

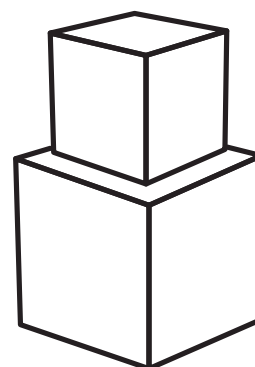
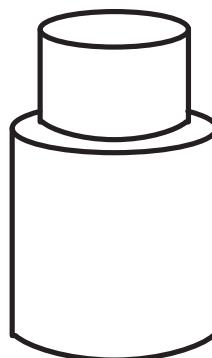
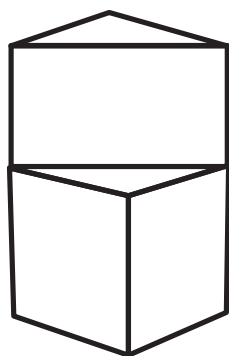
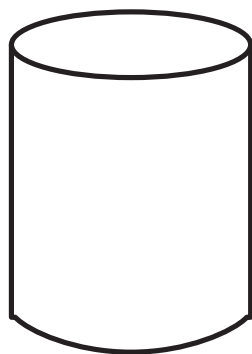
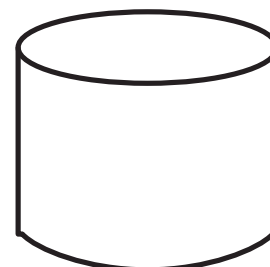
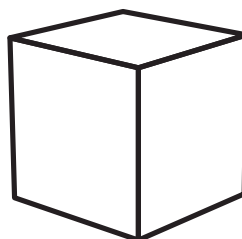
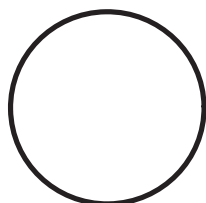
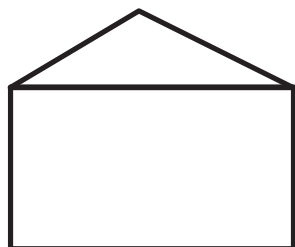
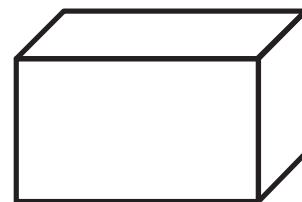
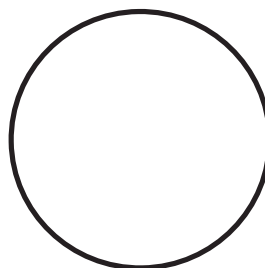
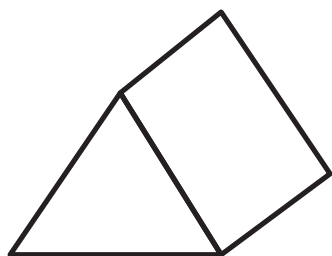
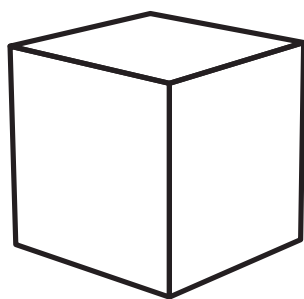
Name: _____

Data

Who Belongs Together?

Cut out each of the shapes. Choose 4 that you think belong together and put them in a group. Choose a shape that you think does not belong with them. Explain why it doesn't belong.

Repeat this again with 4 different shapes and one that doesn't belong. Use different reasons for why they belong together that you used for the first 4 shapes.



Reasoning behind the task

Sorting shapes is the basis for work in pattern, geometry and measurement. It is by classifying shapes that students can distinguish items to make patterns (e.g. red vs. blue or circle vs. square), can name shapes, and can distinguish between shapes with big and small areas.

This particular task provides students with the opportunity to create their own sorting rules; this gives them more "responsibility" than guessing someone else's sorting rule. By asking students why one shape doesn't belong, we encourage them to be flexible thinkers. By asking them to repeat the task with different shapes, we further encourage flexible thinking.

Curriculum coverage

- Data
- Classifying shapes
- Sorting objects by one or more criterion

Expectations

All	Most	Some
Sort one or two sets of five shapes using simple sorting rules.	- Appropriately sort the five shapes, justifying why four belong and one does not for at least three different sets of shapes using simple sorting rules. - Begin to use shape properties in explanations.	- Appropriately sort the five shapes, justifying why four belong and one does not for at least three different sets of shapes. - Have a clear understanding of shape properties and use this understanding to describe why shapes belong or not. - Use a wide range of 'sorting rules'.

Key questions

- What are some of the things about shapes that you can use to sort them?
- Choose a shape. What other shapes would go with it? Why do they belong together? What other shape wouldn't belong? Why?
- How did you decide that a shape didn't belong? How many things about the shape did you have to think about?
- Imagine there was a small yellow cylinder and a large yellow cube. What would make them go together? What would stop them belonging together? What shapes wouldn't belong with them?
- Is it possible for a sphere to belong with a cube? How?
- Is it possible for a triangular prism to belong with a cylinder? How?

Scaffolding learning

- Choose a shape. Think about its properties: How many sides does it have? Is it 2D or 3D? How many edges or faces does it have?
- Find 3 shapes that you think belong with your shape and one that does not. Explain your thinking behind your decisions.

Challenge

Use a wider range of shapes. Ask students to describe their reasons for shapes belonging or not using detailed understanding of shape properties.