YEAR 2

Properties of shape

- Count edges on 3D shapes
- Count vertices on 3D shapes
- Sort 3D shapes
- Make patterns with 3D shapes

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Block 3 – Week 9

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Monday
Short
Lesson 1

Step: Count vertices on 3D shapes

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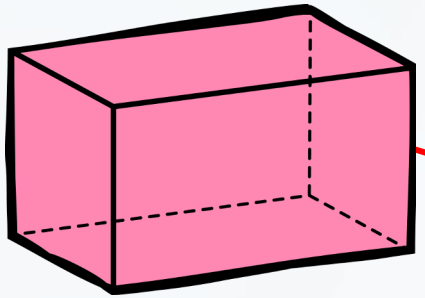
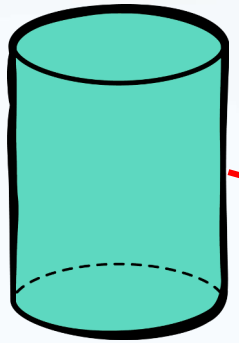
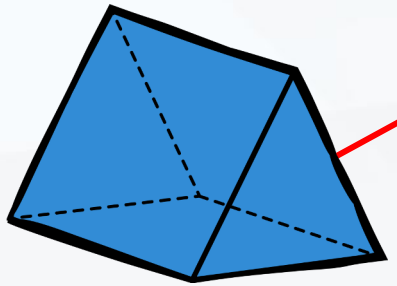
Fluency

Match the 3D shape to the number of vertices it has.







6 vertices

8 vertices

0 vertices

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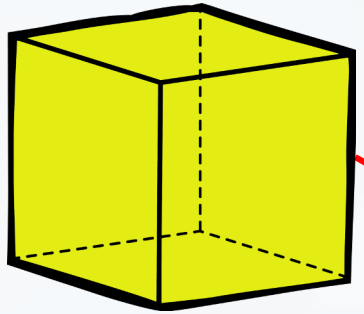
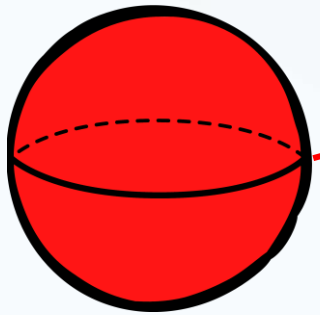
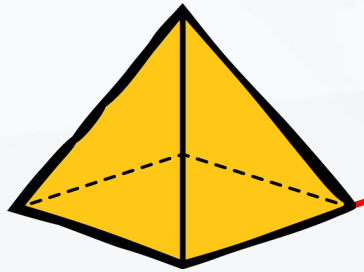
Fluency

Match the 3D shape to the number of vertices it has.







0 vertices

5 vertices

8 vertices

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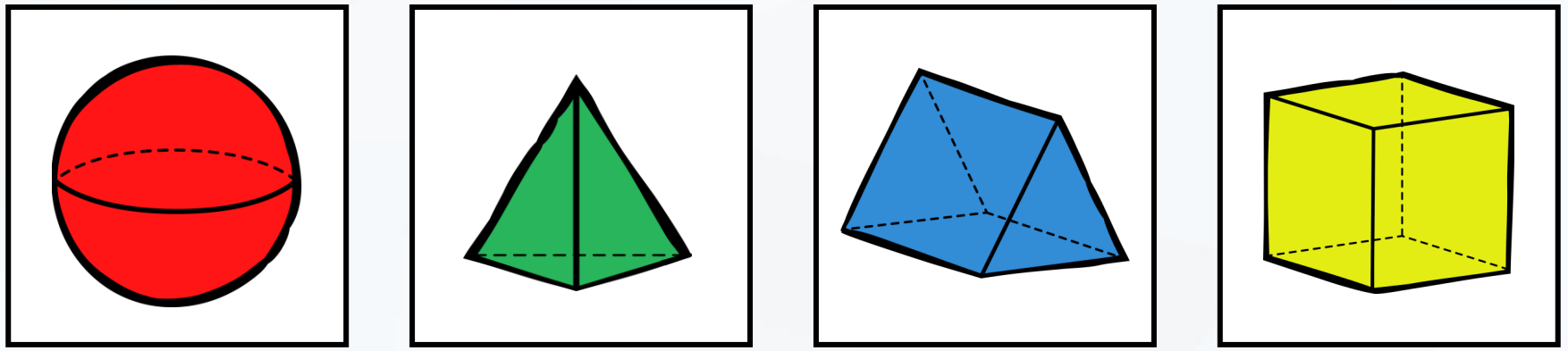
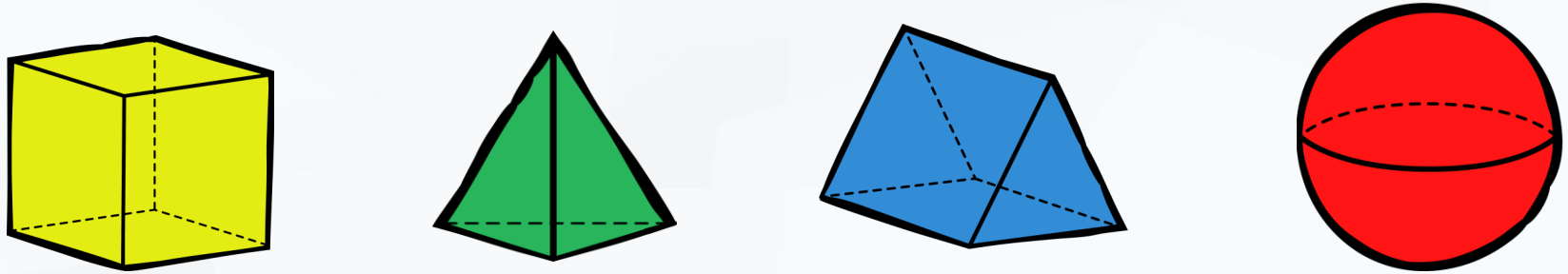
Fluency

Order the shapes from least to most based on the number of vertices it has.

Least



Most



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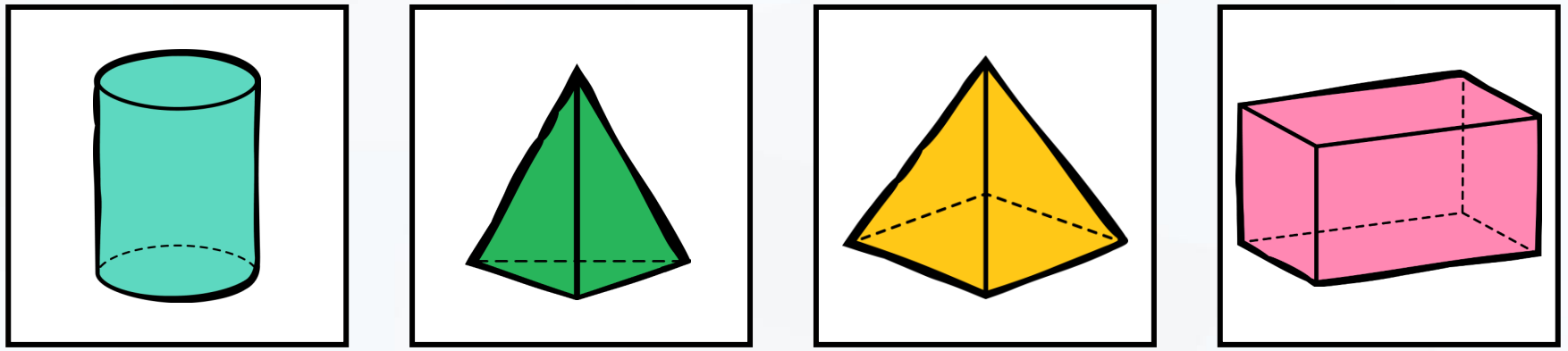
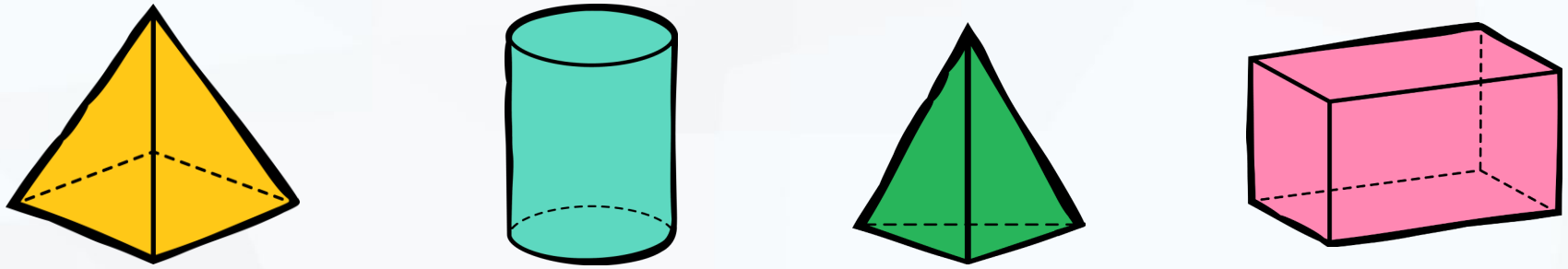
Fluency

Order the shapes from least to most based on the number of vertices it has.

Least



Most



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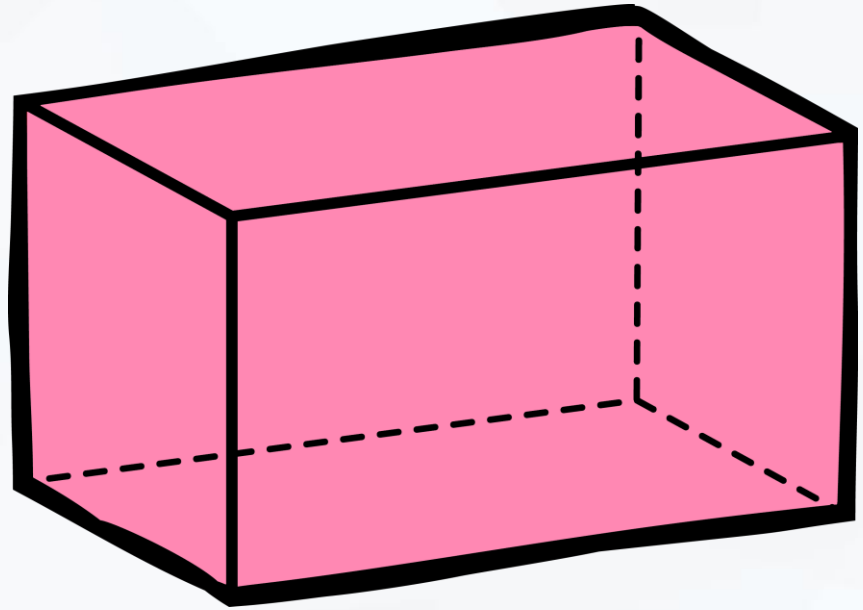
Fluency

How many vertices does this shape have?



A cuboid has 8 vertices.

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Fluency

How many vertices does this shape have?

A tetrahedron has 4 vertices.

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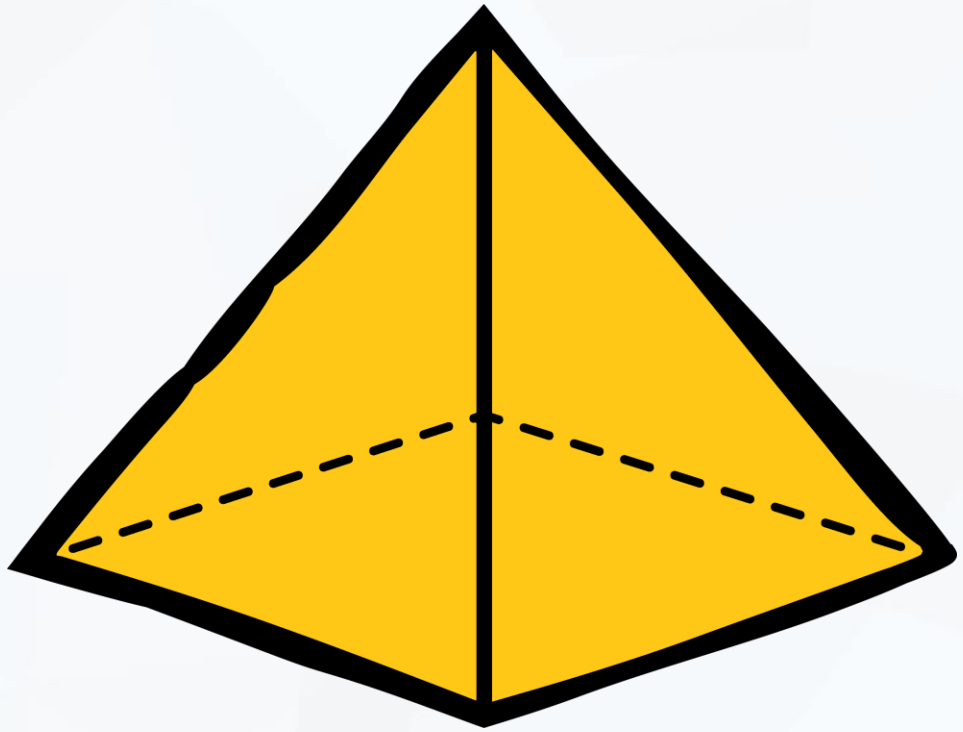
Fluency

How many vertices does this shape have?



A square-based pyramid has 5 vertices.

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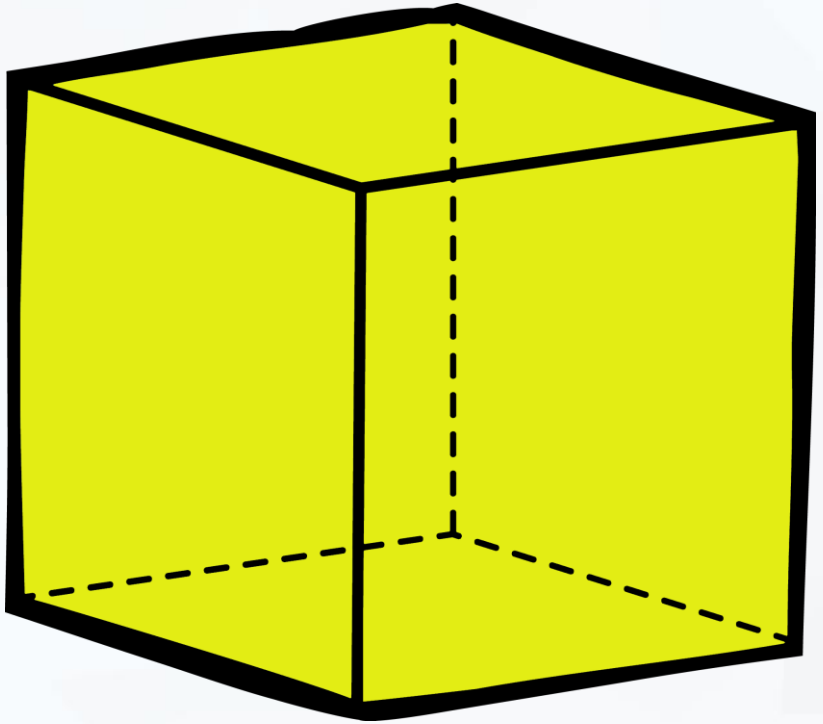
True or false?



A cube has 12 vertices.

True ☐

False ☑

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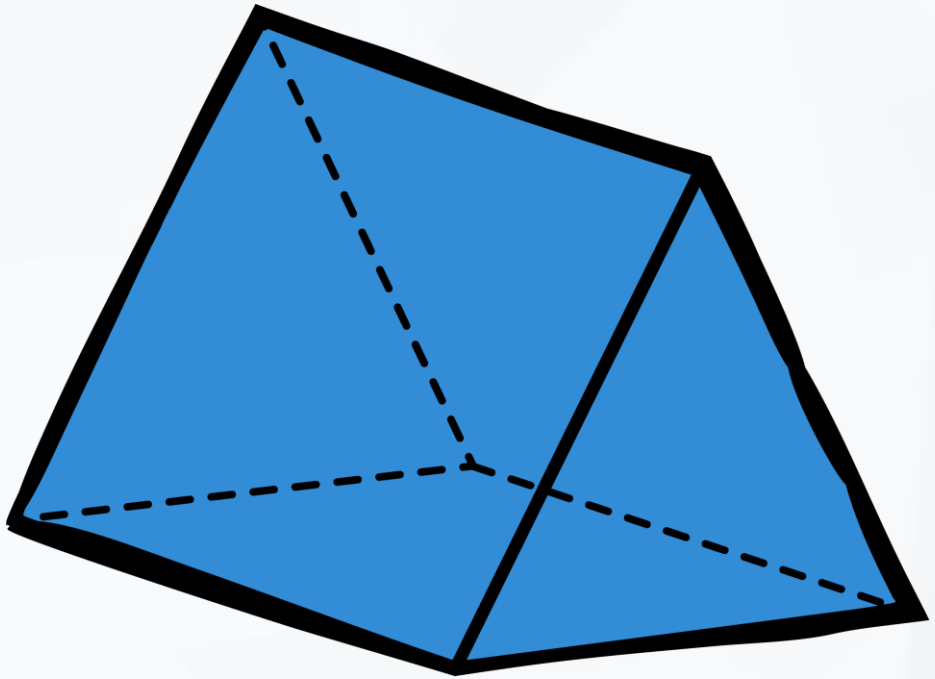
True or false?



A triangular prism has 6 vertices.

True ✓

False

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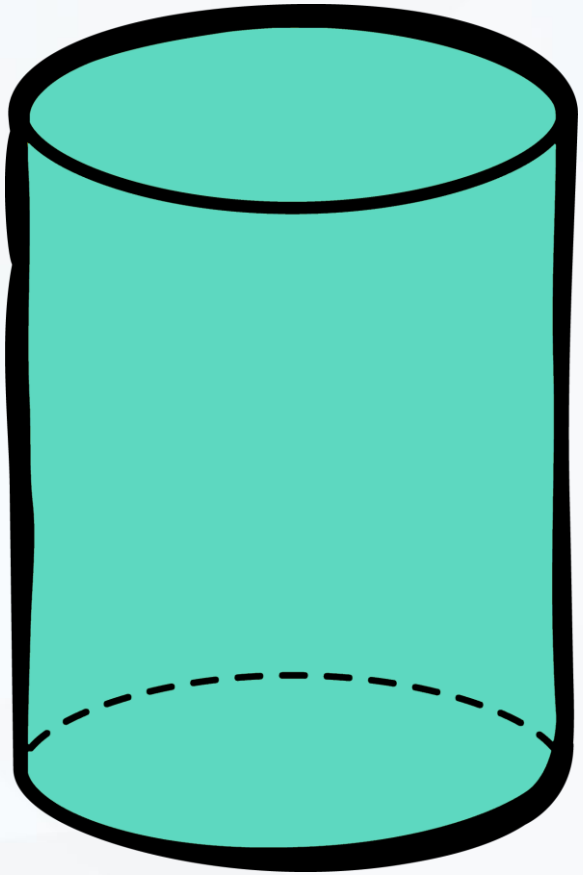
True or false?



A cylinder has 1 vertex.

True ☐

False ☑

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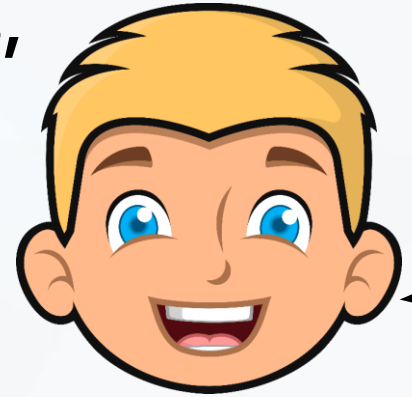
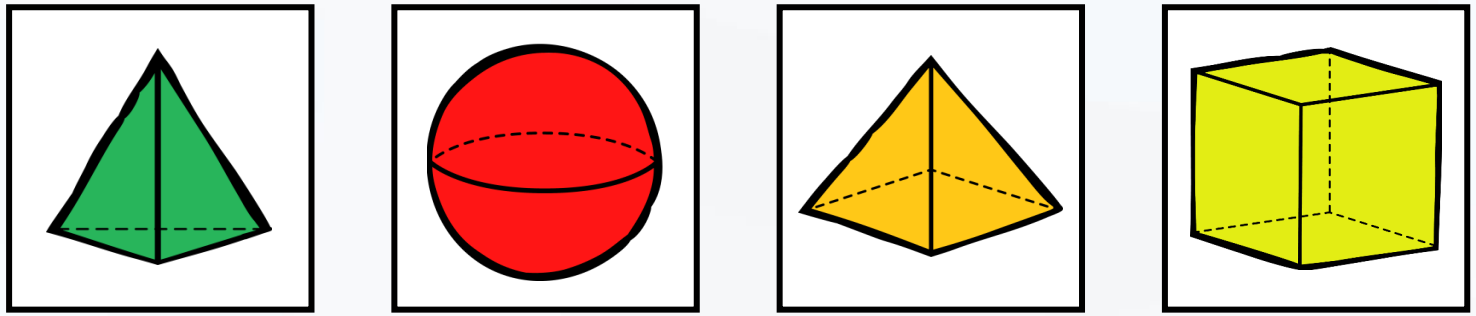
Matt says,



I have sorted these shapes based on the number of vertices least to most.



Has Matt sorted them correctly? Explain your answer.

No Matt has not sorted them correctly.
He has placed the sphere in second place.
A sphere has no vertices so it should be placed first.

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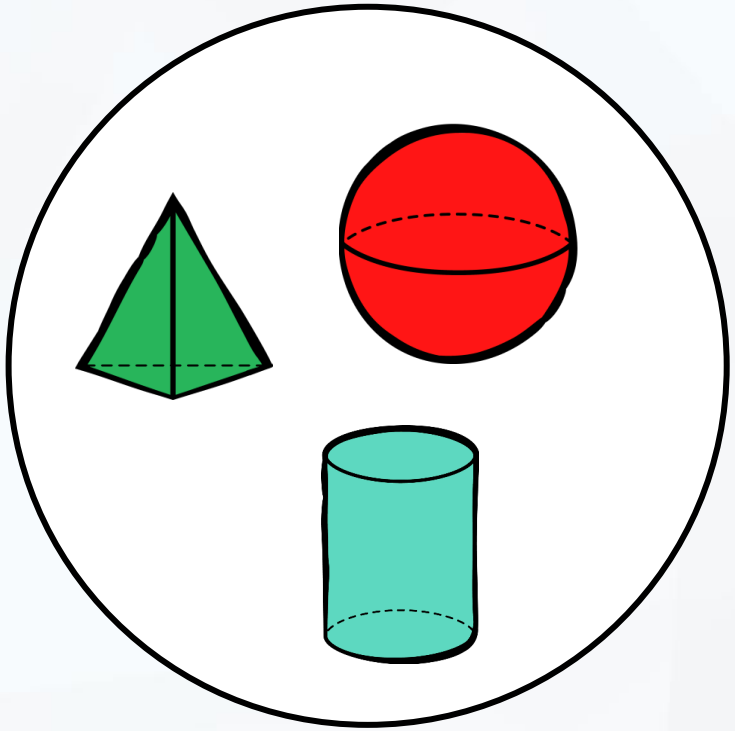
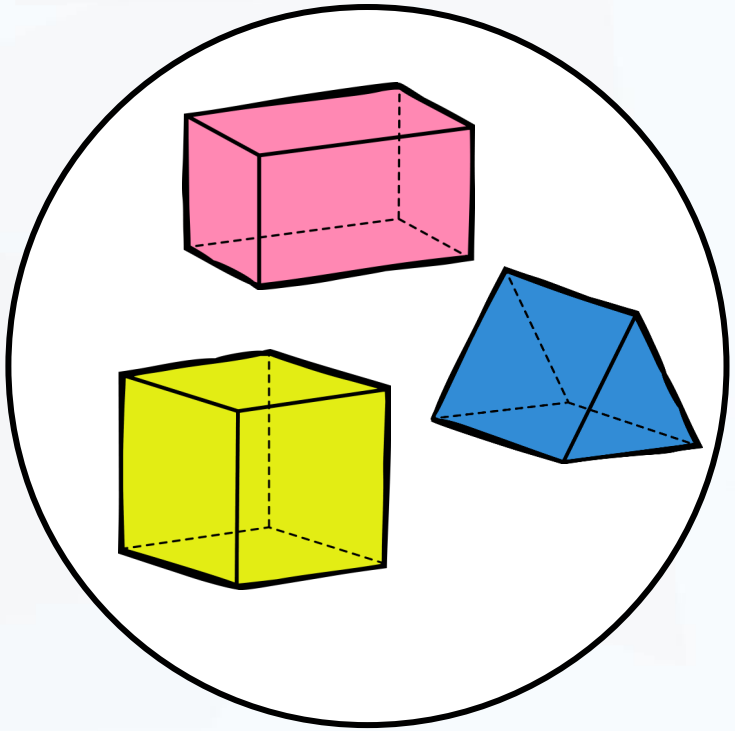
Problem solving

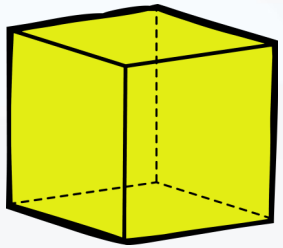
Help Jess solve the following problem.

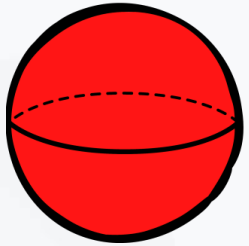
Less than 5 vertices

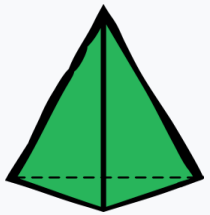


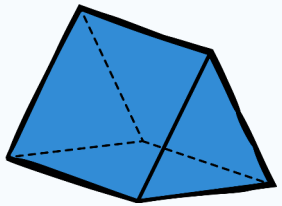
More than 5 vertices

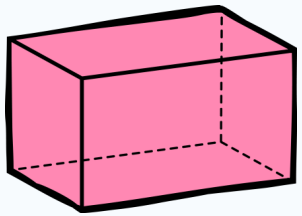


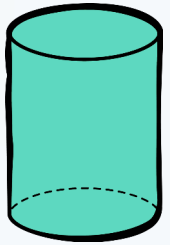












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Wednesday Short Lesson 2

Step: Sort 3D shapes (Practical)

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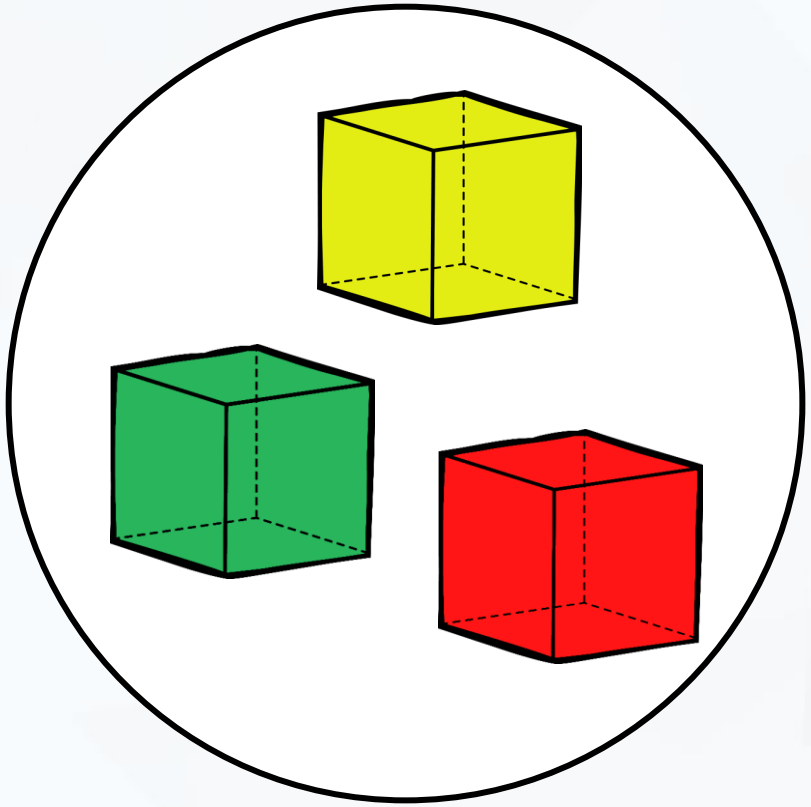
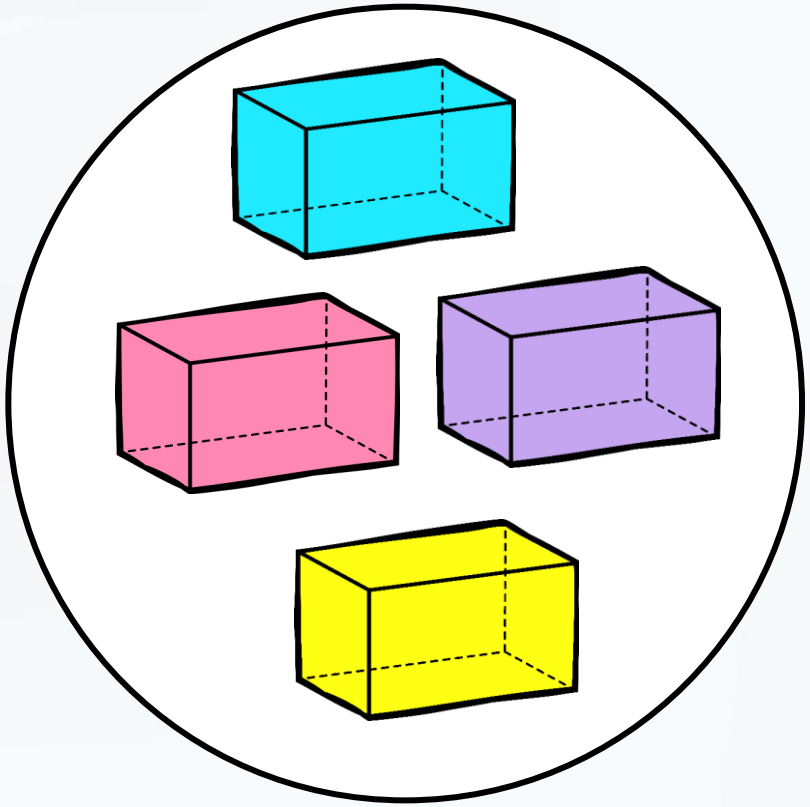
Fluency

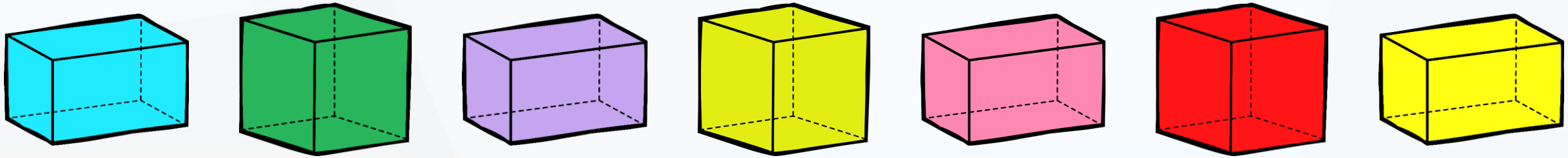
Sort the shapes into two groups.

Cubes



Cuboids





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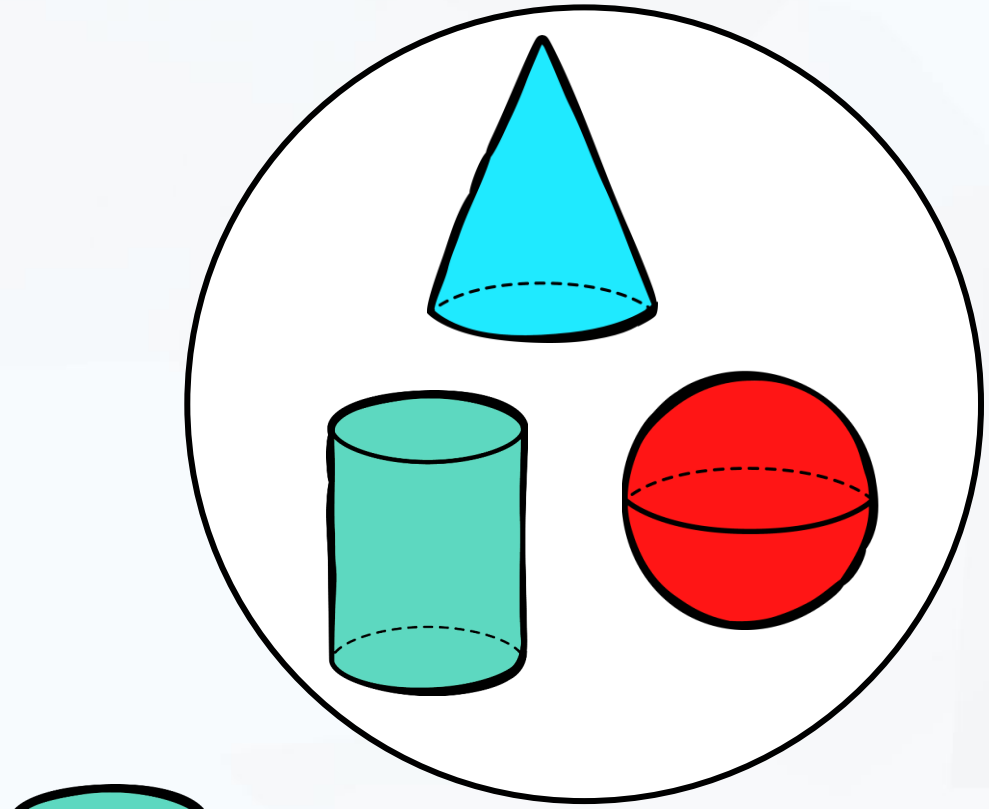
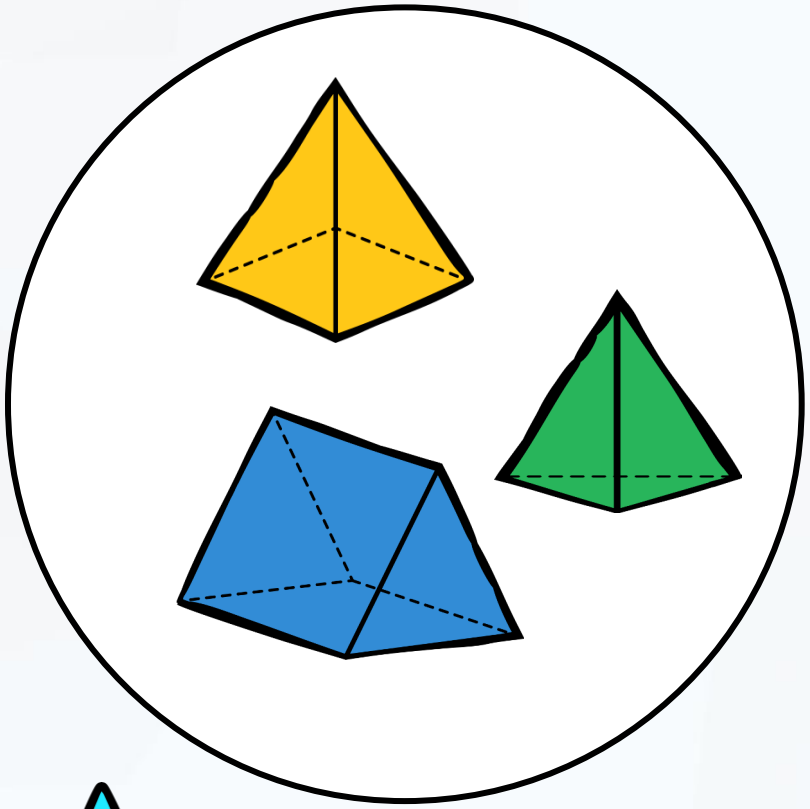
Fluency

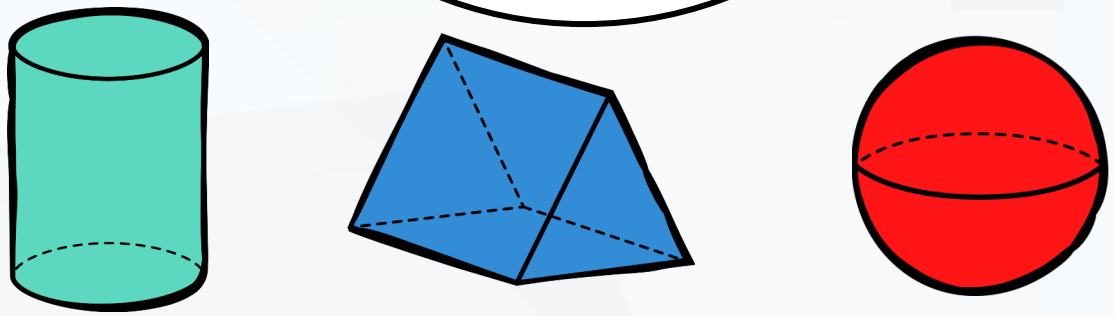
Sort the shapes into two groups.

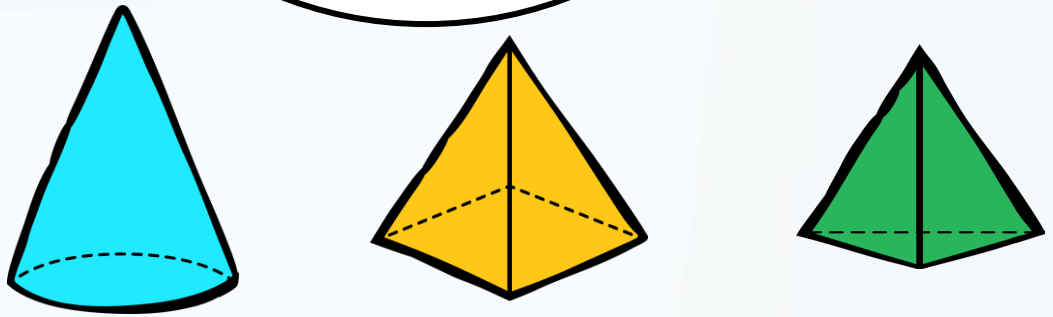
Less than 6 edges

6 or more edges









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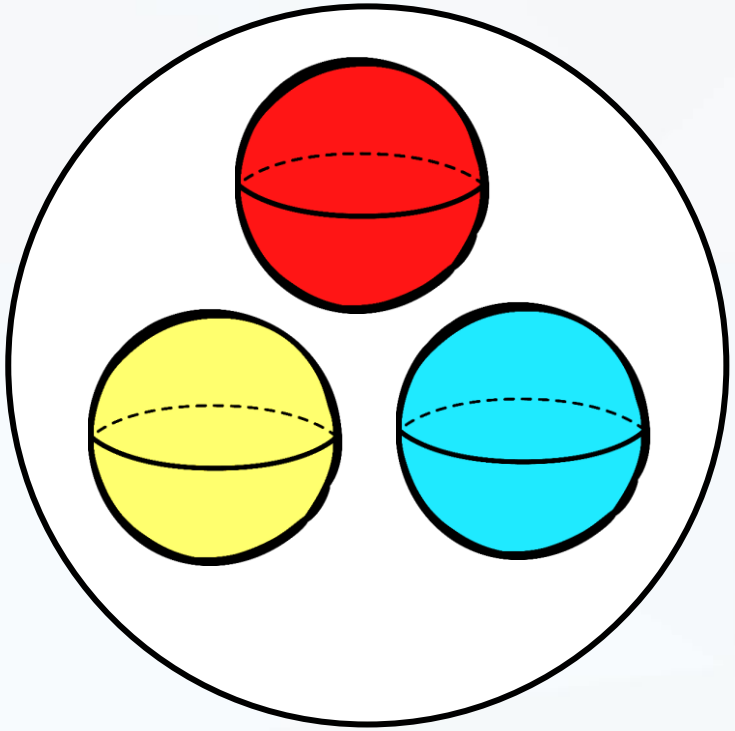
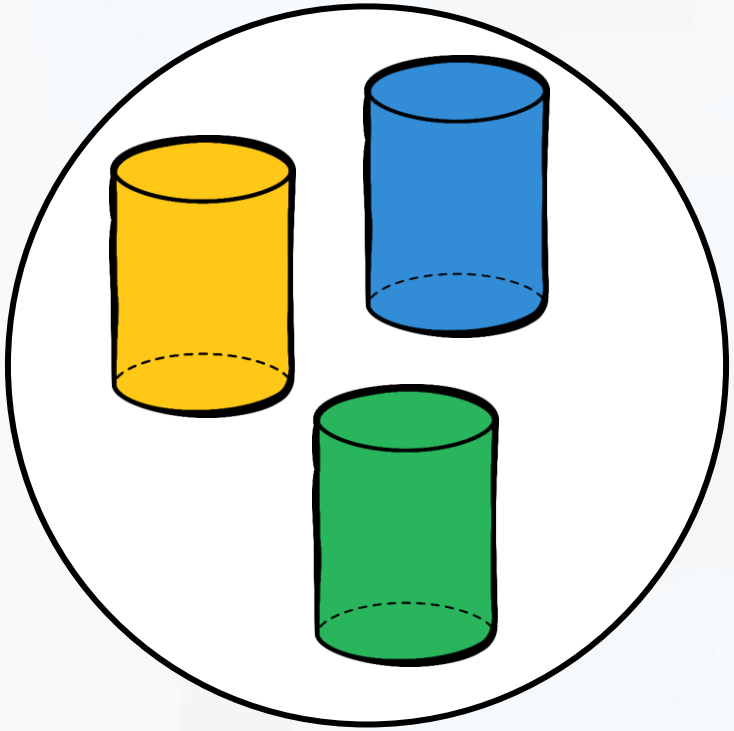
Fluency

Sort the shapes into three groups.

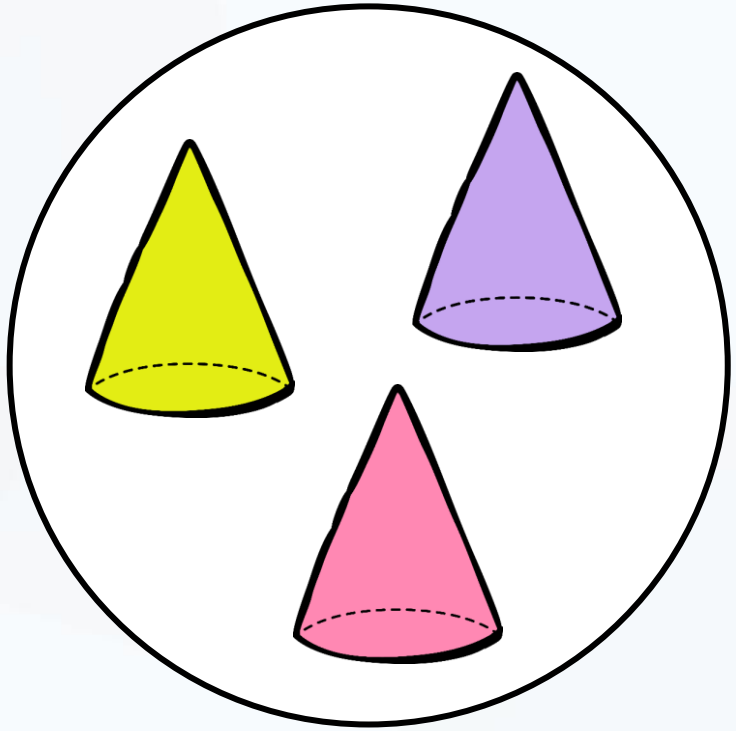
Spheres

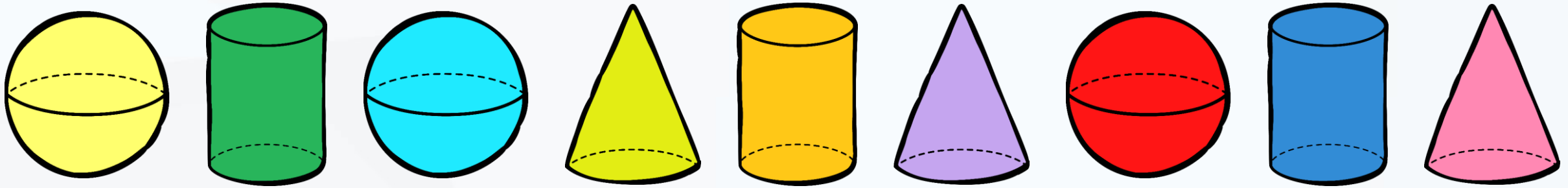


Cylinders



Cones





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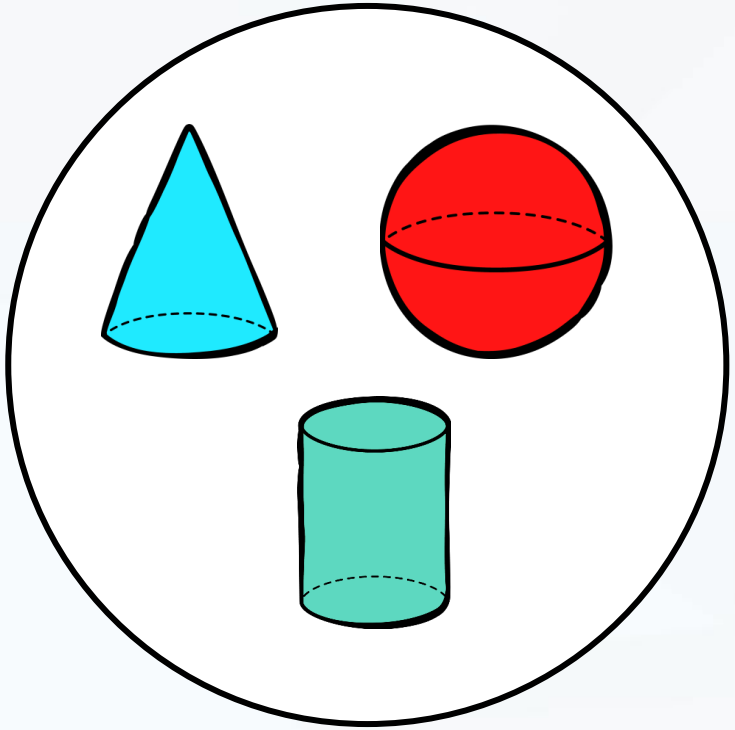
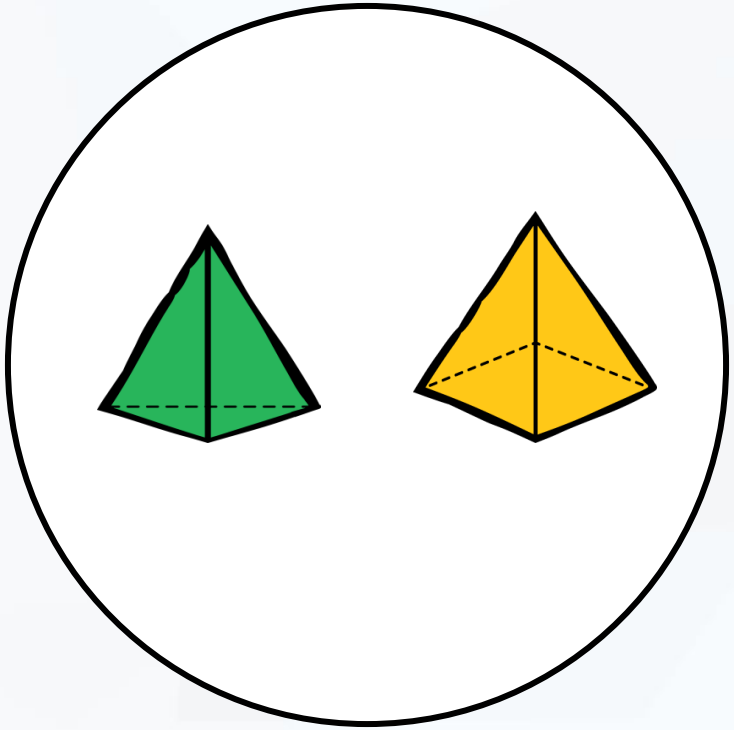
Fluency

Sort the shapes into three groups.

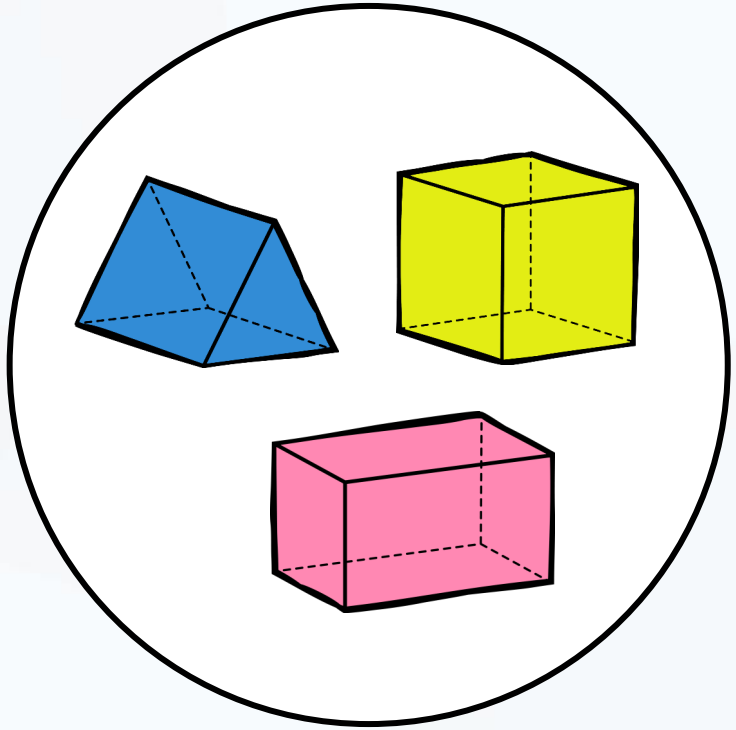
0 – 4 edges

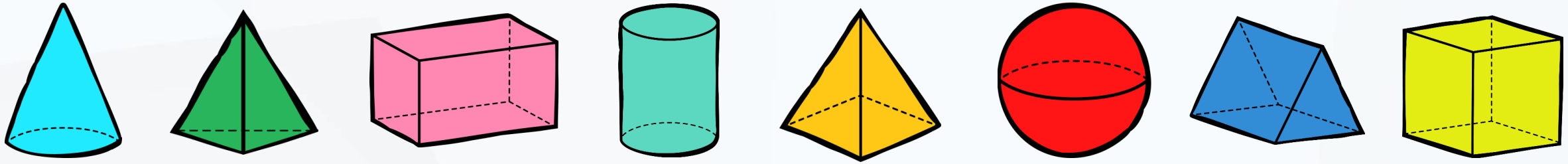


5 – 8 edges



8 – 12 edges





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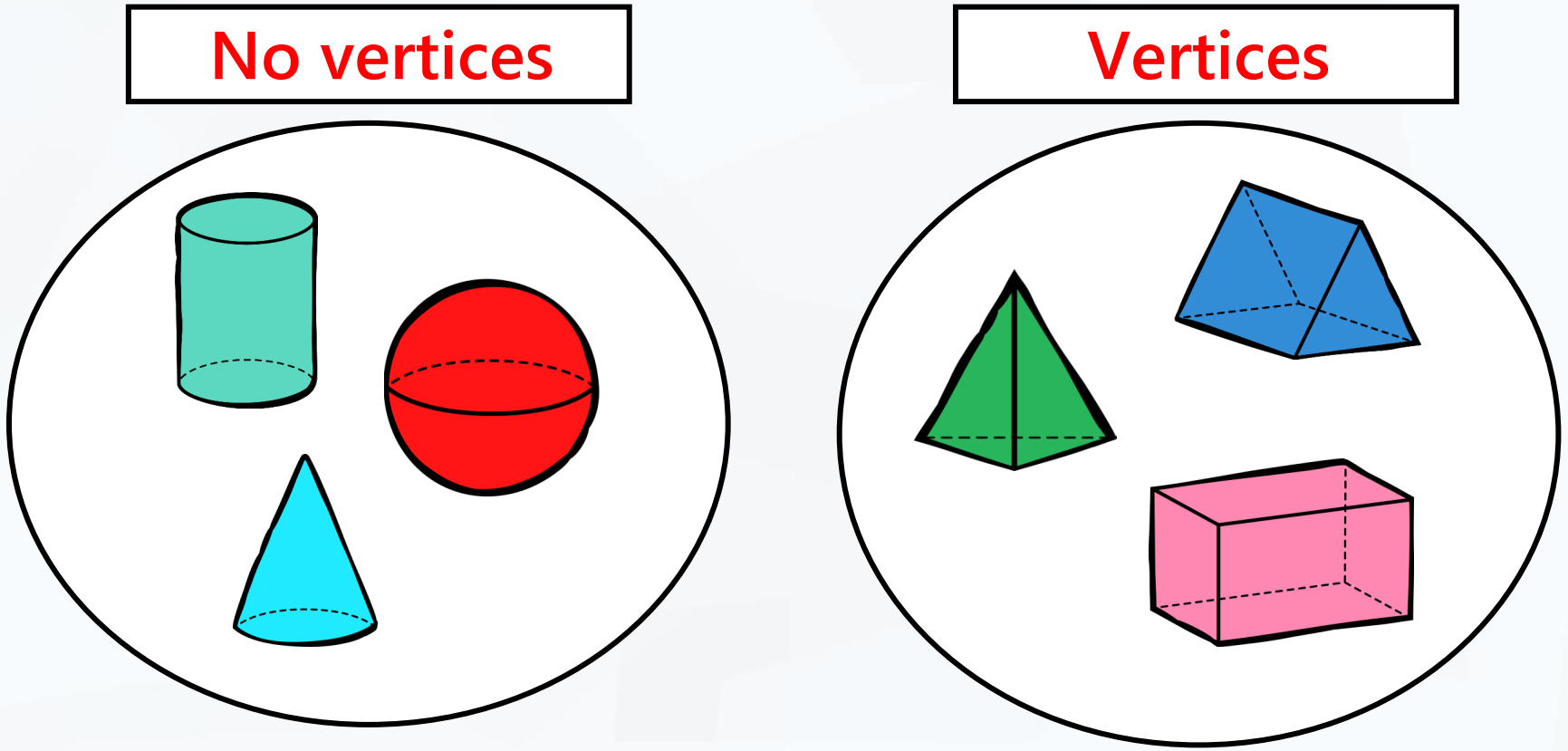
Fluency

How have these shapes been sorted?



How else could they be sorted?

They could also be sorted by curved edges / no curved edges.

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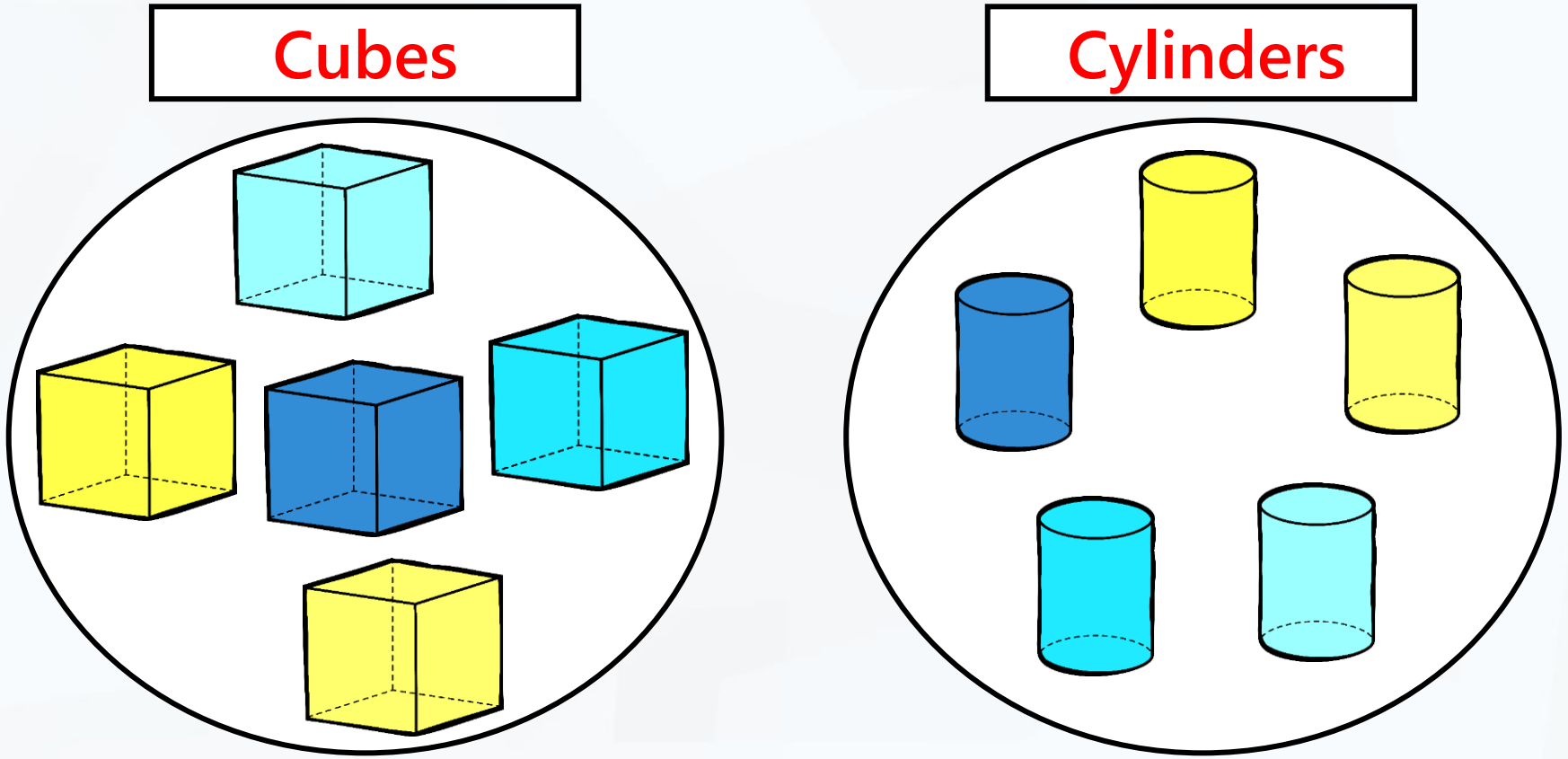
How have these shapes been sorted?



How else could they be sorted?

They could be sorted by colour (blue and yellow).

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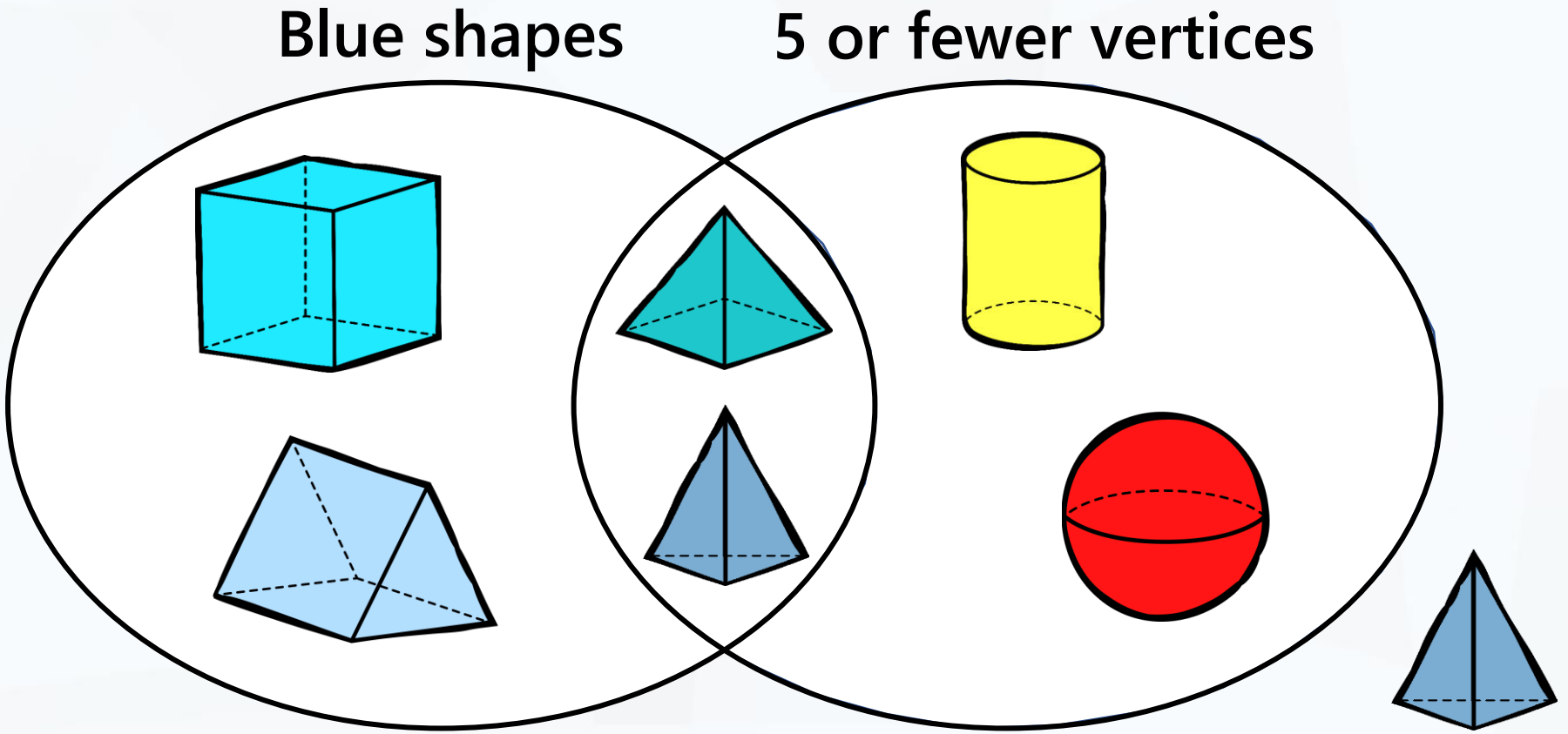
Spot the mistake.



The tetrahedron on the outside should be in the middle section as it is blue and has fewer than 5 vertices.

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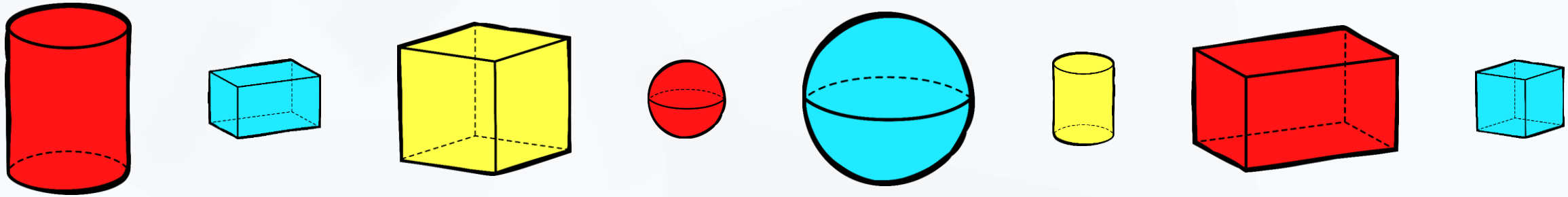
Problem solving

How can the following shapes be sorted?



Is there more than one way?

Possible answers:

They could be sorted by colour, size, shape, number of vertices.

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Friday
Short
Lesson 3

Step: Patterns with 3Dshapes

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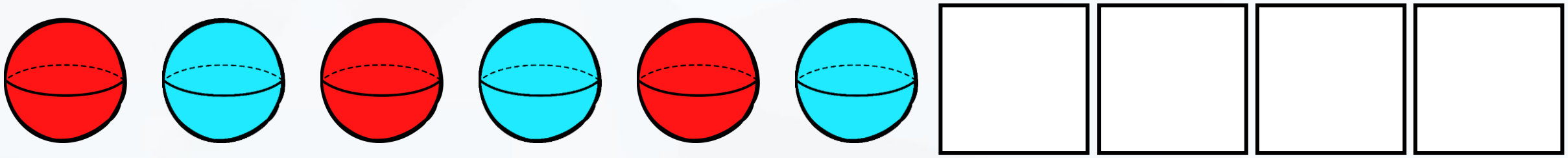
Fluency

Continue the pattern.



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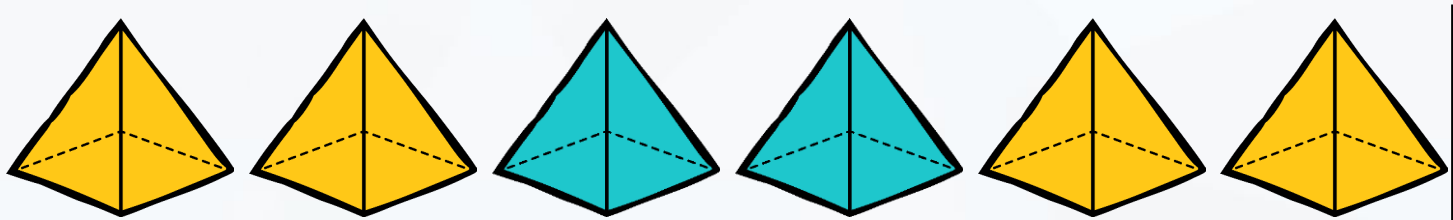
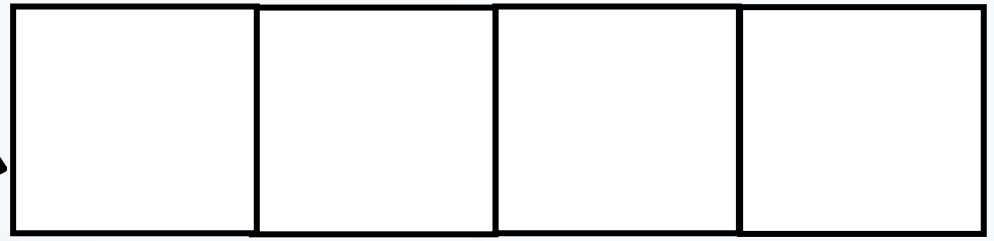
Fluency

Continue the pattern.





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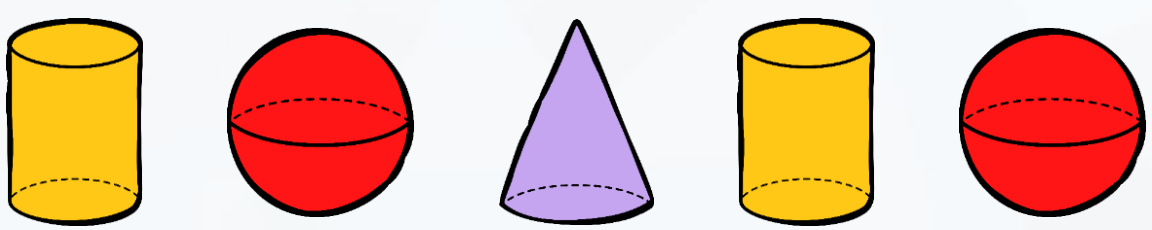
Fluency

Continue the pattern.



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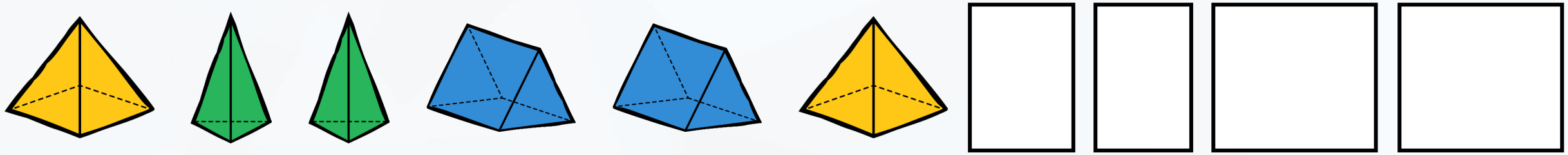
Fluency

Continue the pattern.



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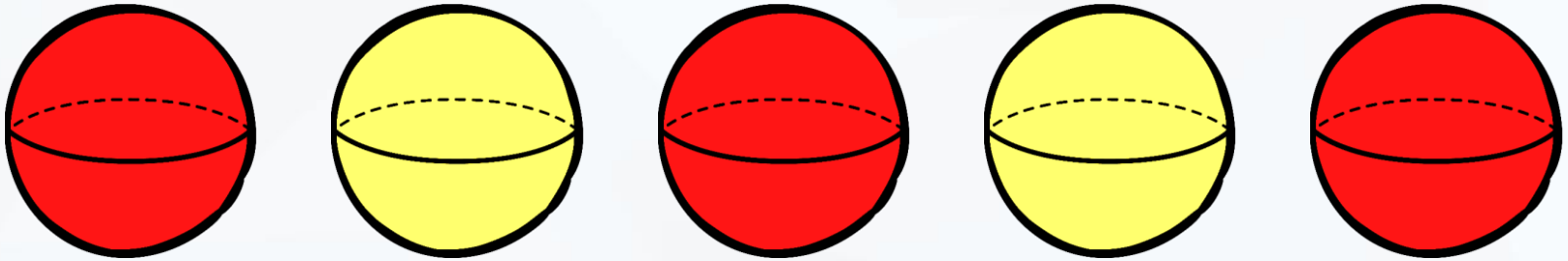
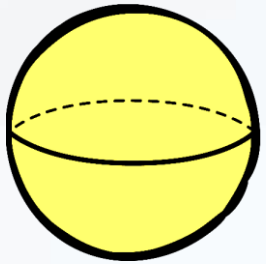


What would be the 8th shape in this pattern be?



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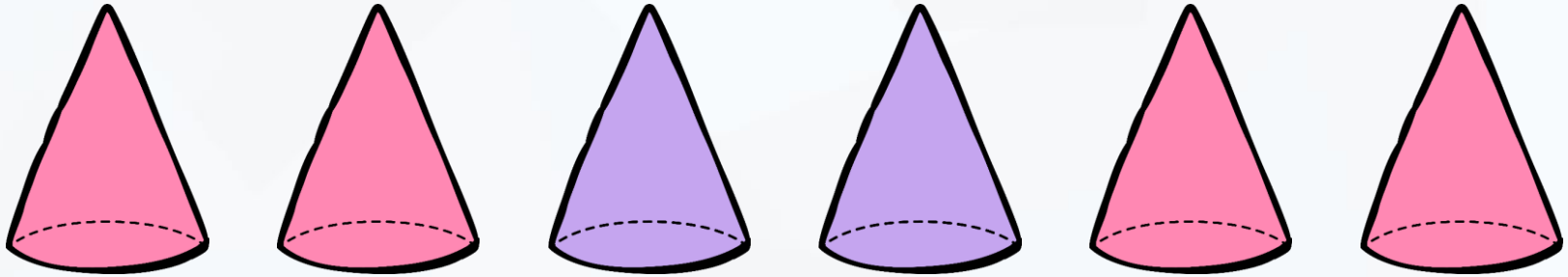
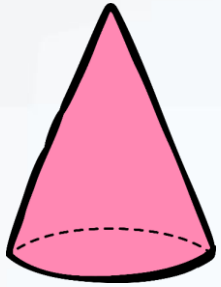


What would be the 10th shape in this pattern be?



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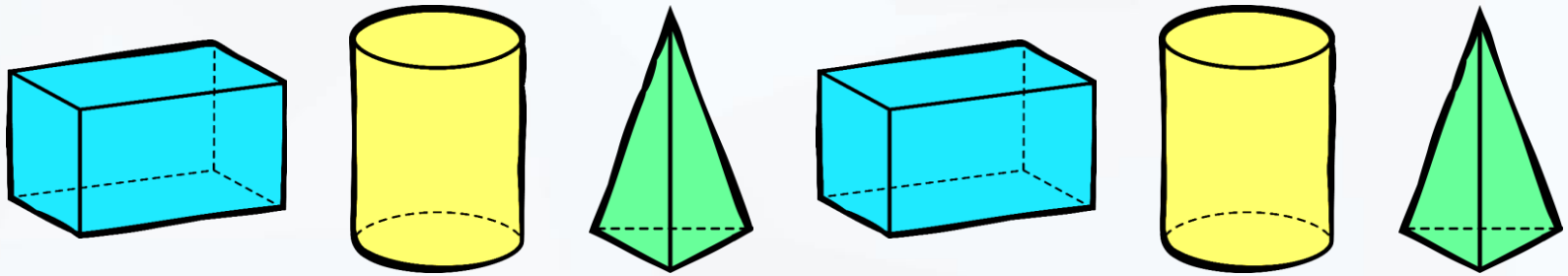
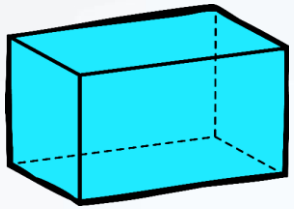


What would be the 13th shape in this pattern be?



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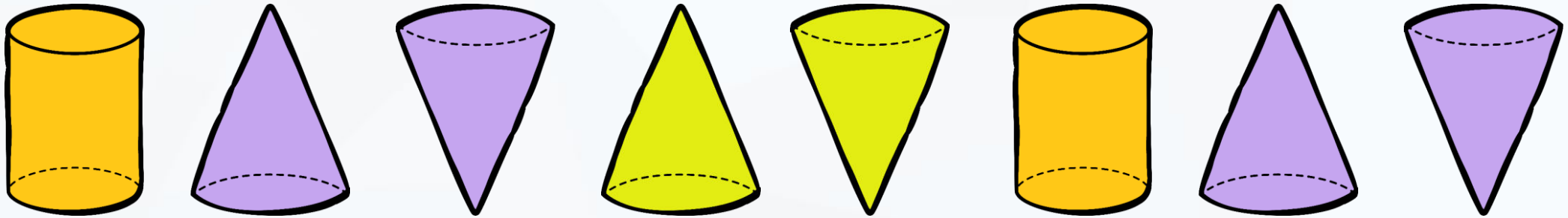
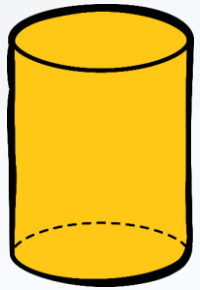


What would be the 16th shape in this pattern be?



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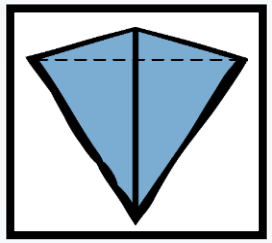
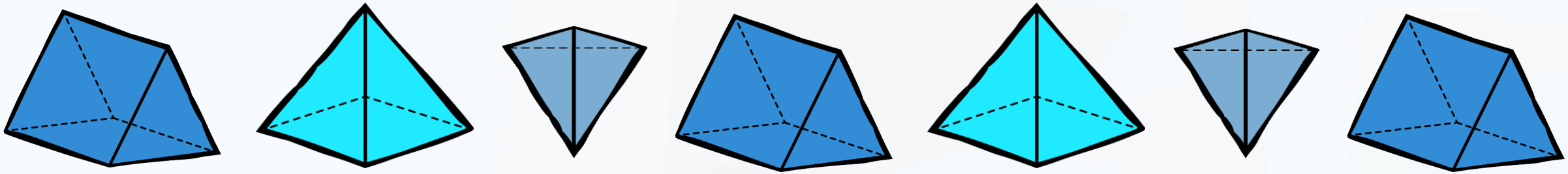
Asha says,

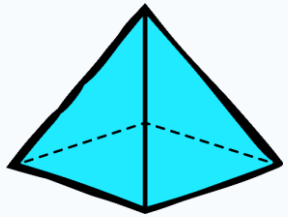
The next shape in the pattern is this blue shape:





Is Asha correct?

No, Asha is not correct.
Next will be a square-based pyramid:



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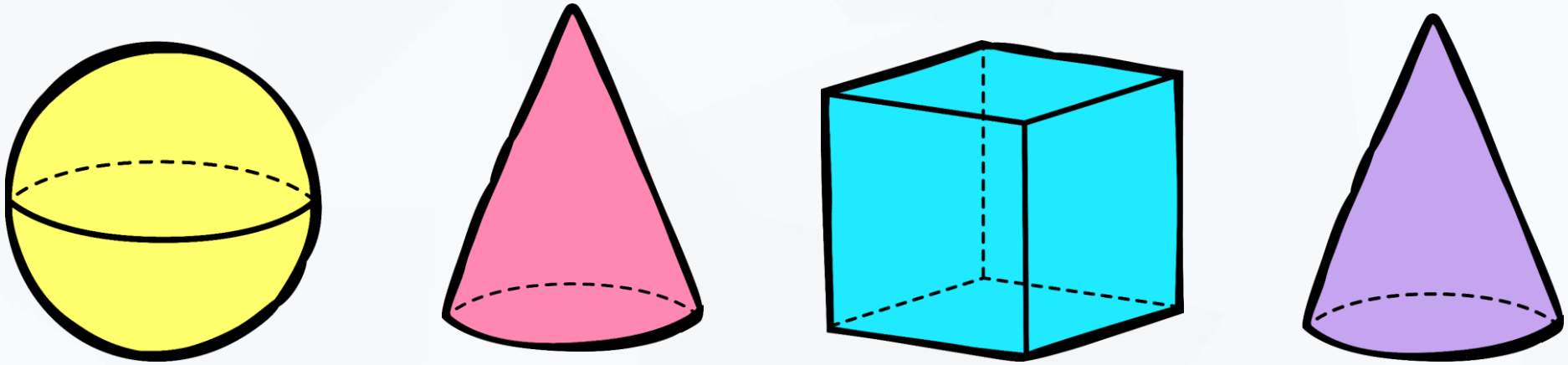
Problem solving



Create patterns using the shapes above.

You must use each shape at least once.

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