Count Edges on 3D Shapes

Adult Guidance with Question Prompts

Children know an edge is where two flat faces meet or where a flat face meets a curved surface. Children will need to keep track of which edges they have counted, perhaps by marking them with a whiteboard pen. Children will need a selection of 3D shapes to handle for this activity (not necessarily matching the ones pictured).

What is an edge?

Can an edge be curved?

Show me an example of a straight edge/curved edge.

How can you count the edges accurately?

How can we make sure we don't count the same one twice?

How many edges does this shape have?

What is the name of the shape?

Are there any shapes with no edges?

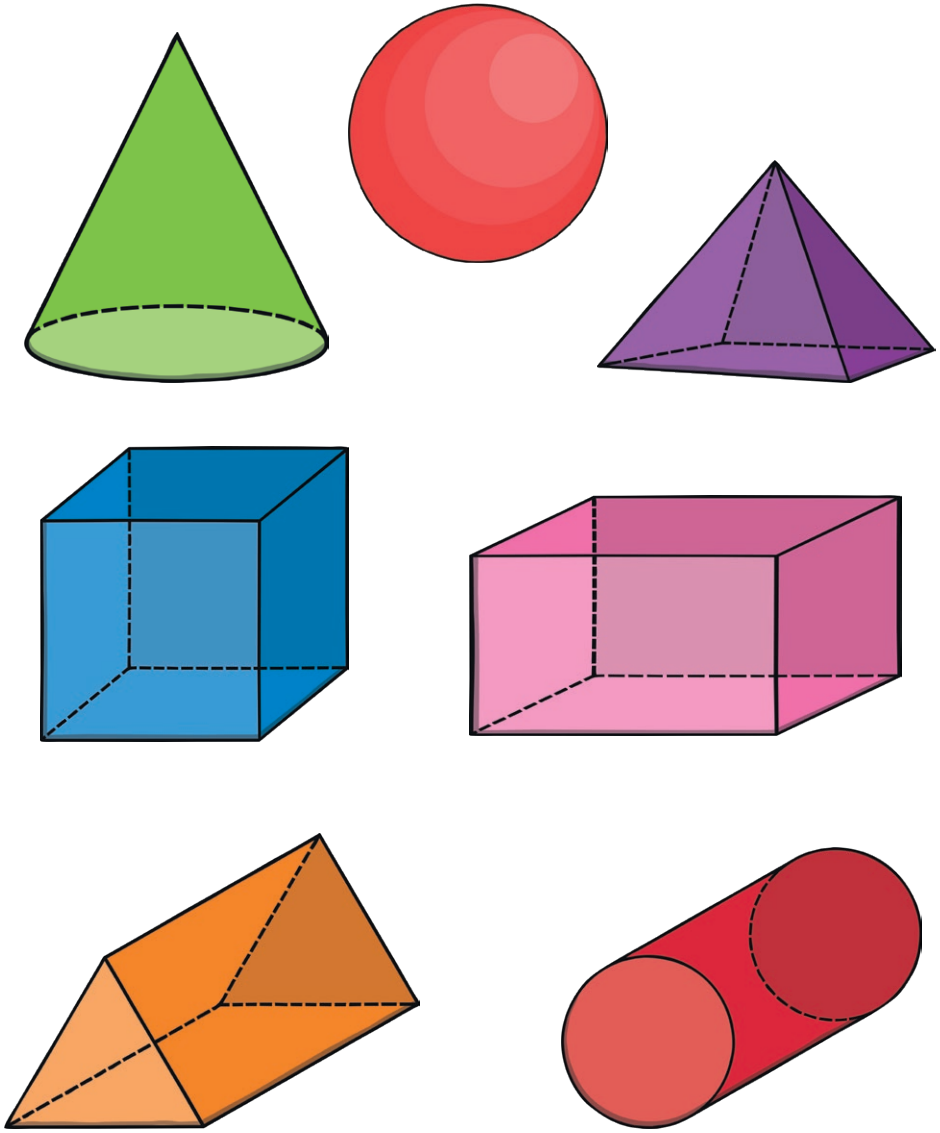
Why?

Shapes with one face will have no edges, true or false? Explain.

A cone has no edges, true or false? Explain.

Count Edges on 3D Shapes

Investigate 3D shapes. How many edges do they have?



Count Edges on 3D Shapes

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Children read clues about the edges of shapes and try to match them to the options. Some of the clues could describe more than one shape. It would be ideal to have these four shapes for children to look at and count during this activity.

Which shapes are the children describing?

Is there one with only one edge?

How would you describe the edge of that shape?

Is there a shape with 12 edges?

Is there another shape that could fit that clue?

Which shape has no edges?

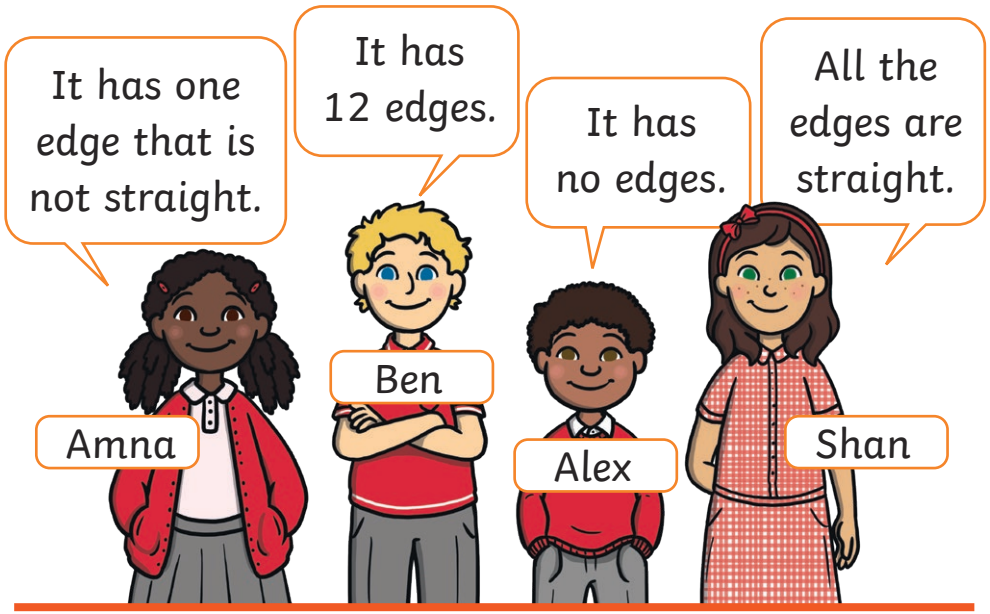
Which shapes have only straight edges?

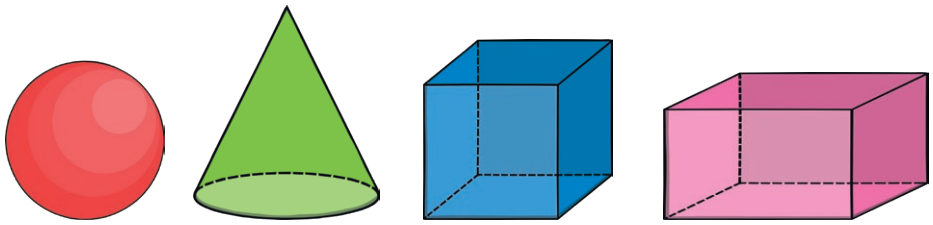
Is there another shape that could fit that clue?

Can you write your own clues for some other 3D shapes?

Count Edges on 3D Shapes

These four children are describing a chosen shape.





Match the children to the shape they are describing.

Is there more than one possible answer? Why?

Count Edges on 3D Shapes

Adult Guidance with Question Prompts

Children count the number of edges on 3D shapes and order them starting either with the fewest or most edges. Children will benefit from having these shapes to handle in this activity, as well as a selection of others with different numbers of edges.

How many edges do each of these shapes have?

Will you order them starting from the fewest edges or the most edges?

Which will come first, second, etc?

I think the triangular prism will come last, am I right? Why/why not?

What shape could come next in your sequence after these four?

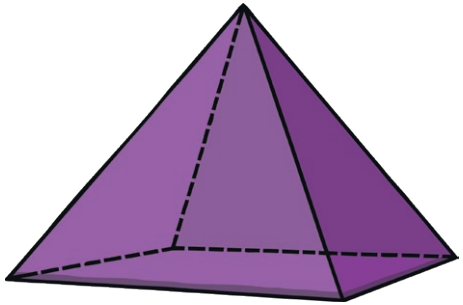
Why?

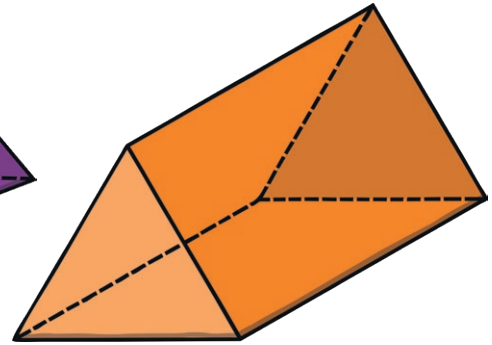
Can you name all these shapes?

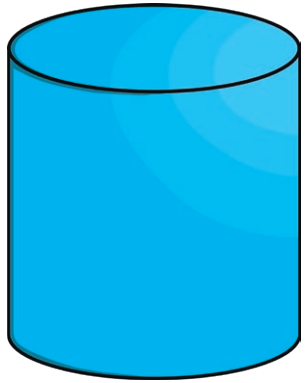
A shape always has more edges than faces, true or false? Explain your answer.

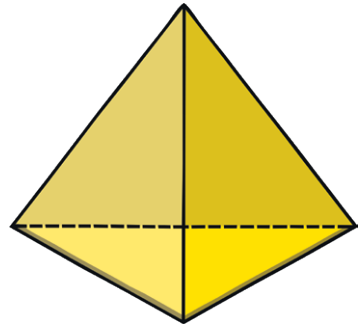
Count Edges on 3D Shapes

Put these shapes in order based upon the number of edges they have.









What could the next shape in the sequence be?