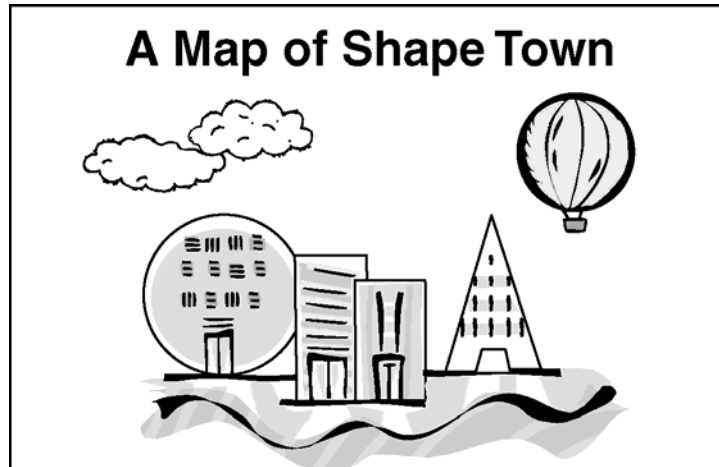


SITES-M Mathematics Challenge



Level: Grade One

Standard: Geometry and Measurement

Learning Target: Focus on Shapes

Checks for Understanding

0106.4.1

Recognize and describe similarities and differences between 2-dimensional figures (geometric attributes and properties).

SITES-M Mathematics Challenge
Grade 1–Focus on Shapes
A Map of Shape Town

The purpose of the Mathematics Challenges is to provide opportunities for students to develop and demonstrate understanding of important mathematical concepts and standards. Each Challenge includes a set of tasks that require higher-order thinking skills. Because these types of tasks may be new for students and they will have varying levels of understanding, the student responses will vary. The Challenges and guiding questions were designed to help teachers plan their implementation and elicit, analyze, and act on evidence of student understanding.

You will be able to choose which Mathematics Challenge Packet to implement each month, according to the learning needs of your students and your teaching context. Each packet contains all the materials necessary to implement the Mathematics Challenge including a grade-appropriate Challenge, the Mathematics Challenge Meeting Protocol, and the Guiding Questions for Analyzing Student Responses to Mathematics Challenges.

For each Challenge, you will complete a six step process of planning, implementation, and analysis and reflection.

The Mathematics Challenge Process

Stage	Step	Task
Planning	Step 1.	Review the Mathematics Challenge Meeting Protocol
	Step 2.	Review and solve the Mathematics Challenge prior to your Professional Learning Community (PLC) meeting. Think about your responses to the guiding questions on the Meeting Protocol
	Step 3.	Hold your PLC meeting and discuss your responses to the Guiding Questions on the Meeting Protocol
Implementation	Step 4.	Implement the Mathematics Challenge with your class
Analysis and Reflection	Step 5.	For your own planning and documentation, respond to the Guiding Questions on the Analyzing Student Responses Protocol
	Step 6.	To help us improve the Challenges and to provide recommendations for teachers implementing them in future years, complete the Mathematics Challenge Feedback Log and provide copies of all student work to the Assessment Coordinator

SITES-M Mathematics Challenge
Grade 1–Focus on Shapes
A Map of Shape Town

Mathematics Challenge Meeting Protocol

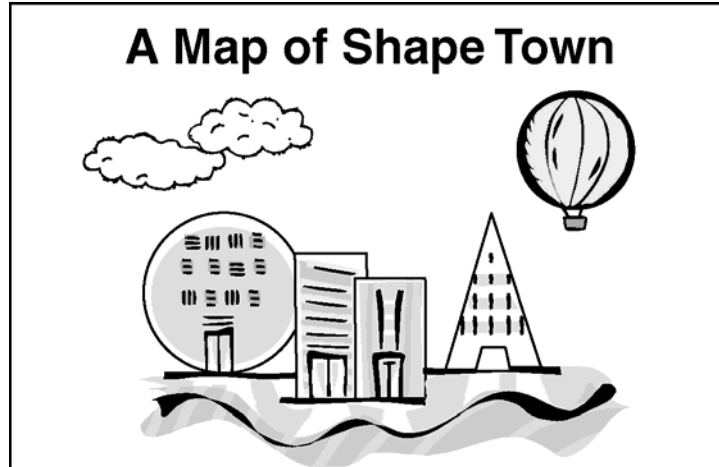
Each month, your Professional Learning Community will meet to discuss the implementation of one Mathematics Challenge. In preparation for your monthly meeting, please print and review this month’s Mathematics Challenge, solve all tasks within the Challenge, and think about the guiding questions below. These questions will be used to facilitate a group discussion regarding the implementation of the upcoming Mathematics Challenge.

Guiding Questions for Implementing the Mathematics Challenges

1. What is the title of the Challenge that you will use this month?
2. What skills or standards is this Challenge measuring?
3. Where does this Challenge fit within your curriculum? Within which unit?
4. At what point during the unit will you administer this Challenge (e.g., At the beginning of a unit to determine what students do or do not know, at the end of a unit to assess what students have or have not learned, in the middle of a unit to determine where to go next instructionally)?
5. How will your students complete this Challenge (e.g., individually, one-on-one, in small groups, as a class)? Why?
6. Are there any prerequisite skills, common misunderstandings, or vocabulary needs that you will have to address? What are they?
7. What difficulties do you anticipate your students will have with the Challenge? How will you address them?
8. Are these skills and difficulties different for special needs students, ELL students, etc.? How? Will you do anything different for these students? What?
9. How will you evaluate student responses (e.g., grade responses with the provided rubric, scan responses to identify common mistakes/misconceptions, have students evaluate one another’s responses, have students evaluate their own response)?
10. What will student responses to this Challenge tell you about student understanding?
11. How might you use this evidence of student understanding to adapt your teaching and learning?
12. What other materials, resources, or support might you need? Where can you get them?
13. How can your colleagues assist you in the analysis of student understanding?
14. What other questions or concerns do you have about this Mathematics Challenge?

After you have implemented the challenge with your class, be sure to respond to the Guiding Questions on the Analyzing Student Responses Protocol.

SITES-M Mathematics Challenge
Grade 1–Focus on Shapes



Standard: Geometry and Measurement

Learning Target: Focus on Shapes

Claims:

Students should understand and be able to explain or demonstrate how to:

- ✓ Recognize and describe similarities and differences between 2-dimensional figures (geometric attributes and properties).

Task Preparation:

Each student will need a copy of the Student Response Sheet, the map of Shape Town, the Shape Sheet, a pencil, a crayon of any color, scissors, and glue.

Stimulus Cards (Drawing or Word Description):

The Map of Shape Town and the Shape Sheet for each student

Manipulatives/Supplies:

Pencils, a crayon of any color, scissors, and glue for each student

SITES-M Mathematics Challenge
Grade 1–Focus on Shapes

Cues/Directions:

Distribute student response sheets and maps of Shape Town. Do not distribute the shape sheets yet. Students should be directed to look carefully at each figure. Allow students time to answer.

Instruct students to follow along as you read aloud and say: **The houses in Shape Town are different shapes. Look at the Map of Shape Town. The map shows streets, houses, and the address of each house. (TEACHER NOTE: Have students look at the map. You may want to give students the opportunity to make observations about the map.)**

1. Say: **Find Quadrilateral Court on the map. (TEACHER NOTE: Have students find Quadrilateral Court.) Name 3 things that are the same about the houses on Quadrilateral Court. (TEACHER NOTE: Students should write 3 similarities in the box.) How is house 203 different from house 201? (TEACHER NOTE: Students should explain the difference in the box.) How is house 206 different from house 204? (TEACHER NOTE: Students should explain the difference in the box.) How are houses 201 and 204 different from all the other houses on Quadrilateral Court? (TEACHER NOTE: Students should explain the difference in the box.)**
2. **Now find Triangle Trail on the map. (TEACHER NOTE: Have students find Triangle Trail.) Name 3 things that are the same about the houses on Triangle Trail. (TEACHER NOTE: Students should write 3 similarities in the box.) How is house 152 different from house 154? (TEACHER NOTE: Students should explain the difference in the box.) Color the two houses on Triangle Trail that have the same size and the same shape. (TEACHER NOTE: Students should color in the correct houses on the map.)**
3. **Now find Polygon Place on the map. (TEACHER NOTE: Have students find Polygon Place.) How are houses 321, 323, and 325 alike? (TEACHER NOTE: Students should explain how the houses are alike in the box.) How are houses 322, 324, and 326 alike? (TEACHER NOTE: Students should explain how the houses are alike in the box.) Houses 322 and 325 have something that is the same. What is it? (TEACHER NOTE: Students should explain the similarity in the box.)**

SITES-M Mathematics Challenge
Grade 1–Focus on Shapes

4. **(TEACHER NOTE:** Hand out shape sheets and scissors to each student.) **Cut out the 6 triangles on your Shape Sheet. (TEACHER NOTE:** Have students cut out their 6 triangles.) **Use 2 triangles to make a bigger triangle. Glue the bigger triangle into the box below. (TEACHER NOTE:** Students should glue 2 triangles in the box so they make a larger triangle.) **Use 2 triangles to make a square. Glue the square into the box below. (TEACHER NOTE:** Students should glue 2 triangles in the box so they make a square.) **Use 2 triangles to make a shape with 4 sides that is not a square. Glue the shape into the box below. (TEACHER NOTE:** Students should glue 2 triangles in the box so they make a parallelogram.)

SITES-M Mathematics Challenge
Grade 1—Focus on Shapes

SITES-M Mathematics Challenge
Grade 1–Focus on Shapes

Student Response Sheet
A Map of Shape Town



Name: _____

Date: _____

The houses in Shape Town are different shapes. Look at the Map of Shape Town. The map shows streets, houses, and the address of each house.

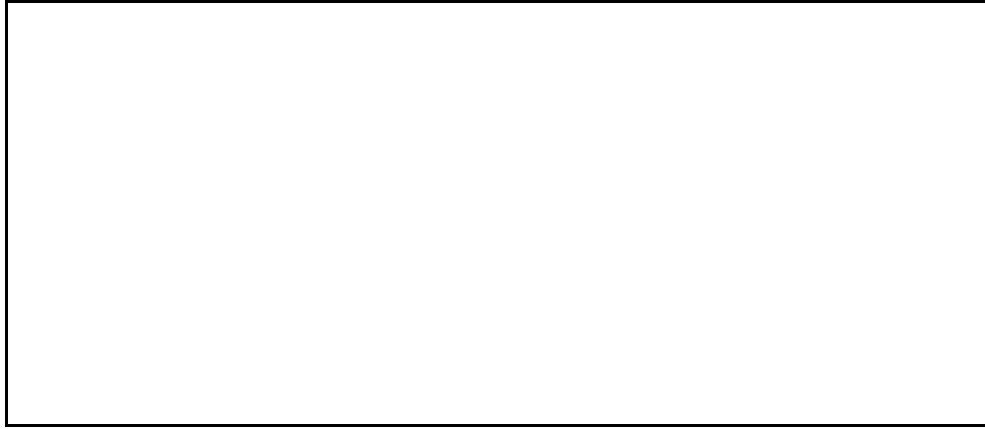
1. Find Quadrilateral Court on the map.

a. Name 3 things that are the same about the houses on Quadrilateral Court.

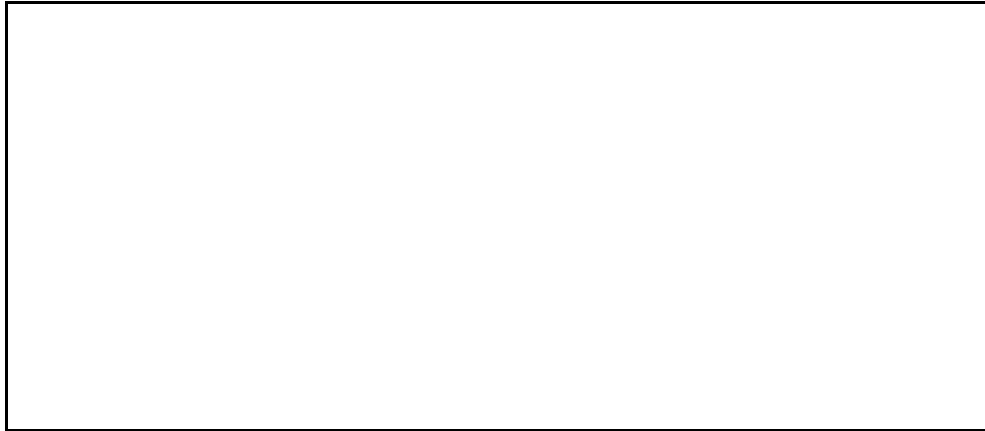
b. How is house 203 different from house 201?

SITES-M Mathematics Challenge
Grade 1–Focus on Shapes

c. How is house 206 different from house 204?



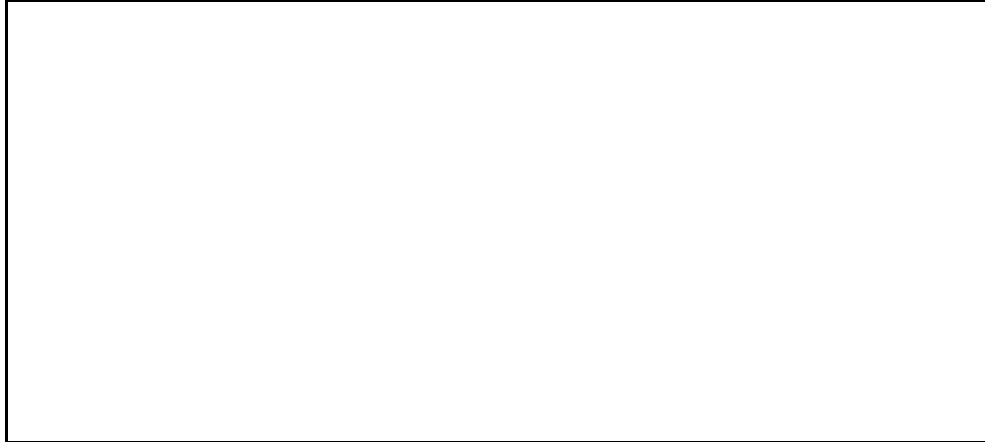
d. How are houses 201 and 204 different from all the other houses on Quadrilateral Court?



SITES-M Mathematics Challenge
Grade 1–Focus on Shapes

2. Now find Triangle Trail on the map.

a. Name 3 things that are the same about the houses on Triangle Trail.



b. How is house 152 different from house 154?



c. Color the two houses on Triangle Trail that have the same size and the same shape.

SITES-M Mathematics Challenge
Grade 1–Focus on Shapes

3. Now find Polygon Place on the map.

a. How are houses 321, 323, and 325 alike?



b. How are houses 322, 324, and 326 alike?

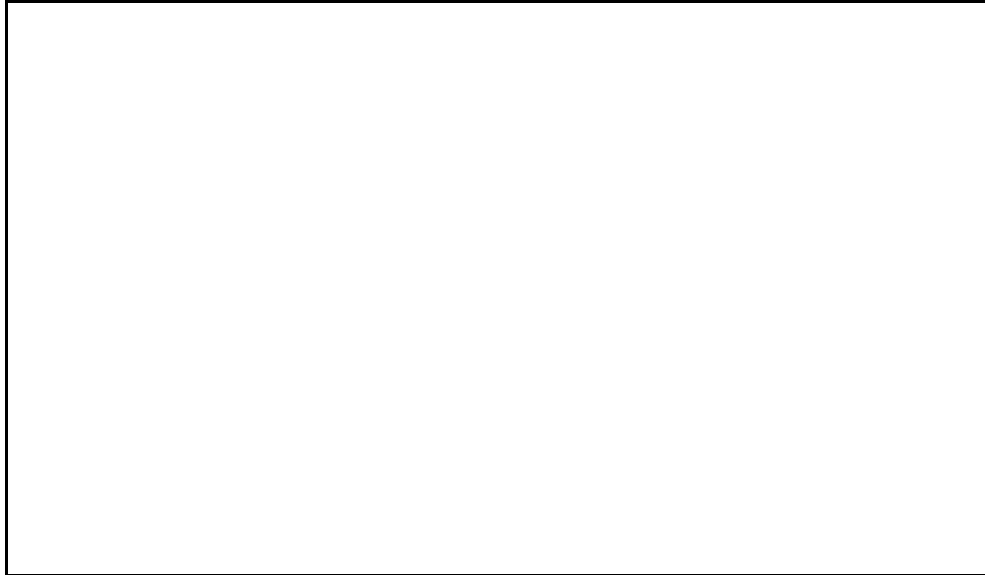


**c. Houses 322 and 325 have something that is the same.
What is it?**

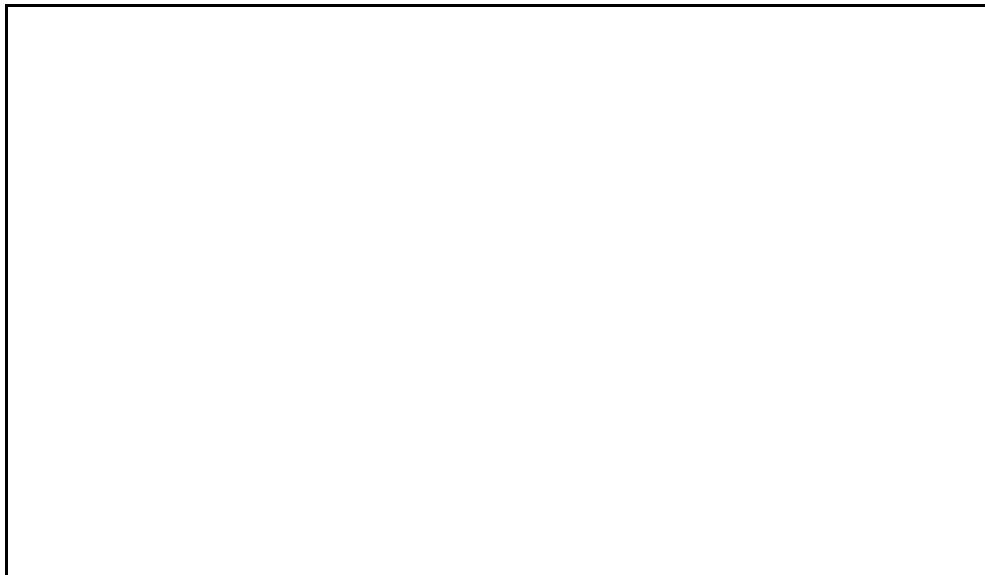


SITES-M Mathematics Challenge
Grade 1–Focus on Shapes

- 4. Cut out the 6 triangles on your Shape Sheet.**
- a. Use 2 triangles to make a bigger triangle. Glue the bigger triangle into the box below.**

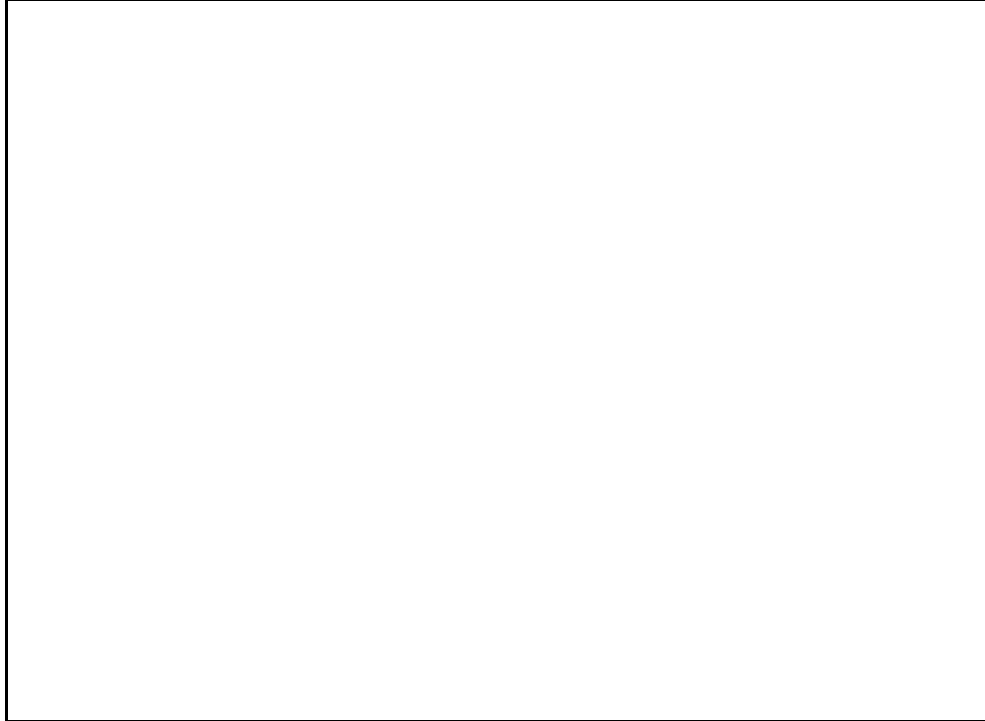


- b. Use 2 triangles to make a square. Glue the square into the box below.**



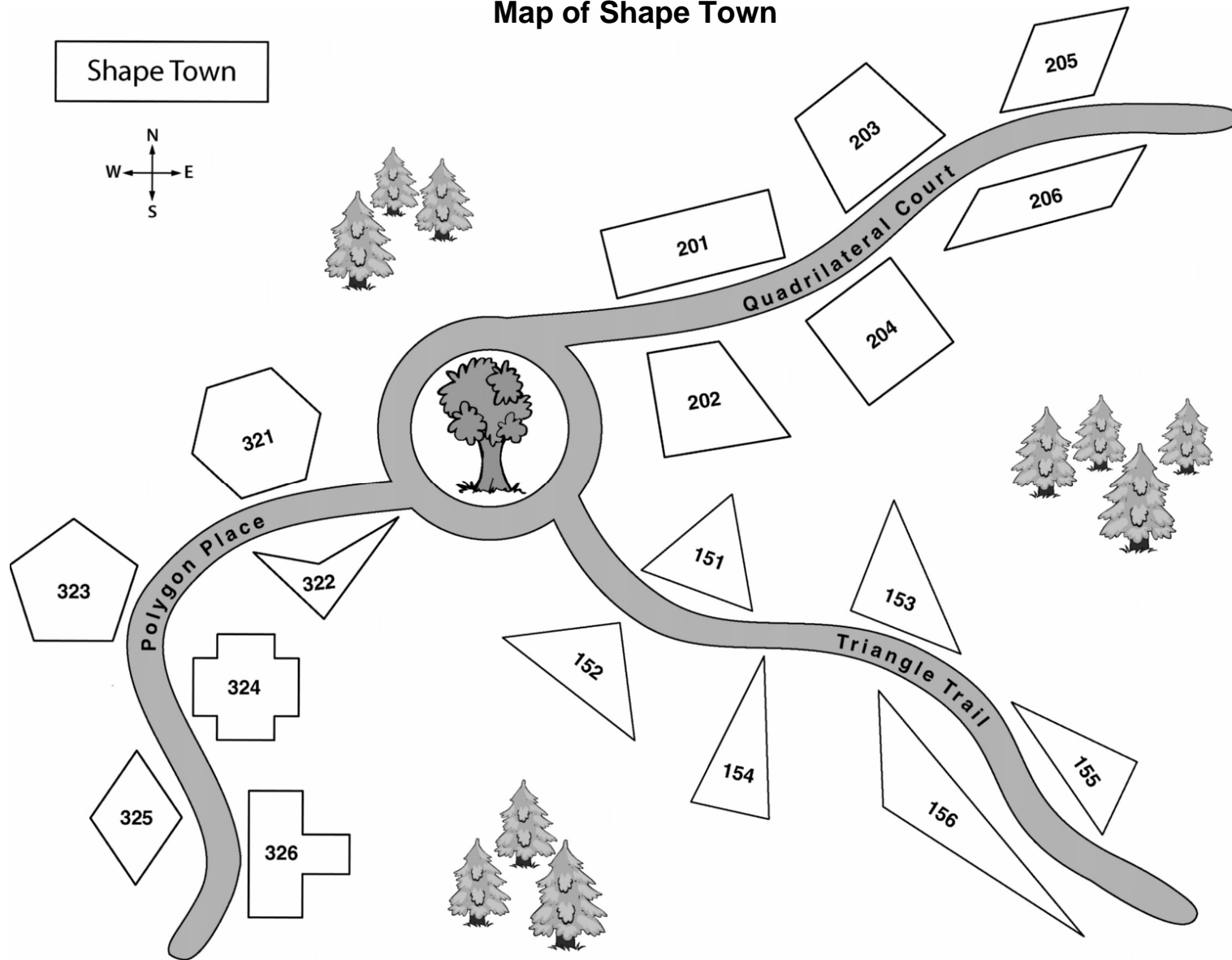
SITES-M Mathematics Challenge
Grade 1–Focus on Shapes

- c. Use 2 triangles to make a shape with 4 sides that is not a square. Glue the shape into the box below.



SITES-M Mathematics Challenge
Grade 1–Focus on Shapes

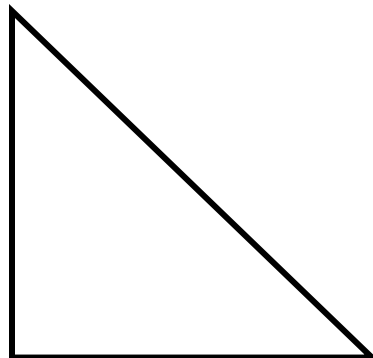
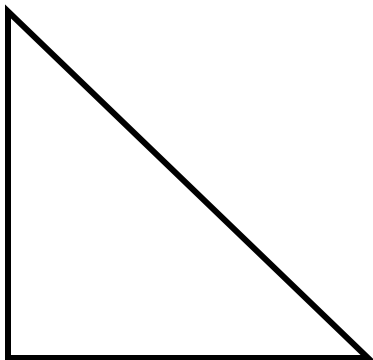
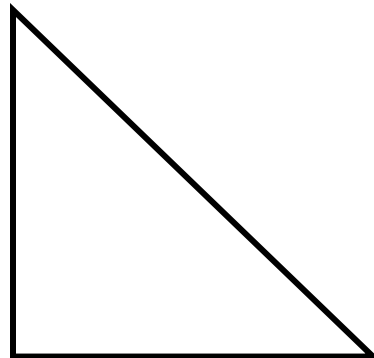
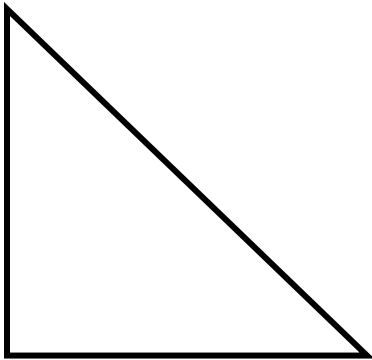
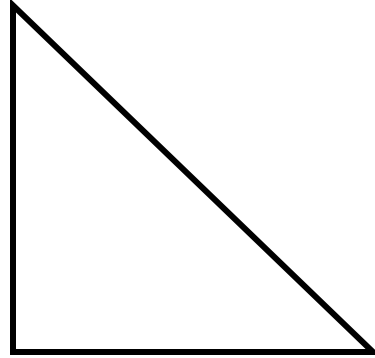
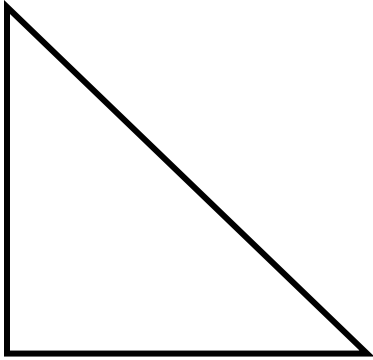
Map of Shape Town



SITES-M Mathematics Challenge
Grade 1–Focus on Shapes

SITES-M Mathematics Challenge
Grade 1–Focus on Shapes

Shape Sheet



SITES-M Mathematics Challenge
Grade 1–Focus on Shapes

SITES-M Mathematics Challenge
Grade 1–Focus on Shapes

Learning and Teaching Considerations

Task 1:

- A) Be sure that students are able to identify similarities and differences in characteristics, such the number of sides, the number of corners, the number of sides of equal length, or the number of squared corners or 90 degree angles.
- B) If a student says or writes, “I just know,” prompt him or her by saying something like “I’m glad you know, but it’s important in math to be able to explain your answers so other people can understand what you’re thinking.”
- C) If a student says or writes, “I don’t know,” say something positive like “Let’s start with what you do know about this problem.” Students often know more than they think or say, and encouraging them to vocalize or write about that knowledge is all they need.
- D) Students may answer in words or in pictures.
- E) Students may recognize the square as a rectangle and therefore identify houses 201 and 204 as rectangles, which is correct by definition. Definitions of a rectangle vary, but the square is always a type of rectangle. For example, a rectangle can be considered a quadrilateral with two pairs of parallel sides and all right angles or a quadrilateral with opposite sides equal and 4 right angles. Students may describe these properties.
- F) Students may recognize the square as a parallelogram and therefore identify houses 204 and 206 as parallelograms, which is correct by definition. Definitions of a parallelogram vary, but the square is always a type of parallelogram. For example, a parallelogram can be considered a quadrilateral with two pairs of parallel sides or a quadrilateral with opposite sides parallel. Students may describe these properties.

Task 2:

- A) Be sure that students are able to identify three things that are the same, including 3 sides and 3 corners.
- B) Be sure that students are able to identify one characteristic that is different. For example, students may recognize that some triangles have more equal sides than others or that some triangles have a squared corner, while others do not.
- C) Be sure that students are able to understand congruence as a figure with equal sides and equal angles (exact same shape and same size).

SITES-M Mathematics Challenge
Grade 1–Focus on Shapes

- D)** Students may have the misconception that a triangle cannot be congruent to another triangle if it is rotated.

Task 3:

- A)** Students may be able to identify angles bending inward or inside of the shape. The shape of houses 321, 323, and 325 are convex. All angles are inside of the shape. The shapes of houses 322, 324, and 326 are concave. The shapes cave in and some angles are outside of the shape. Houses 322, 324, and 326 are also irregular (the sides and angles are not all equal).
- B)** The teacher could encourage students to explore items in the classroom that form convex and concave shapes and discuss properties of the shapes. Shapes that have all equal sides and equal angles are called regular.
- C)** Students should be able to identify quadrilateral characteristics.
- D)** Students may be able to identify sides having the same length and houses 321 and 323 as polygons with equal sides and equal angles (regular shapes).

Task 4:

- A)** Be sure that students are able to put triangles together to create a bigger right triangle, square, and parallelogram (without right angles).

SITES-M Mathematics Challenge
Grade 1–Focus on Shapes

Name: ANSWER KEY

Date: _____

The houses in Shape Town are different shapes. Look at the map of Shape Town. The map shows streets, houses, and the address of each house.

1. Find Quadrilateral Court on the map.

a. Name 3 things that are the same about the houses on Quadrilateral Court.

THEY ARE ALL QUADRILATERALS.
THEY ALL HAVE 4 SIDES.
THEY ALL HAVE 4 CORNERS.
NOTE: AN OBSERVANT, BUT OFF-TOPIC,
RESPONSE IS THAT THE ADDRESSES
ARE IN THE 200'S.

b. How is house 203 different from house 201?

HOUSE 201 HAS "SQUARE" CORNERS
+ 203 DOESN'T.
OR
MAY SAY 201 HAS 2 SETS OF
PARALLEL SIDES + 203 HAS ONLY 1 SET.
OR
MAY SAY THAT 201 HAS OPPOSITE SIDES
THE SAME LENGTH + 203 DOESN'T.

→ OR MAY
SAY 201 IS
A RECTANGLE
+ 203 IS A
TRAPEZOID.

c. How is house 206 different from house 204?

204 IS A SQUARE & 206 IS A PARALLELOGRAM.
OR.
204 HAS "SQUARE" CORNERS & 206 DOESN'T.
OR
ALL SIDES ARE THE SAME LENGTH IN 204 & 206 HAS OPPOSITE SIDES THE SAME LENGTH.

d. How are houses 201 and 204 different from all the other houses on Quadrilateral Court?

ALL CORNERS ARE "SQUARE"
(90°, RIGHT ANGLES, PERPENDICULAR)
IN 201 & 204, AND NOT IN THE OTHER HOUSES.

SITES-M Mathematics Challenge
Grade 1–Focus on Shapes

2. Now find Triangle Trail on the map.

a. Name 3 things that are the same about the houses on Triangle Trail.

ALL ARE TRIANGLES.
ALL HAVE 3 SIDES.
ALL HAVE 3 CORNERS.
NOTE: AGAIN, OBSERVANT BUT
OFF-TOPIC IS THE ADDRESSES
ARE ALL IN THE 100'S.

b. How is house 152 different from house 154?

152 HAS A "SQUARE" CORNER &
154 DOESN'T.
OR
154 HAS 2 SIDES THAT ARE LONGER
THAN THE SIDES OF 152.
OR OTHER ANSWERS OK.

c. Color the two houses on Triangle Trail that have the same size and the same shape.

152 & 153 ARE CONGRUENT
& SHOULD BE COLORED.

SITES-M Mathematics Challenge
Grade 1–Focus on Shapes

3. Now find Polygon Place on the map.

a. How are houses 321, 323, and 325 alike?

OFF-TOPIC → ADDRESS

ALL SIDES ARE THE SAME LENGTH.

OR

ALL CORNERS BEND "INWARD."
(CONVEX → LESS THAN 180°)

b. How are houses 322, 324, and 326 alike?

THEY HAVE AT LEAST 1 CORNER THAT BENDS "OUTWARD."
(CONCAVE → MORE THAN 180°)

c. Houses 322 and 325 have something that is the same. What is it?

THEY HAVE 4 SIDES & 4 CORNERS.

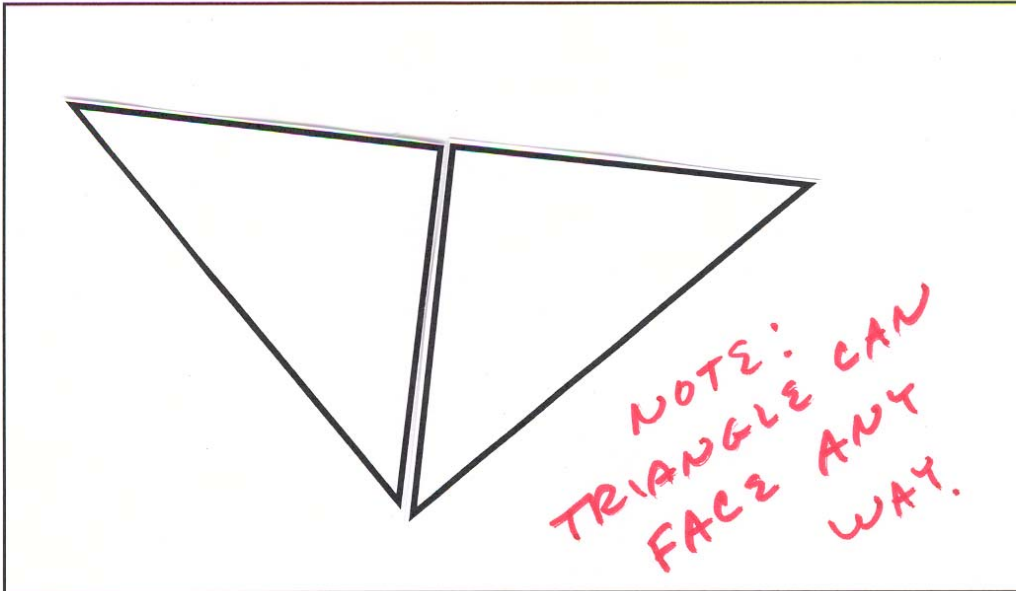
OR

THEY ARE QUADRILATERALS.

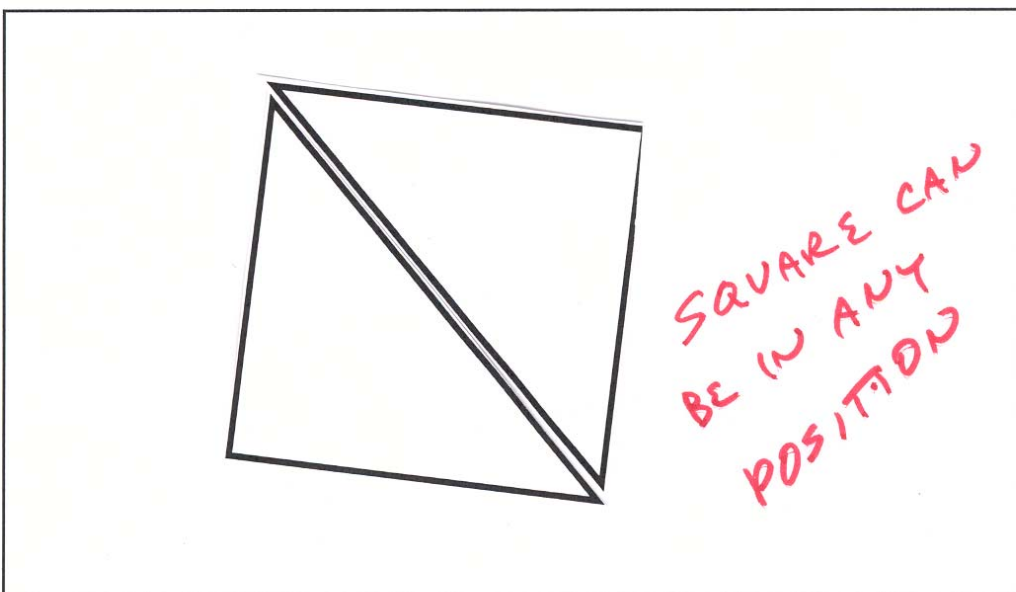
SITES-M Mathematics Challenge
Grade 1–Focus on Shapes

4. Cut out the 6 triangles on your Shape Sheet.

a. Use 2 triangles to make a bigger triangle. Glue the bigger triangle into the box below.

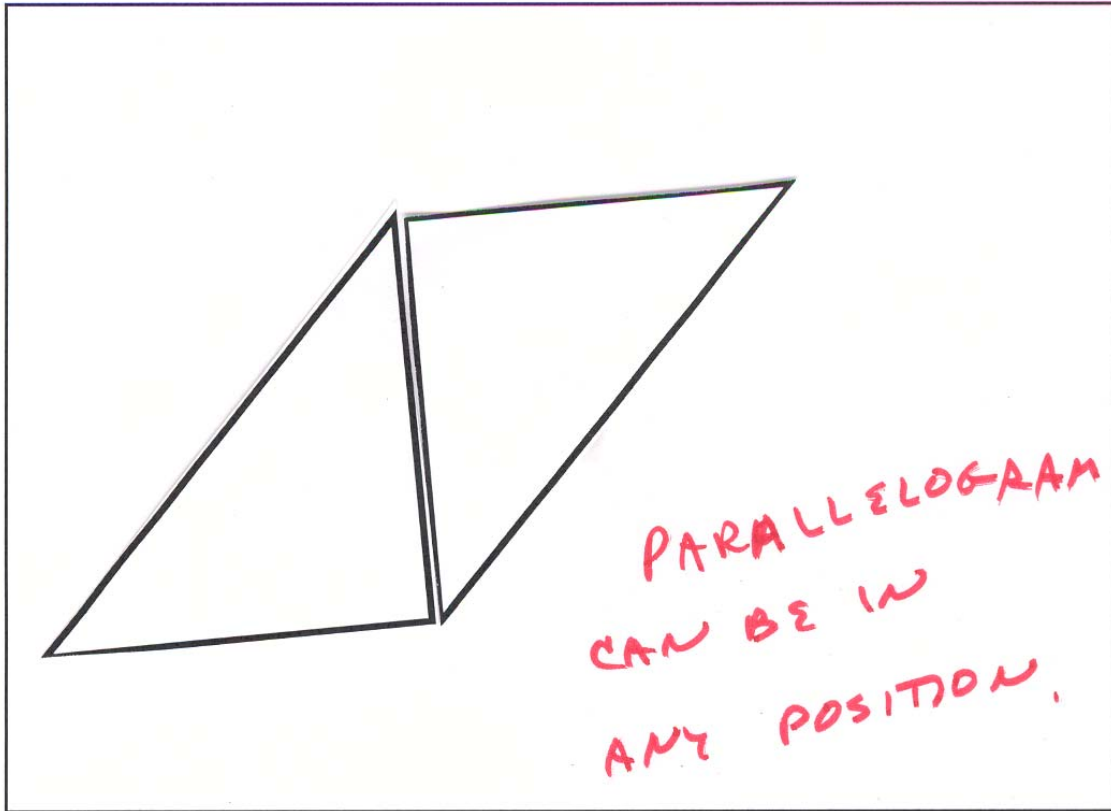


b. Use 2 triangles to make a square. Glue the square into the box below.



SITES-M Mathematics Challenge
Grade 1–Focus on Shapes

- c. Use 2 triangles to make a shape with 4 sides that is not a square. Glue the shape into the box below.



SITES-M Mathematics Challenge
Grade 1–Focus on Shapes
Rubric

CATEGORY	4	3	2	1
Mathematical concepts	Response shows complete understanding of the mathematical concepts used to solve the problem(s).	Response shows substantial understanding of the mathematical concepts used to solve the problem(s).	Response shows some understanding of the mathematical concepts needed to solve the problem(s).	Response shows very limited understanding of the underlying concepts needed to solve the problem(s), OR the response is not written.
	<p>Response shows evidence in ALL of the following tasks.</p> <p>Task 1. In part (a), student identifies 3 things the same, including 4 sides and 4 corners. In part (b), student finds a difference in either name or in characteristic. In part (c), student finds a difference in either name or in characteristic. In part (d), student identifies the square corners (90 degrees, right angles, perpendicular).</p> <p>Task 2. In part (a), student identifies 3 things the same, including 3 sides and 3 corners. In part (b), student identifies one characteristic that is different. In part (c), student colors or marks houses 152 and 153.</p> <p>Task 3. In part (a), student identifies either the sides having the same length or the angles bending inwards, or angle is inside the shape. In part (b), student identifies the outward angle, or angle is outside the shape. In part (c), student identifies quadrilateral characteristics.</p> <p>Task 4. Student is able to put triangles together, as shown on answer sheet.</p>	<p>Response shows evidence in only 3 of the tasks described; may exhibit the following errors.</p> <p>Task 1. Student identifies only 1 common characteristic in part (a), or is not able to identify the square corners in part (d).</p> <p>Task 2. Student identifies only 1 common characteristic in part (a), or is not able to identify the congruent shapes in part (c).</p> <p>Task 3. Student is unable to identify the different bending of the angles (convex and concave).</p> <p>Task 4. Student is unable to create the parallelogram.</p>	<p>Response shows evidence in only 2 of the tasks described; may exhibit errors as described in category 3. Student may identify off-topic similarities and differences, such as the house address or the house orientation.</p>	<p>Response shows evidence in 1 or fewer of the tasks described, and may exhibit errors as described in category 3.</p>

SITES-M Mathematics Challenge
Grade 1–Focus on Shapes
Rubric

CATEGORY	4	3	2	1
Strategy and procedures	Student typically uses an efficient and effective strategy to solve the problem(s).	Student typically uses an effective strategy to solve the problem(s).	Student sometimes uses an effective strategy to solve problem(s), but not consistently.	Student rarely uses an effective strategy to solve problem(s).
	Response shows evidence in ALL of the following tasks. Task 1. Student may show markings on map for counting sides or drawing angle shapes. Student may also show folding of map to compare shapes. Task 2. Same evidence as described in task 1. Task 3. Same evidence as described in task 1.	Response shows evidence in only 2 of the tasks described in category 4.	Response shows evidence in only 1 of the tasks described in category 4.	Response shows no evidence.

SITES-M Mathematics Challenge
Grade 1–Focus on Shapes
Rubric

CATEGORY	4	3	2	1
Explanation and communication	Explanation is detailed and clear; uses appropriate terminology and/or notation.	Explanation is clear; uses some appropriate terminology and/or notation.	Explanation is a little difficult to understand, but includes critical components; little use of appropriate terminology and/or notation.	Explanation is difficult to understand, is missing several components, does not use or include appropriate terminology and/or notation.
	<p>Response shows evidence in ALL of the following tasks.</p> <p>Task 1. In part (a), student explains that the houses all have 4 sides and 4 corners. The third similarity can vary, but mentioning that all are quadrilaterals is a high-level response. In part (b), student explains differences by corner type, by side lengths, by parallel, or by name of shape. In part (c), student explains differences by corner type, or by side lengths, or by name of shape. In part (d), student explains that all corners in houses 201 and 204 are square or right angles.</p> <p>Task 2. In part (a), student explains that all houses have 3 sides and 3 corners. The third similarity can vary, but mentioning that all are triangles is a high-level response. In part (b), student explains differences by angle type, or by side length. To say that the triangles are different shapes is a lower-level response.</p> <p>Task 3. In part (a), student explains similarities in terms of side length or angle bend. In part (b), student explains similarities in terms of the angle bend (compared to houses in part (a).) In part (c), student recognizes quadrilaterals.</p>	<p>Response shows evidence in ALL of the tasks, but may lack detail in explanation, as evidenced by the following.</p> <p>Task 1. Student describes only 1 or 2 similarities. Student describes differences in vague terms, such as, different shape or size.</p> <p>Task 2. Student describes only 1 or 2 similarities. Student describes differences in vague terms, such as, different shape or size.</p> <p>Task 3. Student is unable to describe the difference between inside and outside angles.</p>	<p>Response shows evidence in only 1 or 2 explanations, with errors as described in category 3.</p>	<p>Response shows no explanation.</p>

SITES-M Mathematics Challenge
Grade 1–Focus on Shapes
Rubric

CATEGORY	4	3	2	1
Mathematical accuracy	All or almost all of the steps and solutions have no mathematical errors.	Most of the steps and solutions have no mathematical errors.	Some of the steps and solutions have no mathematical errors.	Few of the steps and solutions have no mathematical errors.
	<p>Student provides correct answers for ALL of the following tasks.</p> <p>Task 2. Student identifies houses 152 and 153 as congruent.</p> <p>Task 4. Student constructs shapes correctly in parts (a), (b), and (c), as shown on answer sheet.</p>	<p>Student is unable to identify houses 152 and 153 as congruent, or makes 1 error in shape construction.</p>	<p>Student is unable to identify houses 152 and 153 as congruent AND makes 1 error in shape construction, or makes 2 errors in shape construction.</p>	<p>Student is unable to identify houses 152 and 153 as congruent AND makes 2 errors in shape construction.</p>

SITES-M Mathematics Challenge
Grade 1–Focus on Shapes

Scoring Notes Checklist

Task	Check Yes	Category
Tasks 1, 2, or 3		
May show markings on map for counting sides or drawing angle shapes. May also show folding of map to compare shapes.		Strategy
Task 1 (Part a)		
Identifies 3 things the same, including 4 sides and 4 corners.		Concept
Explains that the houses all have 4 sides and 4 corners. The third similarity can vary, but mentioning that all are quadrilaterals is a high-level response.		Explanation
Task 1 (Part b)		
Finds a difference in either name or in characteristic between house 203 and house 201.		Concept
Explains difference by corner type, by side lengths, by parallel, or by name of shape.		Explanation
Task 1 (Part c)		
Finds a difference in either name or in characteristic between house 206 and house 204.		Concept
Explains difference by corner type, or by side lengths, or by name of shape.		Explanation
Task 1 (Part d)		
Identifies the square corners (90 degrees, right angles, perpendicular).		Concept
Explains that all corners in houses 201 and 204 square or right angles.		Explanation
Task 2 (Part a)		
Identifies 3 things the same, including 3 sides and 3 corners.		Concept
Explains that all houses have 3 sides and 3 corners. The third similarity can vary, but mentioning that all are triangles is a high-level response.		Explanation
Task 2 (Part b)		
Identifies one characteristic that is different.		Concept
Explains difference by corner type, or by side lengths, or by parallel, or by name of shape.		Explanation
Task 2 (Part c)		
Colors or marks houses 152 and 153.		Concept
Identifies houses 152 and 153 as congruent.		Accuracy
Task 3 (Part a)		
Identifies either the sides having the same length or the angles bending inwards, or angle is inside the shape.		Concept
Explains similarities in terms of side length or angle bend.		Explanation
Task 3 (Part b)		
Identifies the outward angle, or angle is outside the shape.		Concept
Explains similarities in terms of the angle bend (compared to houses in part (a).)		Explanation

SITES-M Mathematics Challenge
Grade 1–Focus on Shapes

Task 3 (Part c)		
Identifies quadrilateral characteristics.		Concept
Recognizes quadrilaterals.		Explanation
Task 4		
Puts triangles together, as shown on answer sheet.		Concept
Constructs shapes correctly in parts (a), (b), and (c), as shown on answer sheet.		Accuracy

SITES-M Mathematics Challenge
Grade 1–Focus on Shapes
Analyzing Student Responses Protocol

The purpose of the Mathematics Challenges is to provide opportunities for students to develop and demonstrate understanding of important mathematical concepts and standards. They include extended responses, open-ended tasks, and tasks that require higher-order thinking skills. Because these types of tasks may be novel for students and they will have varying levels of understanding, the student responses will vary.

The guiding questions below were designed to assist you in analyzing your class' response to the Challenge and determining appropriate next steps for your teaching and learning. Responses to these questions are for your reflection and documentation and will not be collected.

Guiding Questions for Analyzing Student Responses to the Mathematics Challenges

1. When completing the Challenge, what did your students do well? How do you know?
2. When completing the Challenge, what did your students struggle with? How do you know?
3. When your students completed the Challenge, did they implement multiple correct solutions strategies? What insightful approaches to problem solving did you observe?

SITES-M Mathematics Challenge
Grade 1—Focus on Shapes

4. What, if any, patterns (e.g., common errors/misconceptions) did you observe across your student responses?

5. What questions or concerns did your students have when working through this Challenge or a particular task? Are these things you should address for the class as a whole?

6. What, if any, feedback did you provide to your class? How did you provide it?

7. What did you learn about your students' mathematical understanding based on their responses to this Challenge?

Reminders:

- 1) After you have completed the Challenge with your class and responded to these Guiding Questions for Analyzing Student Responses, please complete the Challenge Feedback Log. A link to this Log is e-mailed to you each month. Responses will be used to improve the Challenges and to provide recommendations for teachers implementing the Challenges in future years.

- 2) Please provide copies of all student work to the Assessment Coordinator.