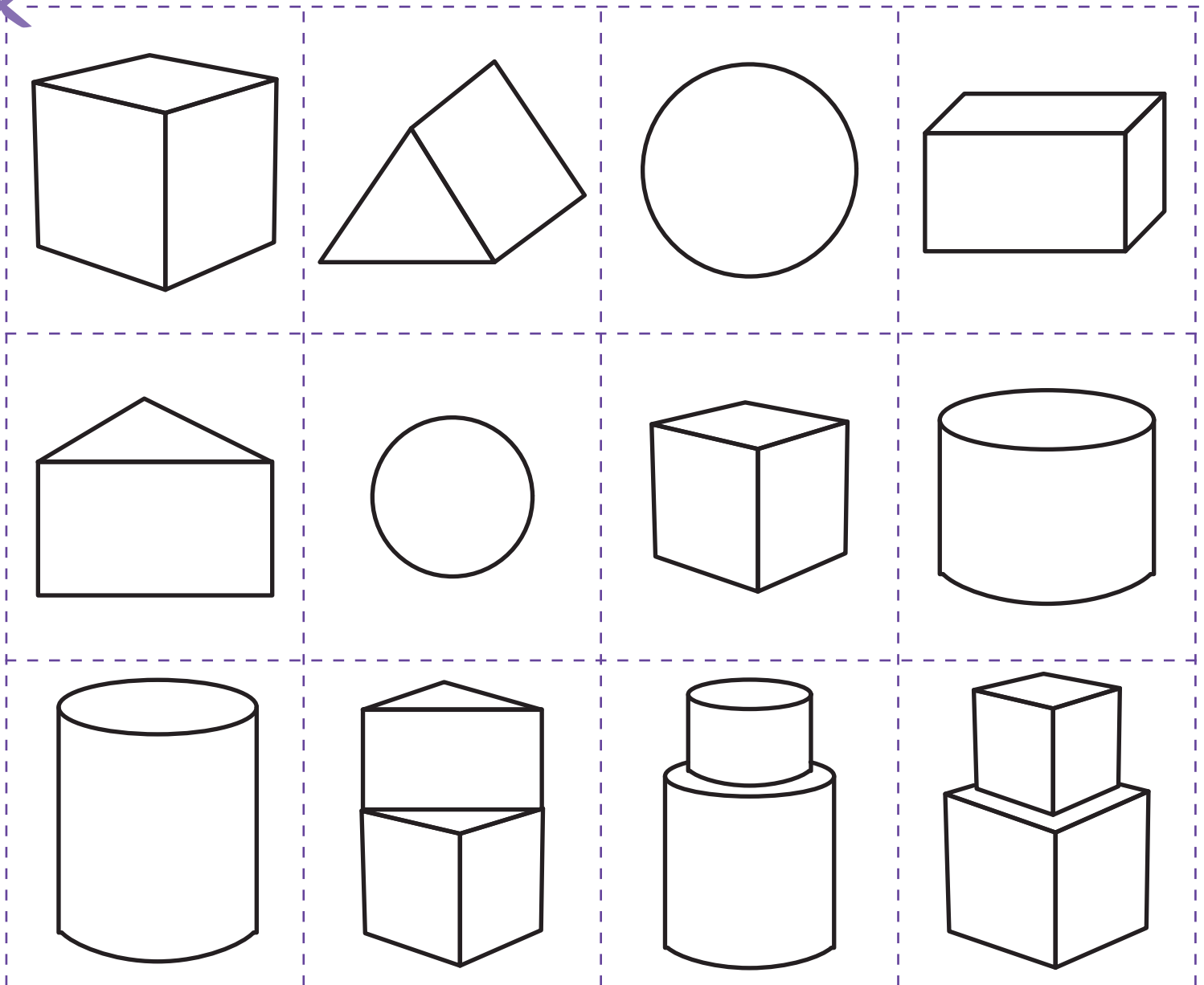


Name: _____

Who Belongs Together?

Cut out the shapes. Choose 4 that you think belong together and put them in 1 group. Then choose another shape that does not belong with them. Tell why it doesn't belong.

Repeat this one or two more times with 4 different shapes. Don't use the same reasons for them to belong together that you used for the first 4 shapes.



What's the point of this 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. Sorting is also part of the curriculum in its own right.

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.

Questions to facilitate the learning

- What are some of the things about shapes that you can use to sort them?
- Is it possible for a sphere to go with a cube? How?
- Is it possible for a triangular prism to go with a cylinder? How?
- How did you decide that a shape didn't belong? How many things about the shape did you have to think about?

Alignment to standards

This activity relates to sorting shapes (CCSS K.MD.3, K.G.4). Processes involved include CCSS Standards for Mathematical Practice MP3: Construct viable arguments.

Scaffolding the learning

- Choose a shape and make it a size and color you want. What other shape would go with it? What other shape wouldn't? Why?
- Suppose there was a small yellow sphere and a large yellow cube. What would make them go together? What wouldn't go with them?
- How could a small yellow sphere and large yellow cube not go together?

Extending the learning

Students could be asked to use criteria other than the name of the shape or color to make their categories.

Rubric

Level 1	Level 2	Level 3	Level 4
<p>The student has difficulty sorting or is able to sort but not indicate items that do not belong in the sort.</p> <p>The student is not flexible in the types of sorting rules used.</p>	<p>The student creates a reasonable sort or two and correctly names a shape that doesn't belong.</p> <p>The student is not flexible in the types of sorting rules used.</p>	<p>The student reasonably sorts the required four shapes, identifies a shape that does not belong, and justifies why at least three ways. The sorting rules used are very simple.</p> <p>The student has difficulty creating sorting rules that would suggest why shapes might go together some times and not other times.</p>	<p>The student reasonably sorts four shapes, identifies a shape that does not belong, and justifies why at least three ways. At least one or two sorting rules are "unique".</p> <p>The student can create sorting rules that would suggest why shapes might go together some times and not other times.</p>