

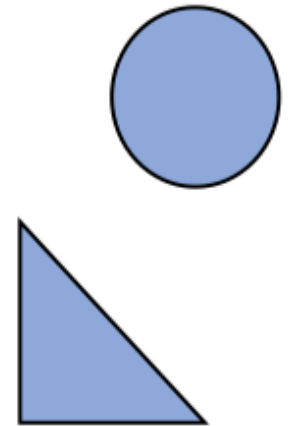
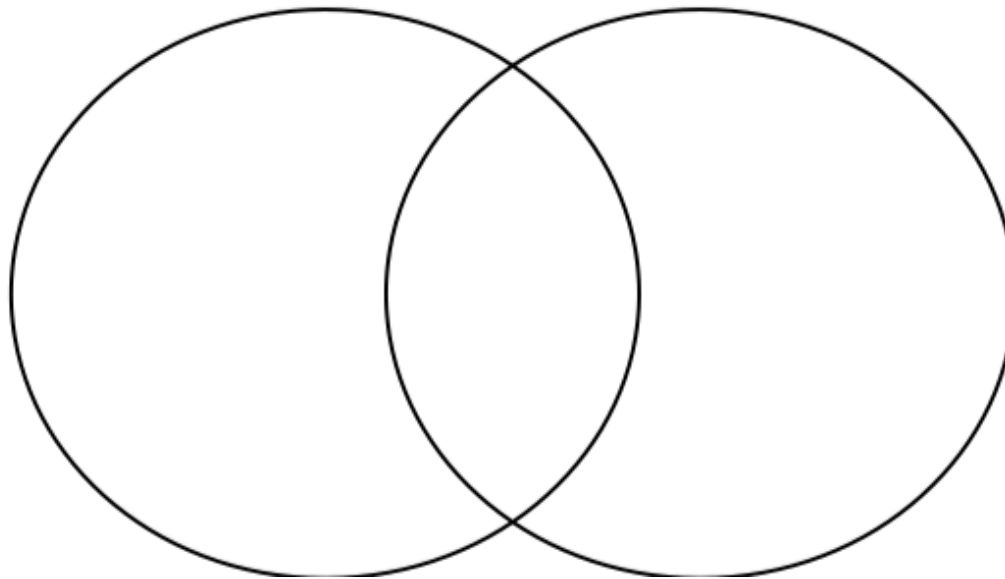
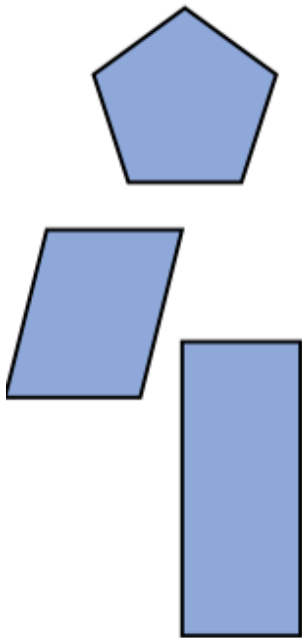
**Skill: I can count the faces on a 3 D shape**

# Big Question

When sorted into the Venn diagram, one shape is left on the outside.

4 sided  
shape

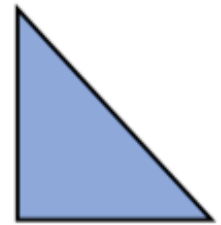
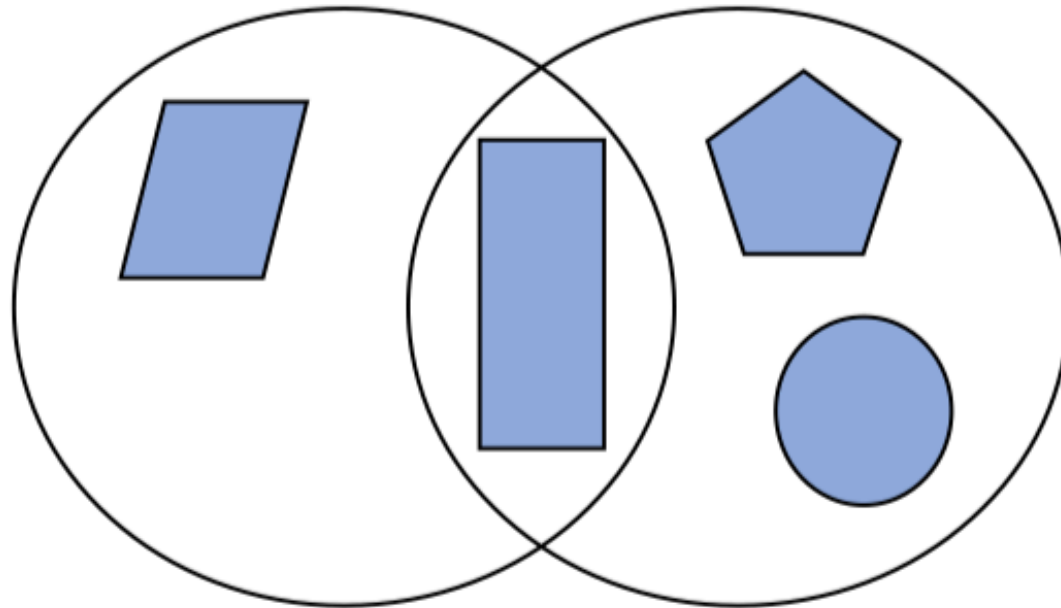
Vertical line of  
symmetry



# True

4 sided  
shape

Vertical line of  
symmetry



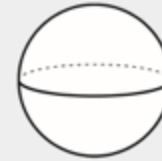
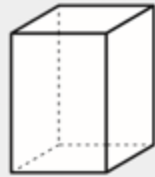
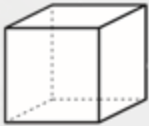
Can you practice your 2 x table with the Numberock crew?

[https://www.youtube.com/watch?v=6RHvIUry\\_uc](https://www.youtube.com/watch?v=6RHvIUry_uc)



## Introduction

Match the 3D shapes to the correct name.



**Cylinder**

**Cube**

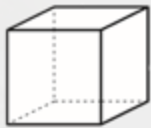
**Sphere**

**Pyramid**

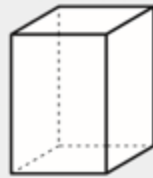
**Cuboid**

## Introduction

Match the 3D shapes to the correct name.



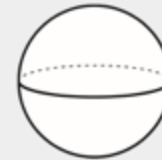
**Cube**



**Cuboid**



**Cylinder**



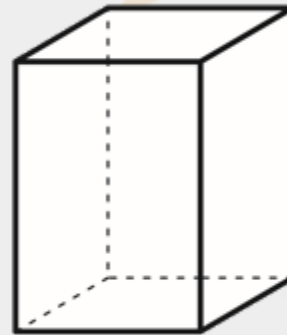
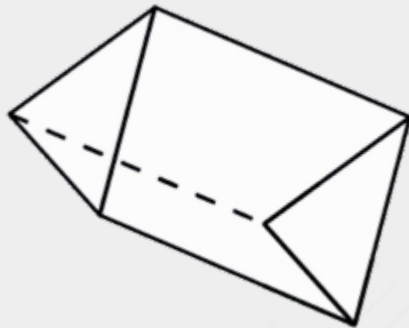
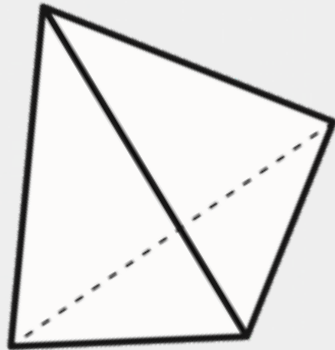
**Sphere**



**Pyramid**

Varied Fluency 1

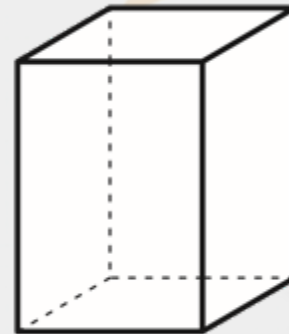
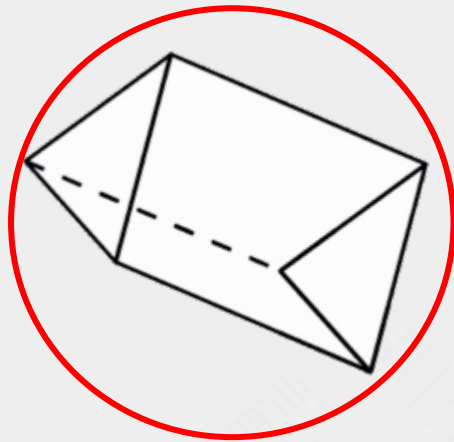
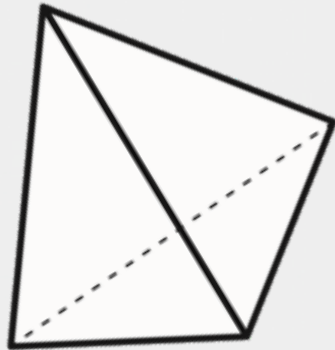
**Circle the shape with 5 faces.**





Varied Fluency 1

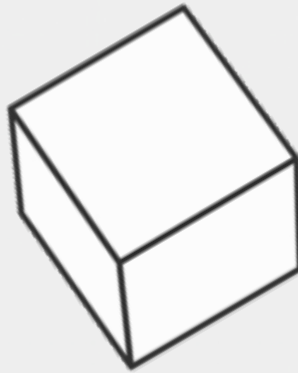
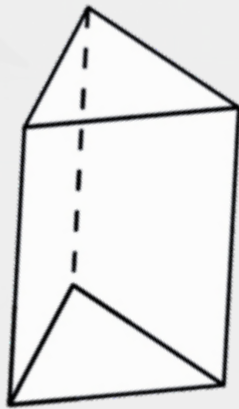
Circle the shape with 5 faces.





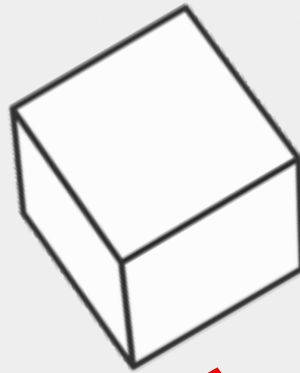
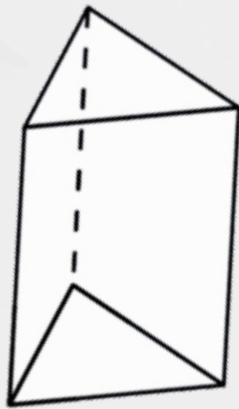
## Varied Fluency 2

Tick the shape below that has 6 flat faces and 0 curved surfaces.



## Varied Fluency 2

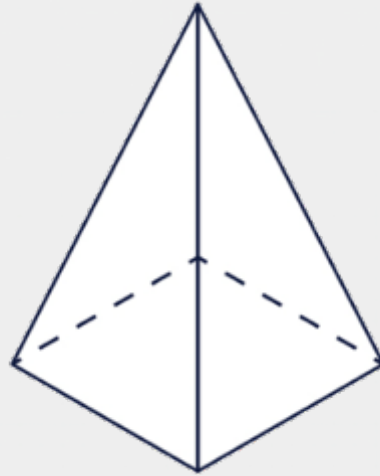
Tick the shape below that has 6 flat faces and 0 curved surfaces.



### Varied Fluency 3

Complete the sentence below.

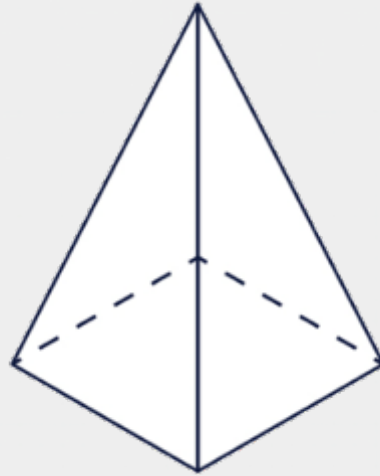
This shape has  flat faces and  curved surfaces.



### Varied Fluency 3

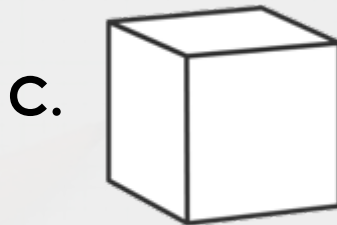
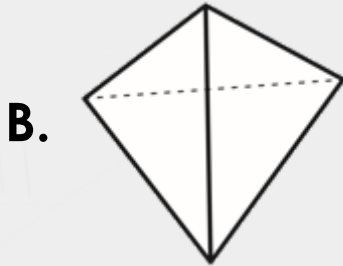
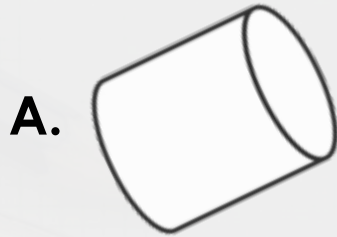
Complete the sentence below.

This shape has  flat faces and  curved surfaces.



## Varied Fluency 4

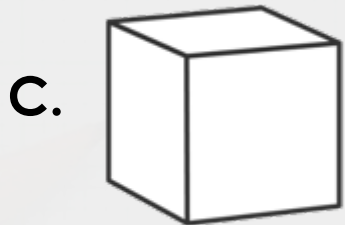
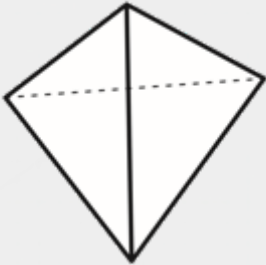
Which 2D shapes can you see on the flat faces of the 3D shapes?





## Varied Fluency 4

Which 2D shapes can you see on the flat faces of the 3D shapes?



1.



2.



3.



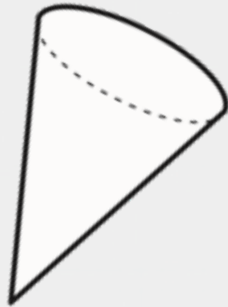
**A = circle; B = triangle; C = square**



## Reasoning 1

Look at the surface of the shapes. Which shape is the odd one out?

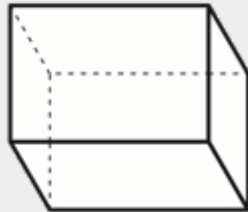
A.



B.



C.



D.

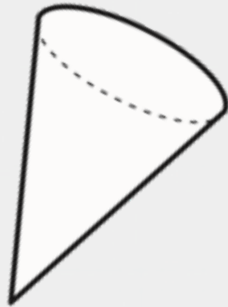


Explain your answer.

## Reasoning 1

Look at the surface of the shapes. Which shape is the odd one out?

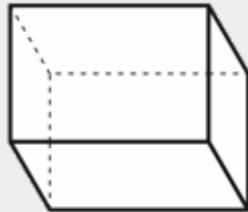
A.



B.



C.



D.

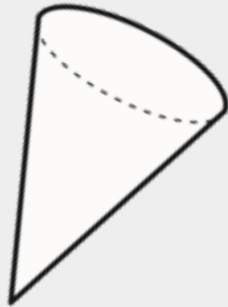


Explain your answer.  
C because...

## Reasoning 1

Look at the surface of the shapes. Which shape is the odd one out?

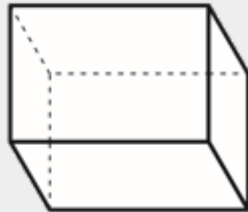
A.



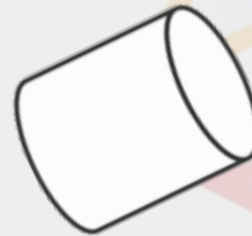
B.



C.



D.

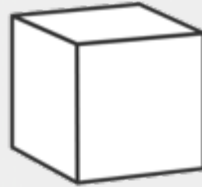
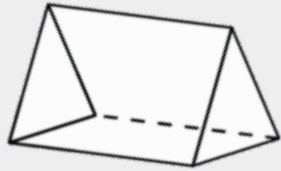


Explain your answer.

**C because it is the only shape that does not have a curved surface.**

## Problem Solving 1

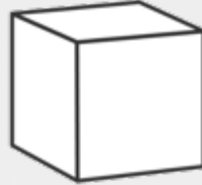
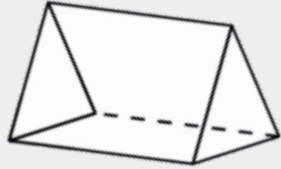
**Complete the table below.**



<b>Name</b>	<b>Number of flat faces</b>	<b>2D shape of faces</b>
		<b>square</b>
<b>cone</b>		
		<b>triangle</b>

## Problem Solving 1

Complete the table below.

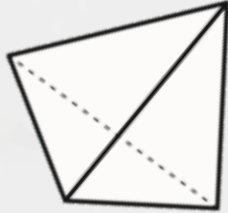


Name	Number of flat faces	2D shape of faces
<b>cube</b>	<b>6</b>	<b>square</b>
<b>cone</b>	<b>1</b>	<b>circle</b>
<b>triangular prism</b>	<b>5</b>	<b>triangle rectangle</b>



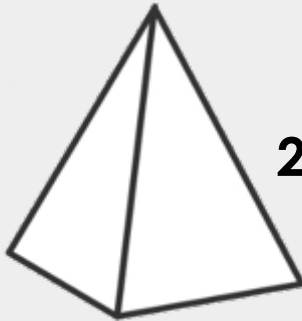
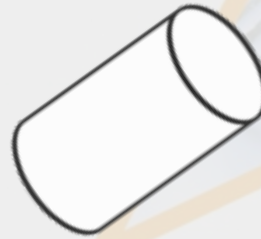
## Problem Solving 2

**Which group of shapes has the most number of flat faces?**



**3 triangle-based pyramids**

**3 cylinders**

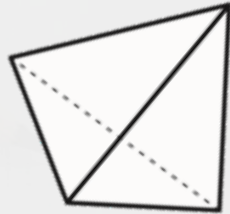


**2 square-based pyramids**



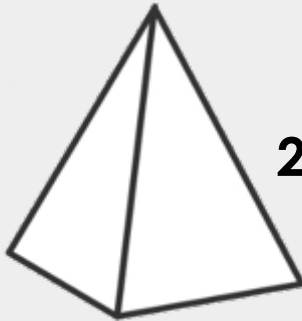
## Problem Solving 2

Which group of shapes has the most number of flat faces?



**3 triangle-based pyramids**

**3 cylinders**



**2 square-based pyramids**

**3 triangle-based pyramids have the most flat faces (12 in total).**

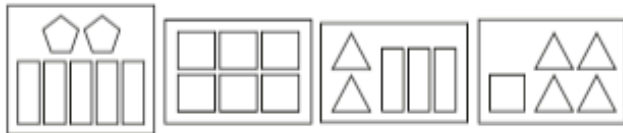
**3 cylinders = 6 flat faces**

**2 square-based pyramids = 10 flat faces**





# Independent task

## Count faces on 3D shapes

1 Match the shapes to the faces.



2 Complete the table.

Shape	Name	Number of faces
		
		
		
		



3



My shape has one curved surface.

What shape is Jack describing?

4 Match the description to the shape.

1 circular face and  
1 curved surface



2 circular faces and  
1 curved surface



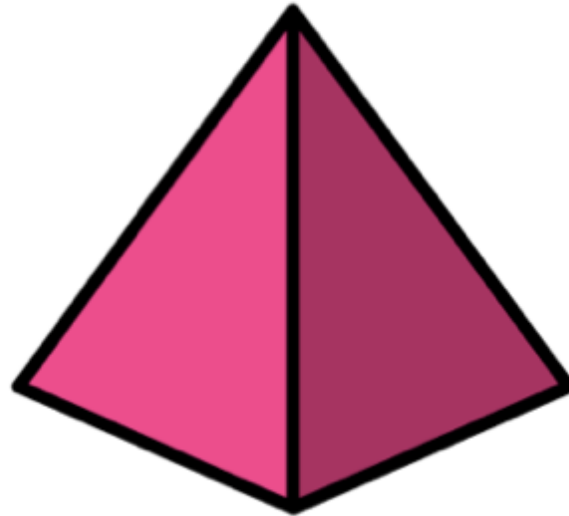
4 triangular faces



**Skill: I can count the edges on a 3 D shape**

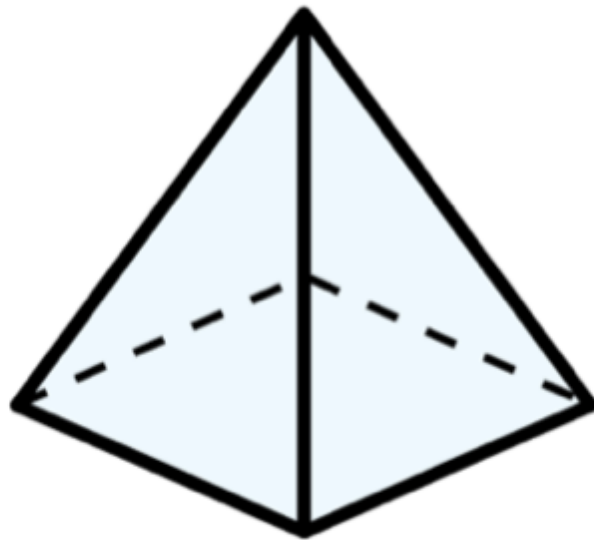
## Big Question

A square-based pyramid has 4 faces.



False

A square-based pyramid has 5 faces.



Can you practice your 10 x table with the Numberock crew?

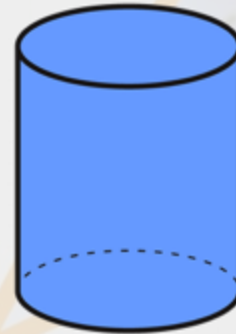
<https://www.youtube.com/watch?v=5kwlccQGcr0>





## Introduction

Count the edges on each shape.



## Introduction

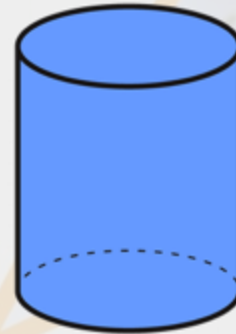
Count the edges on each shape.



0 edges



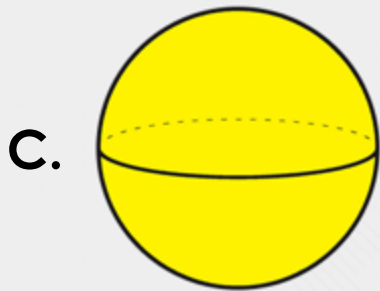
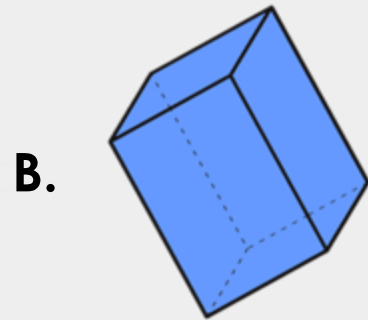
8 edges



2 edges

## Varied Fluency 1

Match the 3D shapes to the correct number of edges.



0 edges

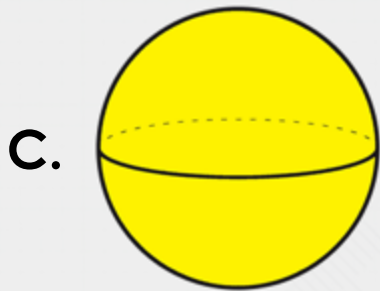
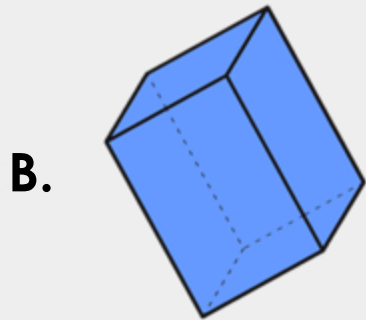
6 edges

1 edge

12 edges

Varied Fluency 1

Match the 3D shapes to the correct number of edges.



0 edges

6 edges

1 edge

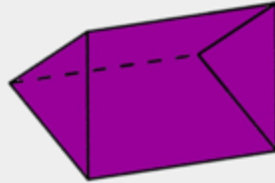
12 edges



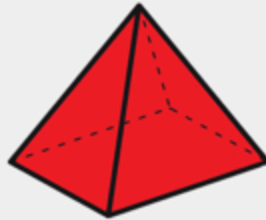
## Varied Fluency 2

Tick the shape below that has 2 edges.

A.



B.



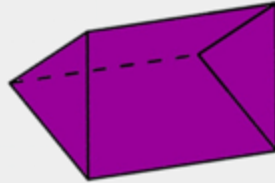
C.



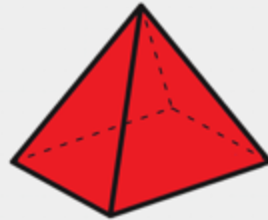
## Varied Fluency 2

Tick the shape below that has 2 edges.

A.



B.



C.



### Varied Fluency 3

Lucas is describing one of the 3D shapes below.



He says,



My shape has 12 edges.

What shape is Lucas describing?



### Varied Fluency 3

Lucas is describing one of the 3D shapes below.



He says,



My shape has 12 edges.

What shape is Lucas describing?

**cuboid**

Problem Solving 1

Match each child to the shape they are describing.

My shape has 0 edges.



Thomas

My shape has 12 edges.



Molly

A.



B.



## Problem Solving 1

Match each child to the shape they are describing.

My shape has 0 edges.



Thomas

My shape has 12 edges.



Molly

A.



B.



**Thomas = A; Molly = B**

## Reasoning 1

Caleb is describing the shape below.



He says,



The triangular prism  
has 6 edges.

Do you agree? Explain your answer.



## Reasoning 1

Caleb is describing the shape below.



He says,



The triangular prism  
has 6 edges.

Do you agree? Explain your answer.

Caleb is incorrect because...

## Reasoning 1

Caleb is describing the shape below.



He says,



The triangular prism  
has 6 edges.

Do you agree? Explain your answer.

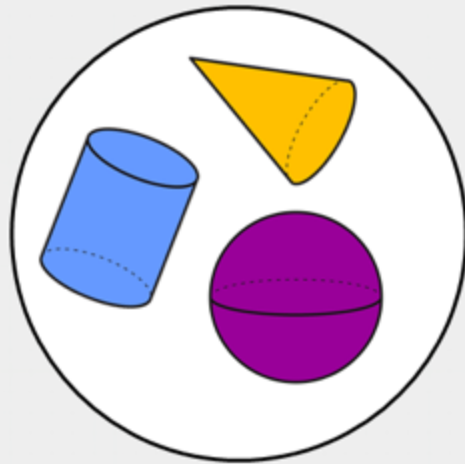
**Caleb is incorrect because the triangular prism has 9 edges.**



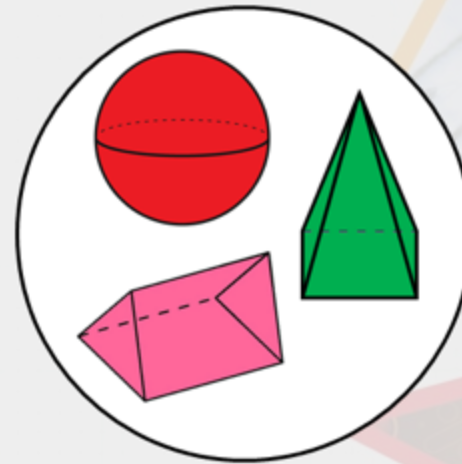
## Reasoning 2

Ted has made a mistake when sorting 3D shapes.

Fewer than  
3 edges



More than  
3 edges

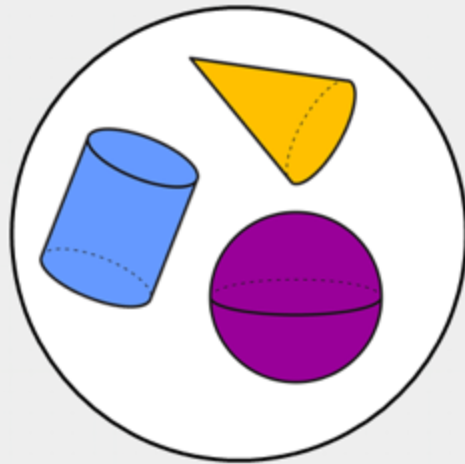


What has he done wrong?

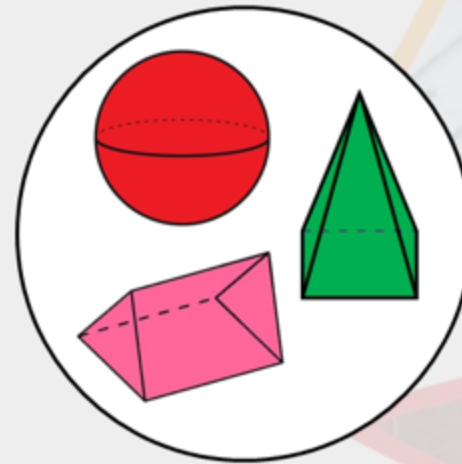
## Reasoning 2

Ted has made a mistake when sorting 3D shapes.

Fewer than  
3 edges



More than  
3 edges



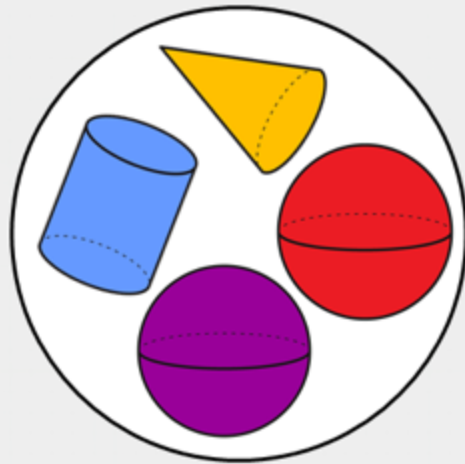
What has he done wrong?

Ted has put the sphere in the wrong group because...

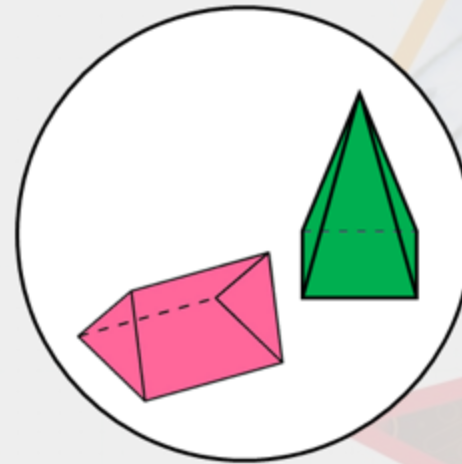
## Reasoning 2

Ted has made a mistake when sorting 3D shapes.

Fewer than  
3 edges



More than  
3 edges



What has he done wrong?

**Ted has put the sphere in the wrong group because a sphere has 0 edges which is fewer than 3. Both spheres should be in the same group.**

## Independent task

### Count edges on 3D shapes

1 How many edges does each shape have?

a)



c)







b)



d)



2 Complete the table.

Shape	Name	Number of edges	Number of faces
			
			
			
			

3



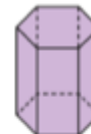
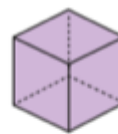
3D shapes always have more edges than faces.

Do you agree?

Why?

4

Use the clues to label the shape with the correct letter.



- Shape A has an odd number of edges.
- Shape B has the most edges.
- Shape C has the same number of edges as a cube has faces.
- The edges of shape D are all the same length.

