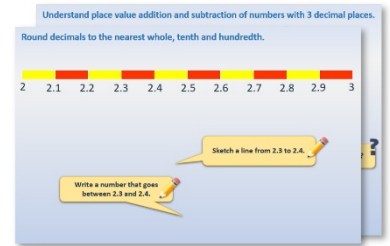


Week 10, Day 5

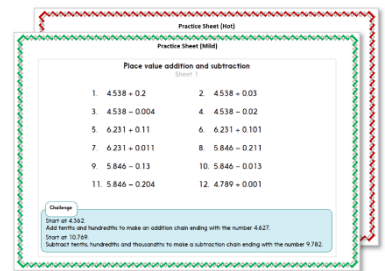
3-D shape (2)

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

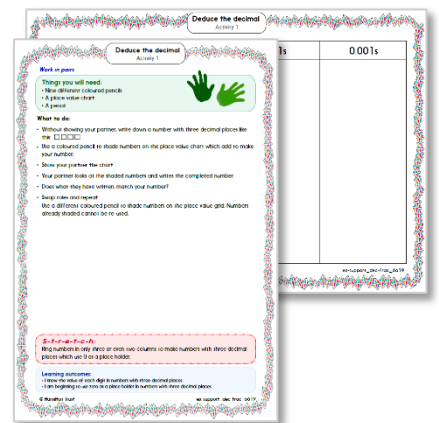
1. Start by reading through the **Learning Reminders**. They come from our *PowerPoint* slides.



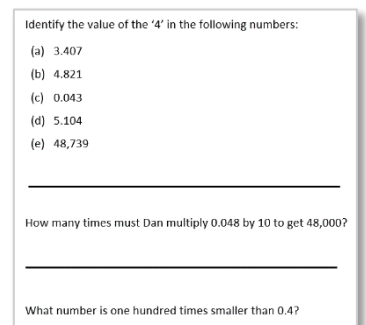
2. Tackle the questions on the **Practice Sheet**. There might be a choice of either **Mild** (easier) or **Hot** (harder)! Check the answers.



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

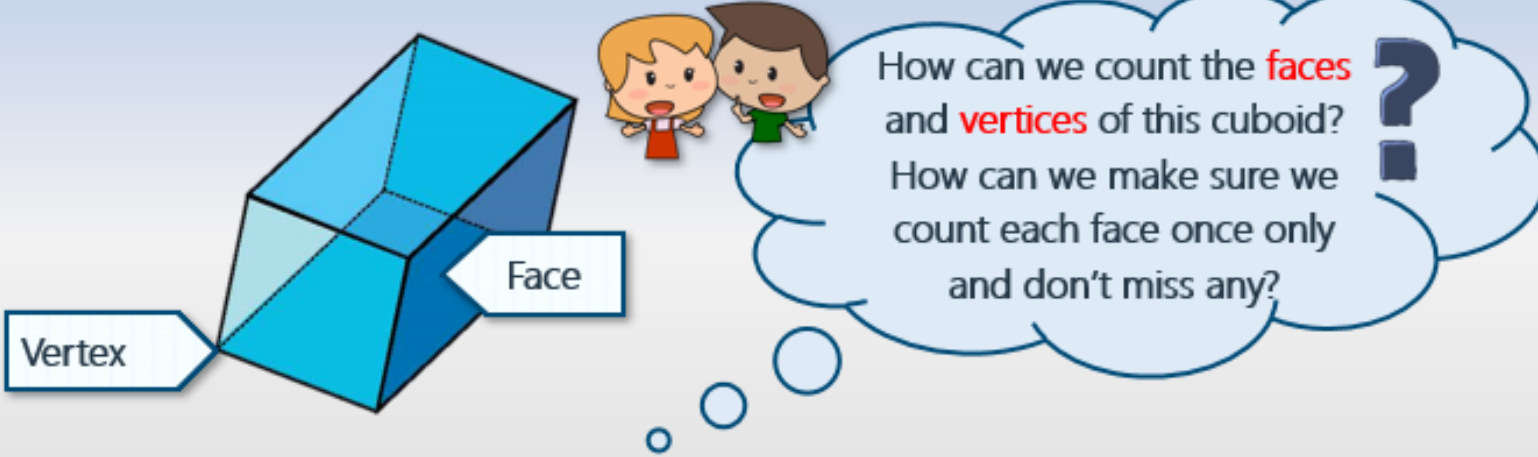


4. Have I mastered the topic? A few questions to **Check your understanding**. Fold the page to hide the answers!



Learning Reminders

Faces and vertices.



Vertex

Face

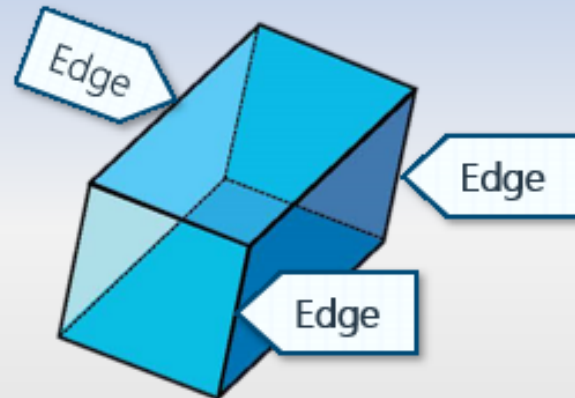
How can we count the **faces** and **vertices** of this cuboid?
How can we make sure we count each face once only and don't miss any?

We could put a piece of sticky tape on each face!

We could count the vertices on one 'end' and then the other, or the vertices around the 'top', then the 'bottom'.

Learning Reminders

Counting edges.



Where two faces meet on a shape is called an **edge**.



Can you think of a shape which has no edges? Hint: it has no vertices either.

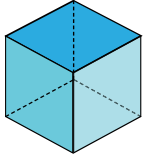
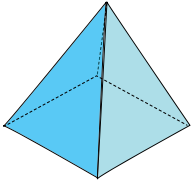
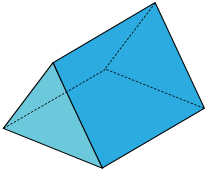
?



Practice Sheet Mild

Faces and vertices

Complete the table – you may use some shapes to help.

<i>Shape</i>	<i>Number of faces</i>	<i>Number of vertices</i>
		
		
		

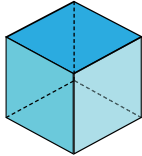
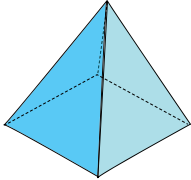
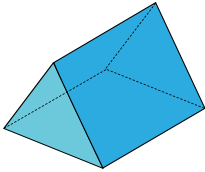
Challenge

Find one more 3-D shape and add its information to the table.

Practice Sheet Hot

Faces, vertices and edges

Complete the table – you may use some shapes to help.

Shape	Number of faces	Number of vertices	Number of edges
			
			
			

Challenge

Find one more 3-D shape and add its information to the table.

Practice Sheet Answers

Practice Sheet (Mild)

Shape	No. of faces	No. of vertices
Cube	6	8
Square-based pyramid	5	5
Triangular prism	5	6

Practice Sheet (Hot)

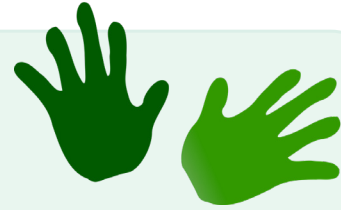
Shape	No. of faces	No. of vertices	No. of edges
Cube	6	8	12
Square-based pyramid	5	5	8
Triangular prism	5	7	9

A Bit Stuck? Smiley faces

Work in pairs

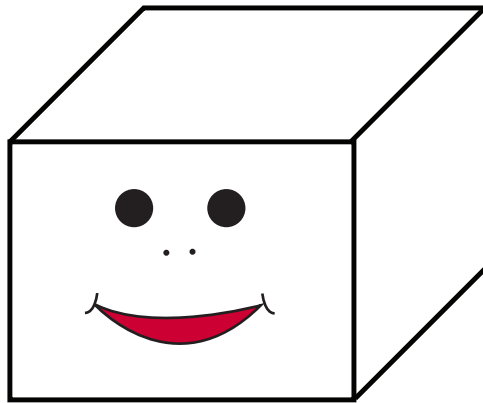
Things you will need:

- At least three different shapes from around the home, e.g. cube, cuboid and cylinder
- Post-it notes
- Pen



What to do:

- Choose one shape. Draw a smiley face on a Post-it and stick it to one face of the shape.
Your partner draws a tally mark.
- Stick a smiley face on a different face.
Your partner draws a tally mark.
- Keep going until every face has a smiley face.
How many faces does this shape have?
- Put the shape back.
Choose a new shape.
This time your partner draws the smiley face and you draw the tallies.
- Repeat with other shapes.



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

Count the vertices of at least two shapes, using blobs of Blu-tac to help keep track.

Learning outcomes:

- I can count the number of faces on 3-D shapes.
- I am beginning to count the number of vertices on 3-D shapes.

Check your understanding:

Questions

What shape am I?

- I have 8 vertices, 12 edges all the same length and six identical faces.
 - I have 1 curved face, 2 flat faces and two edges.
 - I have five flat faces and five vertices.
-

Say or write one property of each shape, e.g. 'Has 2 flat faces'.

You may not write the same property twice!

- Cube
- Cylinder
- Cuboid
- Pyramid

Fold here to hide answers:

Check your understanding:

Answers

What shape am I?

- I have 8 vertices, 12 edges all the same length and six identical faces. **Cube.**
 - I have 1 curved face, 2 flat faces and two edges. **Cylinder.**
 - I have five flat faces and five vertices. **Pyramid.**
Children struggling to visualise this could try to find matching 3-D shapes around the home.
-

Say or write one property of each shape, e.g. 'Has 2 flat faces.'

You may not write the same property twice!

- Cube **e.g. 6 flat faces, 6 square faces.**
- Cylinder **e.g. two circular faces.**
- Cuboid **e.g. opposite faces are similar rectangles.**
- Pyramid **e.g. has flat faces (5 faces if it is square-based).**