

PRACTICE TASK: Which One Doesn't Belong?

Approximately 1-2 days

Adapted from Math Connections: Linking Manipulatives and Critical Thinking by David J. Glatzer and Joyce Glatzer (1997) by Dale Seymour Publications.

STANDARDS FOR MATHEMATICAL CONTENT

MCC1.G.1 Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.

STANDARDS FOR MATHEMATICAL PRACTICE

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

BACKGROUND KNOWLEDGE

Students should understand how to sort shapes using a variety of attributes. They should be able to explain why a shape does not belong in a group and explain. Students should understand that there is not always only one answer.

ESSENTIAL QUESTIONS

- What makes a shape different from other shapes?
- How can we group certain shapes together? Why do they belong together?

MATERIALS

- Pattern blocks
- “Which One Doesn’t Belong?” task sheet
- Brown bag

GROUPING

Small Group

TASK DESCRIPTION, DEVELOPMENT AND DISCUSSION

Part I

The students will be shown four pattern blocks, three of which have some similar properties or characteristics (based upon, shape, size, color, thickness.) Discuss which three belong together and why. Have students justify their reasoning. The teacher can decide how the students share their choices and their reasoning. Provide several examples. Next allow the students to work with a partner and create some examples. Allow students time to share their examples and have other students identify which one doesn't belong and why.

Having students explain WHY they respond to the answer that they give is extremely important. Encouraging student discussions about how or why other answers could also be correct will enrich student understanding. Once students are familiar with the language, they are able to make-up their own questions. Please note there are some examples that could have multiple correct answers. Answers are correct as long as students are able to justify them.

Part II

Teacher will place pattern blocks in a brown paper bag. One student will come to the front of the room and grab a handful of blocks from the bag. The student will show the blocks to the class, describe the blocks and decide which one(s) does not belong. The teacher will want to model this prior to the students completing in front of the class. The student will place the blocks back in the bag and another student will repeat. Complete this activity several times until the students have grasped the concept of which one does not belong.

Part III

Show students the “Which One Doesn’t Belong” task sheet. Students will look at the shapes in each box and think about how the shapes are alike. One of the shapes does not belong. Students will choose the shape and describe how the shape is different. The first puzzle could be done together. Please note that there could be multiple correct answers as long as the students can justify their response.

FORMATIVE ASSESSMENT QUESTIONS

- Can all pieces be the same?
- What makes your one shape different from the other shapes?
- Is there more than one difference?
- Could you have grouped your shapes any other way?
- Can you think of another shape that would fit into the group with the other three shapes?

DIFFERENTIATION

Extension

- Have students look through a magazine and cut out several shapes from the real world. They can use these shapes to make their own task cards. They could trade with a partner to find the shape that doesn't belong.

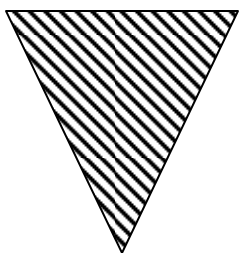
Intervention

- Use a smaller simpler set of shapes, for instance a set of three where two of the shapes are obviously alike (square and rectangle) and one that is obviously different (circle). You could also start with animals, everyday objects, etc that they would be familiar with from kindergarten.

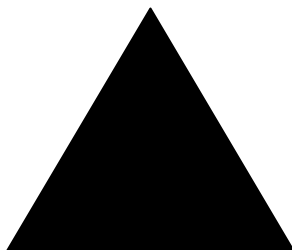
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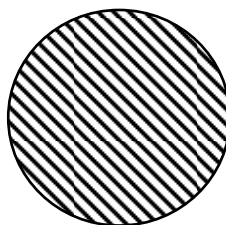
Which One Doesn't Belong?



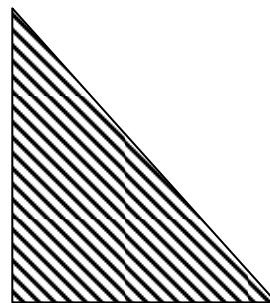
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B



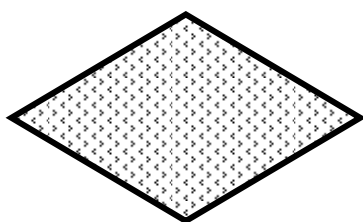
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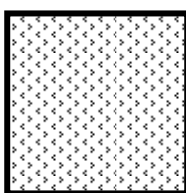
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Shape _____ doesn't belong because _____

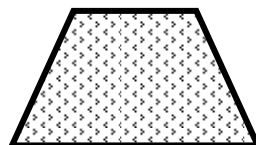
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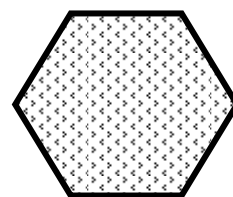
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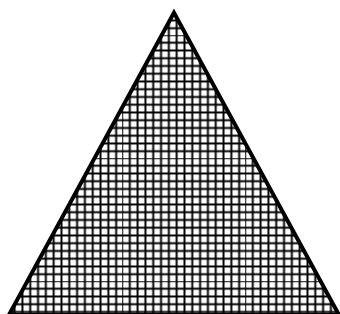
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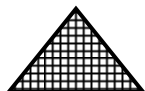
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Which One Doesn't Belong?



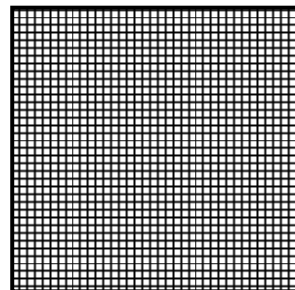
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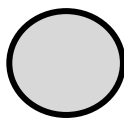
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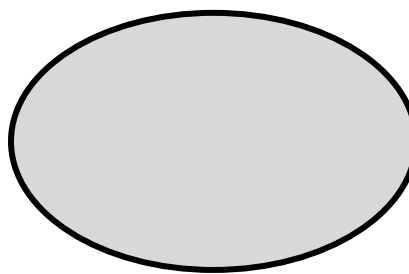
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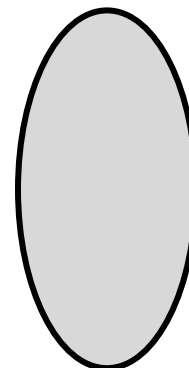
A



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C



D

Shape _____ doesn't belong because _____
