

Hello!

Today's WALT is describe 3D shapes

You should work for 45 minutes to an hour on this lesson.

You don't need to print anything - just write on paper as if you were writing in your Maths book.

Remember to answer in full sentences.

Mental Warm Up Work out the answers to these questions

$$8 \times 5 = \underline{\hspace{2cm}}$$

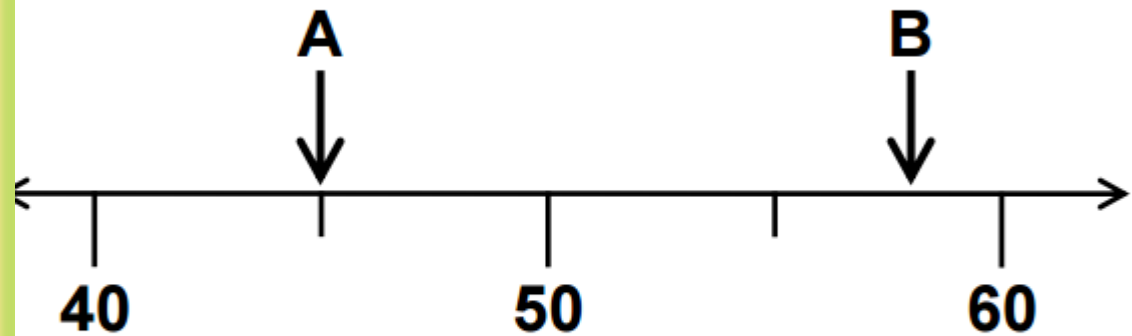
$$21 + 40 = \underline{\hspace{2cm}}$$

$$8 \div 2 = \underline{\hspace{2cm}}$$

$$28 + \boxed{\hspace{2cm}} = 35$$

$$69 + 11 = \underline{\hspace{2cm}}$$

Look at the number line below.

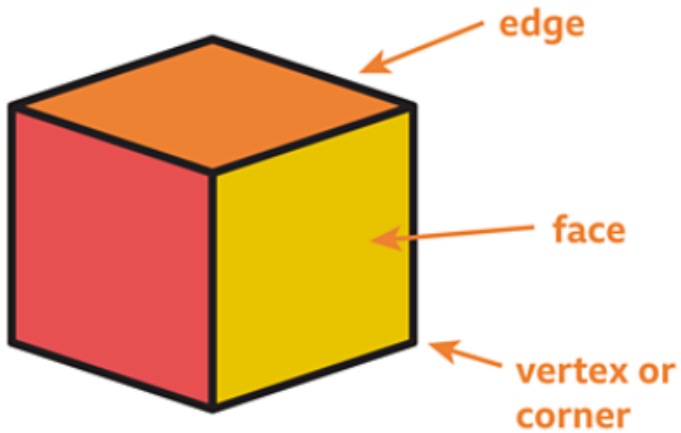


Write the number shown by arrow **A**.

Let's answer this question together. You can go through it with your grown up.

If you found 3D shapes tricky then go back to [Recognise and name 3-D shapes - Year 2 - P3 - Maths - Catch Up Lessons - Home Learning with BBC Bitesize - BBC Bitesize](#)

**Remember vertices are where the edges meet**



**Faces** - A face is a flat surface on a 3D shape. For example a cube has 6 faces.



**Edges** - An edge is where two faces meet. For example a cube has 12 edges.

**Vertices** - A vertex is a corner where edges meet (the plural is vertices). For example a cube has 8 vertices.

## Counting vertices on 3D shapes

### Discover



- 1 a) Eve is making a triangle-based pyramid.  
How many  does she need?
- b) How many more  does she need for this pyramid?



### Share

- a) Eve makes the base first.



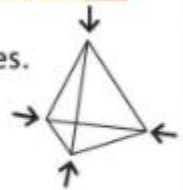
Eve uses three sticks and joins them at one vertex at the top.



There is a  at each vertex.

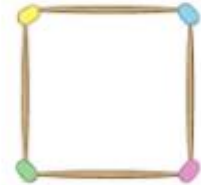
A pyramid with a triangle base has four vertices.

Eve needs four  for this pyramid.







- b) Eve makes a square base.



Then Eve makes one more vertex at the top point.



A pyramid with a square base has five vertices.

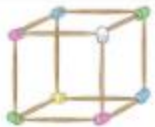


 needs four .


 needs five .

Eve needs one more  for .

## Think together

- 1 How many vertices does each shape have?

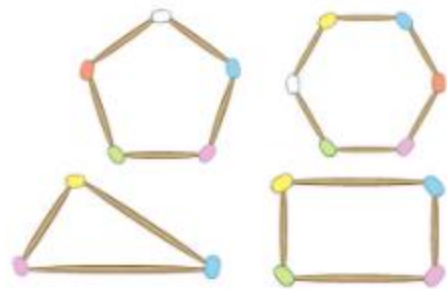
Shape	Number of vertices
	
	
	

Remember there is a  at each vertex.



- 2 George wants to make different pyramids.

Each pyramid has a different base.






I know each pyramid will have a point as well as a base.



How many  does George need for each pyramid?

## Counting vertices on 3D shapes

- 1 Complete the table.

Shape	Number of vertices
	
	
	

I count vertices where edges meet.



- 2 Complete these sentences.



has  vertices.



has  vertices.



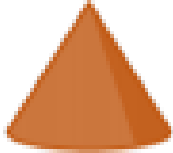

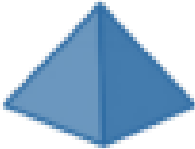
has  vertices.



has  vertices.

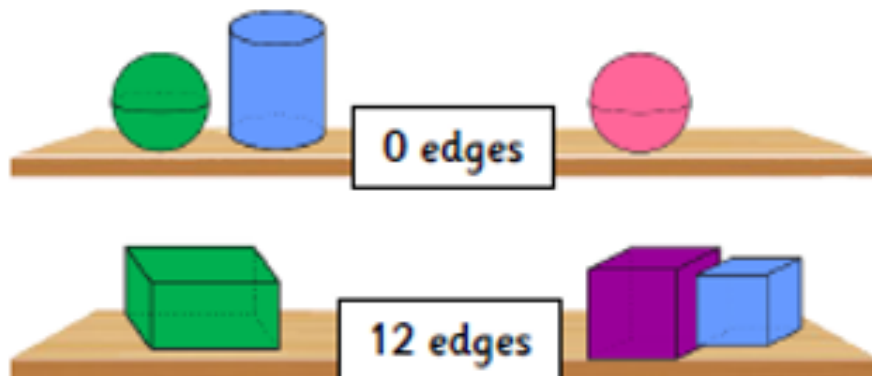
Work through these worksheets on your own.

Complete the table:

Shape	Name	Faces	Edges	Vertices
				
				
				

# Miss Khimasia's Maths group Extension Questions

These shapes have been sorted onto two shelves. Circle the mistake and explain why it's wrong.



The image shows two shelves. The top shelf has a green sphere, a blue cylinder, and a pink sphere. A label below the top shelf says "0 edges". The bottom shelf has a green rectangular prism, a purple rectangular prism, and a blue cube. A label below the bottom shelf says "12 edges".

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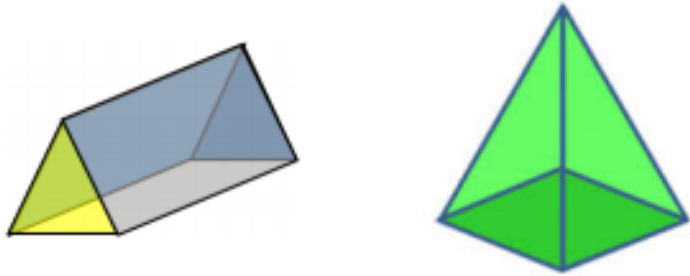
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Sentence start: I know it's wrong because.....

## Miss Khimasia's Maths group Super challenge

What is the same about these 2 shapes?



What is different about them?

Talk about faces, edges and vertices in your answer.

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**Sentence start: I know it's wrong because.....**



# Mr Hirani's group Extension Questions

3 Match the shapes to the number of vertices.



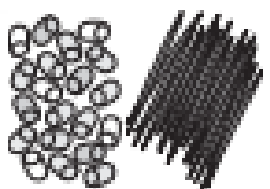
< 5 vertices      = 5 vertices      > 5 vertices



4 a) Will has 20 marshmallows.



He makes two different shapes.  
He has six marshmallows left.

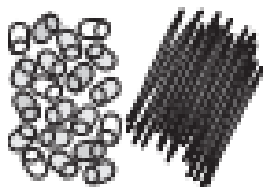


Circle the shapes he has made.



b) Rose has 20 marshmallows.

She makes three different shapes.  
She has three marshmallows left.



Circle the shapes she has made.





