZG6G90
www.youtube.com/watch?v=Ge1LD8JDfYg

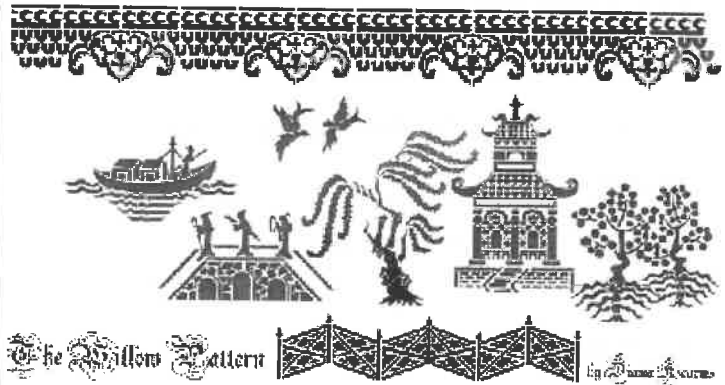
Willow Pattern by Tony Mitton

Look. On my plate
is a blue garden
it happened in China
A long time ago.

There on a bridge
the soldiers are running
to capture the princess,
the Emperor's daughter.

She left with the young man
she wanted to marry.
They fled to an island
That lay on a lake.

The Emperor was angry.
He ordered his soldiers
to capture the princess
and kill the young man.



But the man and the princess
were turned into bluebirds.
They flew from the island
and never returned.

The Emperor, in sadness,
Turned into a willow.
And always he droops
as he weeps in his sorrow.

He weeps on my plate
In a blue garden.
It happened in China
a long time ago.

Tony Mitton (The Works p462)

Plate Picture

Add captions to tell the story.



Story Plan

How will you introduce your story?	
What will be the first event?	
What will happen next?	
What will be your final event?	
How will you round off your story?	

Descriptive Language

Add your ideas for descriptive sentences.

The sky, swirling in a mass of blue and white, appeared to open.

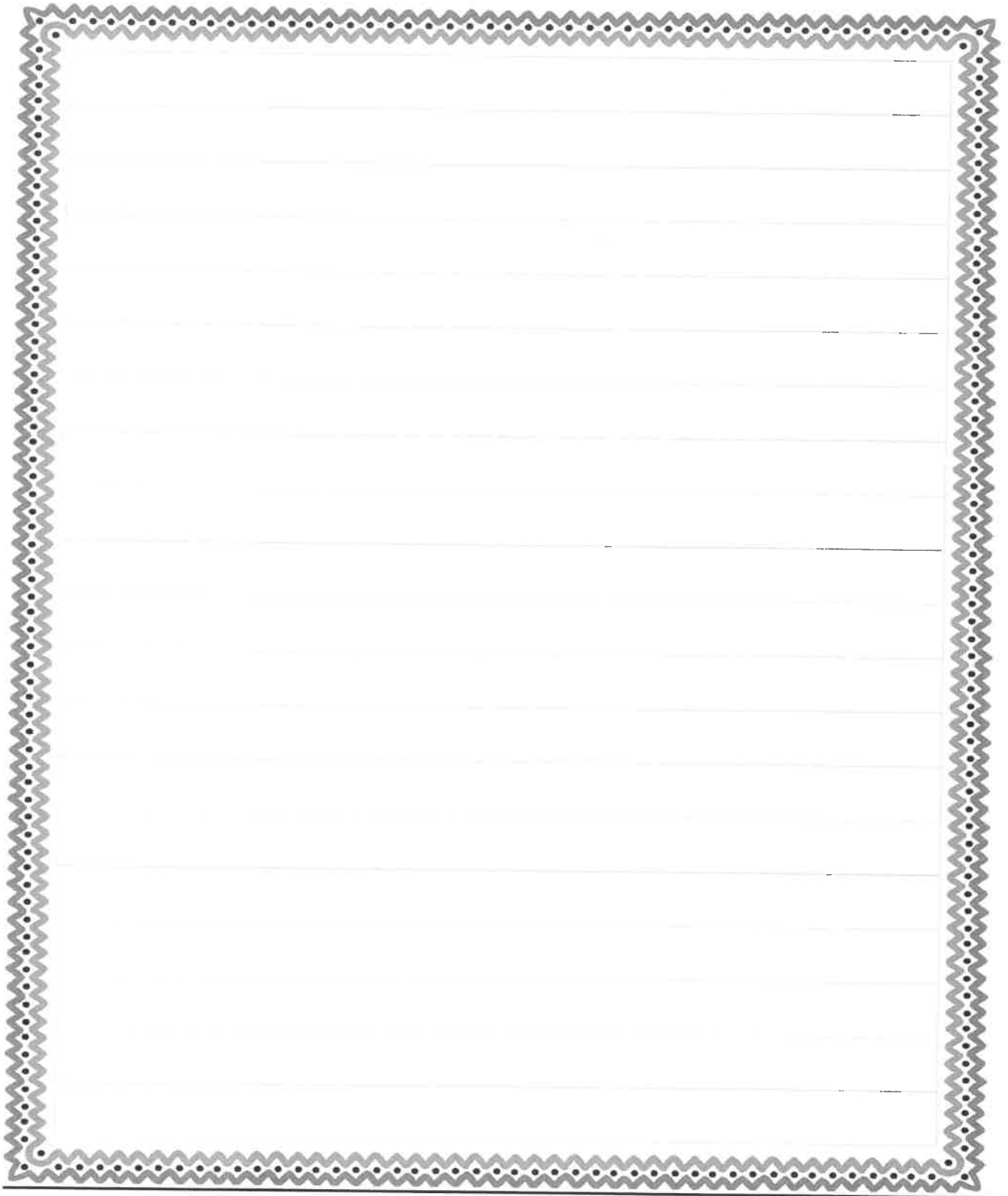
The princess, with glistening hair the colour of ebony, ran over the bridge.

She flew up into the sky, which was orange and warm.

The prince waved his sword, which had been given to him by his father, in the air.

The Willow-Pattern story

Write your version of the story here.

A large rectangular writing area with a decorative border. The border consists of a repeating zigzag pattern with small dots at the peaks and valleys. Inside the border, there are horizontal lines for writing, spaced evenly apart. The writing area is intended for a student to write their version of the Willow-Pattern story.



What to do today

IMPORTANT Parent or Carer – Read this page with your child and check that you are happy with what they have to do and any weblinks or use of internet.

1. Read a poem and think about the story.

- Read *How Tortoise Got His Shell*.
- What did you like about the poem? What patterns did you notice?
- Why was Zeus so angry with Tortoise? How did Zeus punish Tortoise? Do you think this was fair?

Find a grown-up and read them the poem. Can you help them to understand the story by the way that you read the poem?

2. Imagine a conversation

- Try writing a conversation between Zeus and the Tortoise in the *Speech Bubbles*.
- Now use the *Revision Card* to remind yourself about direct speech. Can you turn some of your Speech Bubble writing into sentences with direct speech? (add speech marks and reporting clauses)

3. Now for some writing

- Make a *Story Plan* for the story of how tortoise got his shell.
- Read your plan through and then try writing your story. Include some of your direct speech if you can.

Try the Fun-Time Extras

- Can you make an illustration of the story? You could even make a comic strip version.
- Can you perform the poem and film it to share with someone else?
- Can you perform your speech bubbles with someone else. Who will be Zeus and who will be the Tortoise? How will you show their different characters?

How the Tortoise Got His Shell

Come to my feast!

cried the great god Zeus.

Today I shall be wed!

And from each corner of the earth
all Zeus's creatures sped...

The fliers and the creepers,
The long, the short, the tall;
The crawlers and the leapers,
The feathered, furred and bald;
Hunters, biters, finders, fighters,
Hooters, whistlers, roarers;
Squeakers, screamers, squawkers, dreamers,
Nibblers, gulpers, borers.
Paws and claws from hills and shores
From south, from north, from west and east,
From mountain tops and forest floors
all Zeus's creatures joined the feast
except



the tortoise

They raved, they pranced, they feasted, danced;
six days and nights each creature stayed
to chatter, flatter, clap and cheer
at the great god Zeus's grand parade
except

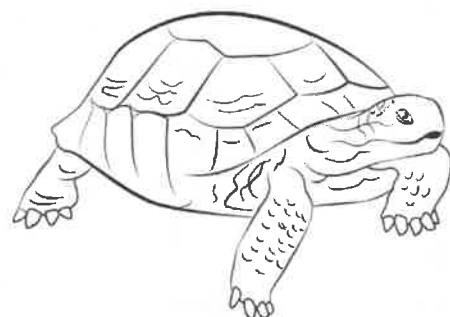
the tortoise

Next day...

*Why weren't you there, my friend, asked Zeus,
the day that I was wed?*

The tortoise smiled her small, slow smile
and raised her small, slow head.

*A wedding feast is fun, I guess,
But I'm a simple one.
I'm happy by myself, she said.
There's no place quite like home!*



*How dare you stay away! roared Zeus.
I'll show you just what for!
From this day on you'll carry your home
On your back, for evermore!*

*Judith Nicholls (The Works p57)
Unit 1 Day 3*

Revision Card – Direct Speech

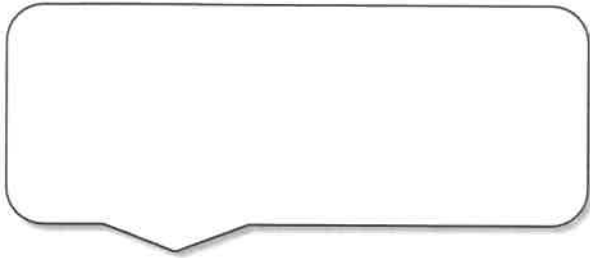
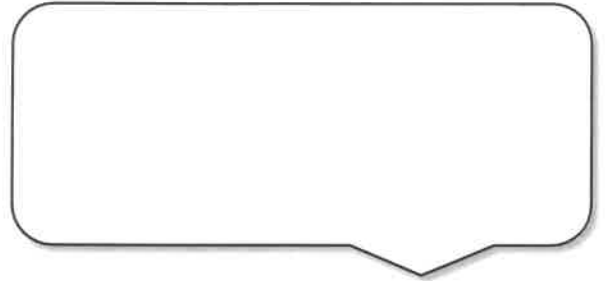
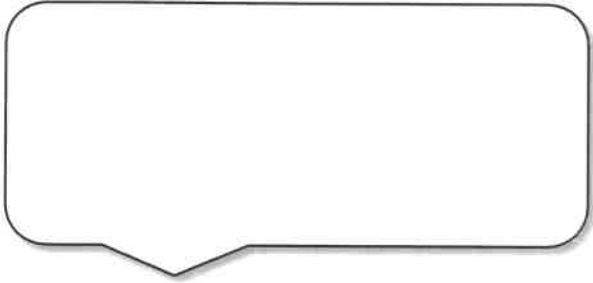
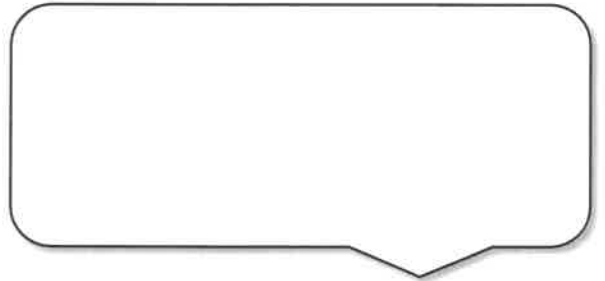
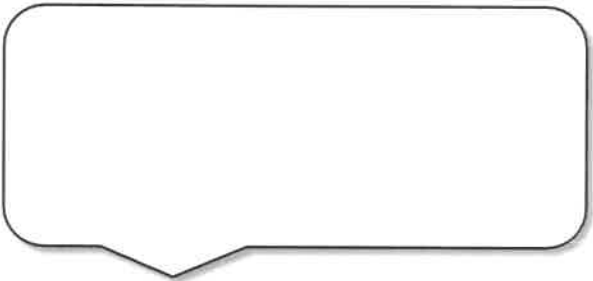
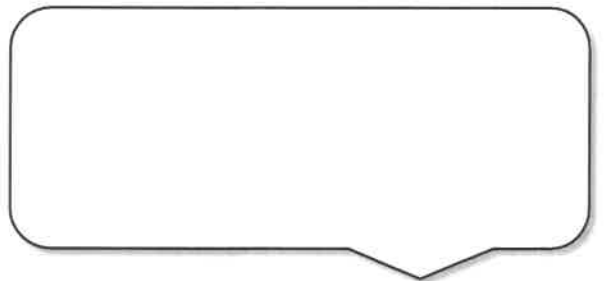
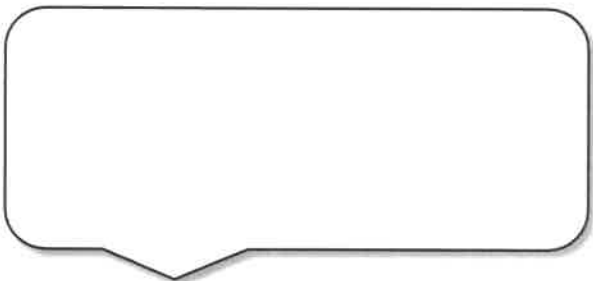
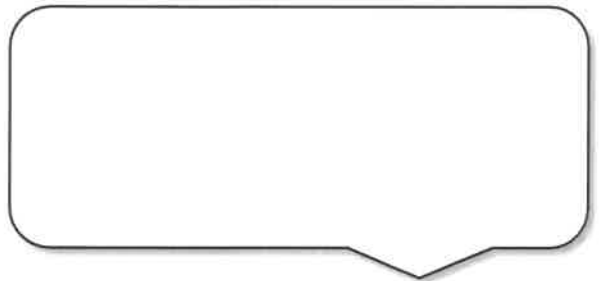
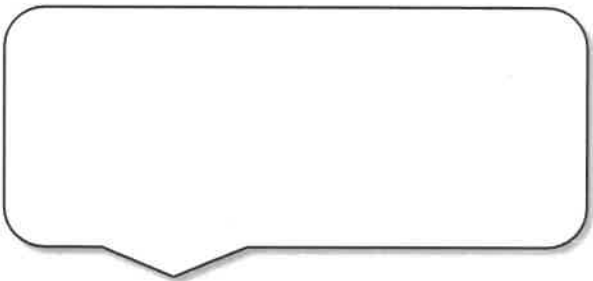
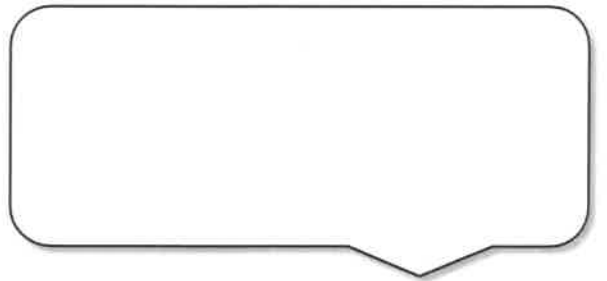
Direct Speech

- Hug the words spoken with speech marks
- Start the speakers' words with a capital letter
- Separate the speech and reporting clause with a comma
- Start a new line to show the speaker has changed

Speech Bubbles

Zeus

Tortoise

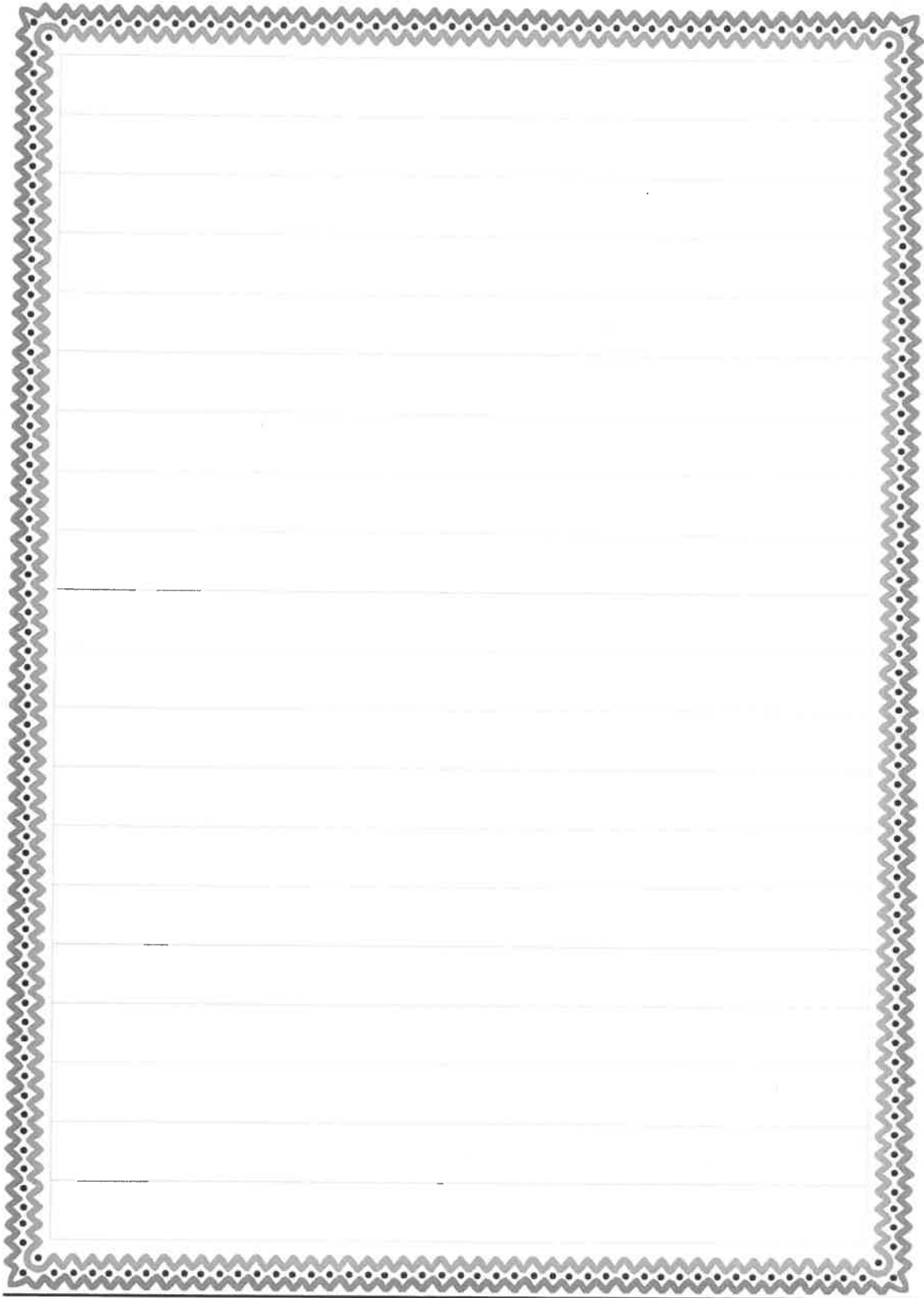
An empty speech bubble with a rectangular body and a pointed tail at the bottom center.An empty speech bubble with a rectangular body and a pointed tail at the bottom center.An empty speech bubble with a rectangular body and a pointed tail at the bottom center.An empty speech bubble with a rectangular body and a pointed tail at the bottom center.An empty speech bubble with a rectangular body and a pointed tail at the bottom center.An empty speech bubble with a rectangular body and a pointed tail at the bottom center.An empty speech bubble with a rectangular body and a pointed tail at the bottom center.An empty speech bubble with a rectangular body and a pointed tail at the bottom center.An empty speech bubble with a rectangular body and a pointed tail at the bottom center.An empty speech bubble with a rectangular body and a pointed tail at the bottom center.

Story Plan

How will you introduce your story?	
What will be the first event?	
What will happen next?	
What will be your final event?	
How will you round off your story?	

Zeus and the Tortoise

Write your story here.

A large rectangular writing area with a decorative border. The border is a repeating pattern of small black dots and grey zig-zags. Inside the border, there are horizontal lines for writing, with a slightly larger margin at the top.

