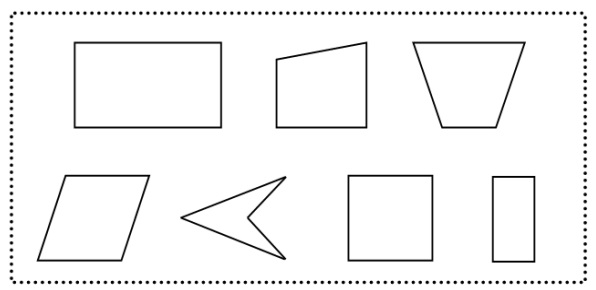
Formative Instructional and Assessment Tasks

Byron's Shapes 3.G.1 – Task 1	
Domain	**Geometry**
Cluster	**Reason with shapes and their attributes.**
Standard(s)	**3.G.1** Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.
Materials	Byron's Shapes handout, pencils
Task	**Part 1:** • Provide each student with a copy of Byron's Shapes handout. • Read: *Byron drew the following shapes.*  *Byron says that all of his shapes are rectangles because they all have four sides. Is he correct? Explain your thinking. Be sure to use specific vocabulary in your explanation.* **Part 2:** • Ask: *What name could be used to describe all of Byron's shapes?*

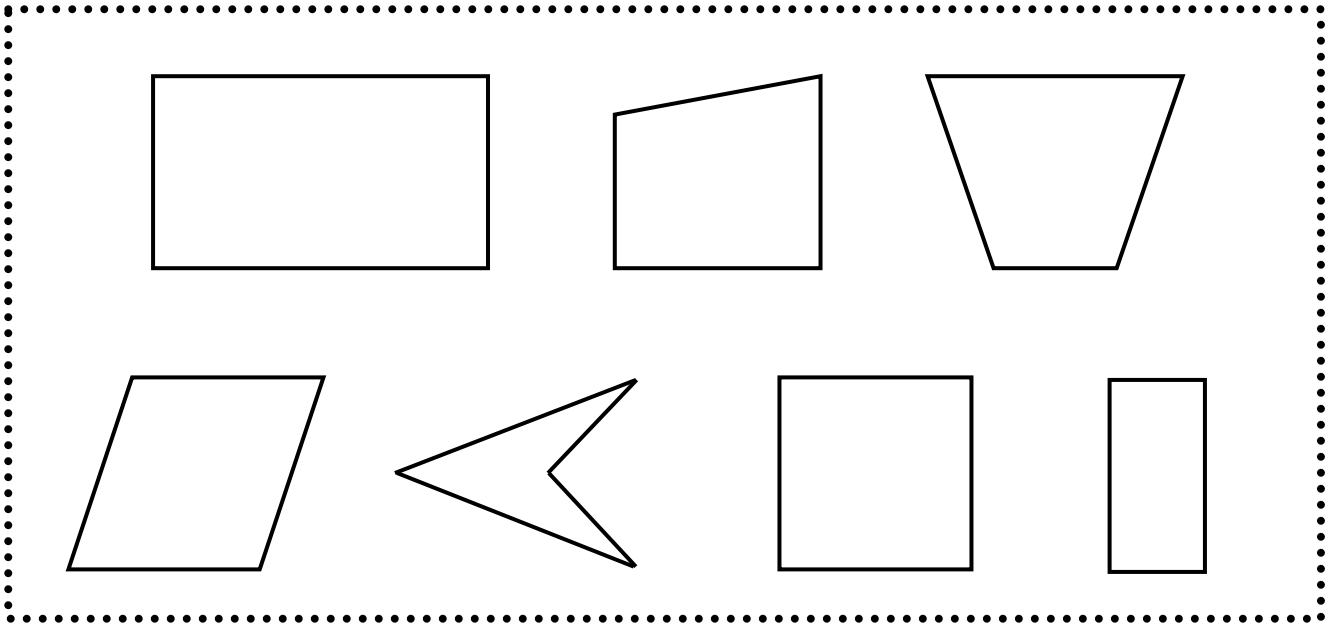
Rubric		
Level I	**Level II**	**Level III**
Limited Performance • Student states that Byron is correct. • Student has little to no explanation. • Student is unable to identify a name which could be used to describe all of Byron's shapes.	Not Yet Proficient Student does one-two of the following: • Student states that Byron is not correct. • Student explains that a rectangle must have four sides and four right angles. • Student recognizes that all of Byron's shapes may be described as quadrilaterals.	Proficient in Performance • Student states that Byron is not correct. • Student explains that a rectangle must have four sides and four right angles. • A square is a special kind of rectangle. • Student recognizes that all of Byron's shapes may be described as quadrilaterals.

Formative Instructional and Assessment Tasks

Standards for Mathematical Practice
1. Makes sense and perseveres in solving problems.
2. Reasons abstractly and quantitatively.
3. Constructs viable arguments and critiques the reasoning of others.
4. Models with mathematics.
5. Uses appropriate tools strategically.
6. Attends to precision.
7. Looks for and makes use of structure.
8. Looks for and expresses regularity in repeated reasoning.

Formative Instructional and Assessment Tasks
Byron's Shapes

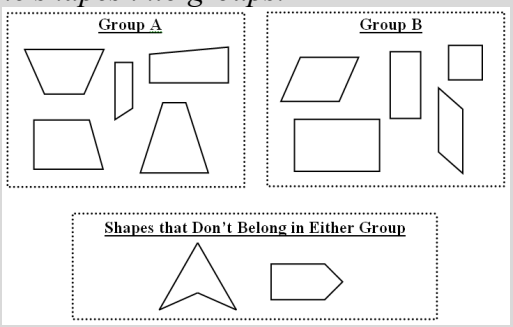
Byron drew the following shapes:



Byron says that all of his shapes are rectangles because they all have four sides. Is he correct? Explain your thinking. Be sure to use specific vocabulary in your explanation.

What name could be used to describe all of Byron's shapes?

Formative Instructional and Assessment Tasks

Sally's Shape Sort 3.G.1 – Task 2	
Domain	**Geometry**
Cluster	**Reason with shapes and their attributes.**
Standard(s)	**3.G.1** Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.
Materials	Sally's Shape Sort handout, pencils
Task	**Part 1:** • Provide students with copy of Sally's Shape Sort handout. • Read: *Sally sorted some shapes into groups.*  *What rule(s) did Sally use to sort the shapes? Explain your reasoning using precise vocabulary.* **Part 2:** • Read: *Draw two more shapes for each of Sally's boxes.*

Rubric		
Level I	**Level II**	**Level III**
Limited Performance • Student is unable to identify how shapes are sorted. • Student has little to no explanation to justify reasoning. • Student is unable to generate additional shapes for each box.	Not Yet Proficient Student does 3-5 of the following: • Student recognizes that *Group 1* contains trapezoids. • Student recognizes that *Group 2* contains parallelograms. • Student justifies reasoning using some precise vocabulary. • Two additional trapezoids are placed in *Group* A. • Two additional parallelograms are placed in *Group* B. • Two additional non-examples of trapezoids and parallelograms are placed in the bottom box.	Proficient in Performance • Student recognizes that *Group 1* contains trapezoids and *Group 2* contains parallelograms. • Student clearly justifies reasoning using precise vocabulary. • Student places two additional of trapezoids in *Group* A, two parallelograms in *Group* B, and two non-examples of trapezoids and parallelograms in the bottom box.

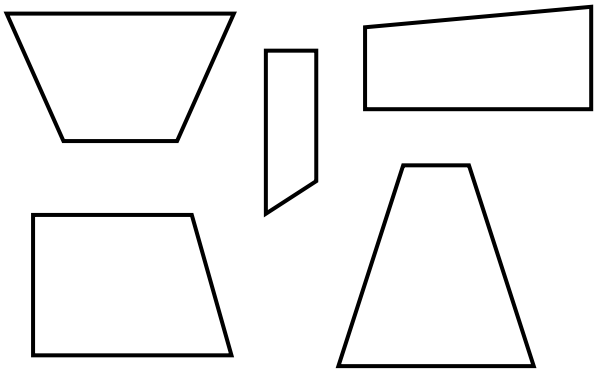
Formative Instructional and Assessment Tasks

Standards for Mathematical Practice
1. Makes sense and perseveres in solving problems.
2. Reasons abstractly and quantitatively.
3. Constructs viable arguments and critiques the reasoning of others.
4. Models with mathematics.
5. Uses appropriate tools strategically.
6. Attends to precision.
7. Looks for and makes use of structure.
8. Looks for and expresses regularity in repeated reasoning.

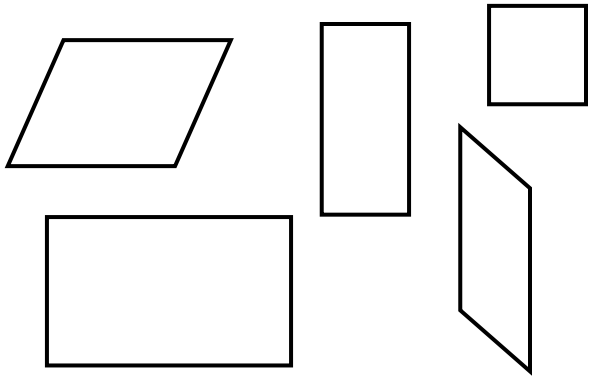
Formative Instructional and Assessment Tasks
Sally's Shape Sort

Sally sorted some shapes into groups.

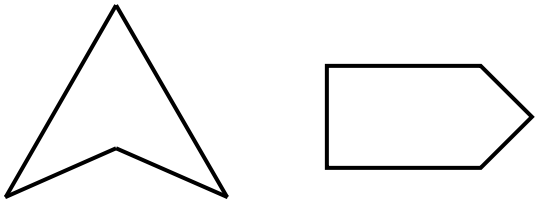
Group A



Group B



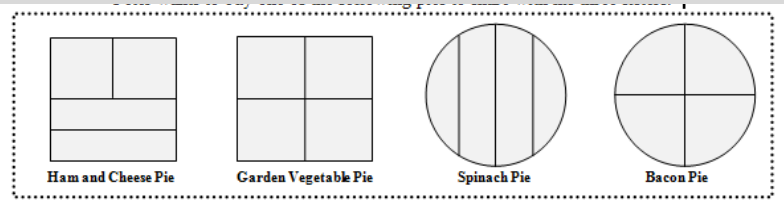
Shapes that Don't Belong in Either Group



What rule did Sally use to sort the shapes?
Explain your reasoning using precise vocabulary.

Draw two more shapes for each of Sally's boxes.

Formative Instructional and Assessment Tasks

Peter's Pie 3.G.2 – Task 1	
Domain	**Geometry**
Cluster	Reason with shapes and their attributes.
Standard(s)	**3.G.1** Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.
Materials	Peter's Pie handout, Square Pan Template (optional) scissors (optional), pencils
Task	**Part 1:** • Distribute Peter's Pie handout to students. • Read Problem: *Peter wants to buy one of the following pies to share with his three sisters.*  *In order for each person to receive an equal share, Peter needs to buy a pie that is cut into fourths. Which of the pies could he buy? Use pictures, numbers, or words to explain your reasoning.* • Prompt as needed: *Is that the only pie Peter can buy? Are any of the other pies equally partitioned into fourths?* **Part 2:** • Read: *Peter decides to make his own pie using a square-shaped baking pan. How many different ways can he partition his pie into fourths?* • If students have difficulty beginning task, suggest that they start by drawing a square pan to partition. If needed, teacher may provide one or more copies of the Square Pan Template to each student.

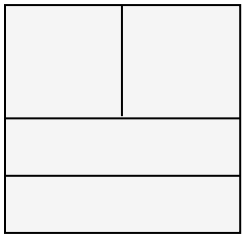
Rubric		
Level I	**Level II**	**Level III**
Limited Performance • Student identifies 0-1 of the pies that Peter may purchase. • Student provides little to no justification. • Student models 0-1 way to partition a square pie into fourths.	Not Yet Proficient • Student identifies 1-2 pies that Peter may purchase, provides limited reasoning to justify his/her solution, and models 1-2 ways to partition a square pie into fourths ***OR*** • Student accurately completes one part of the task	Proficient in Performance • Student identifies that Peter can purchase the ham and cheese, garden vegetable, or bacon pie. • Student uses clear reasoning to justify solution. • Student models 2 or more ways to partition a square pie into fourths.

Formative Instructional and Assessment Tasks

Standards for Mathematical Practice
1. Makes sense and perseveres in solving problems.
2. Reasons abstractly and quantitatively.
3. Constructs viable arguments and critiques the reasoning of others.
4. Models with mathematics.
5. Uses appropriate tools strategically.
6. Attends to precision.
7. Looks for and makes use of structure.
8. Looks for and expresses regularity in repeated reasoning.

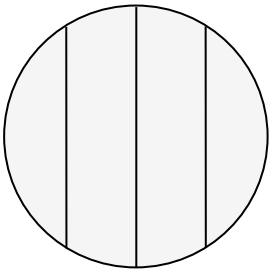
Formative Instructional and Assessment Tasks
Peter's Pie

Peter wants to buy one of the following pies to share with his three sisters.

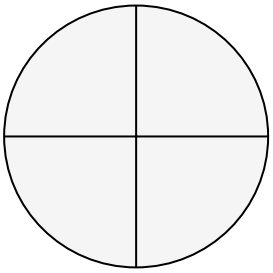


Ham and Cheese Pie

Garden Vegetable Pie



Spinach Pie



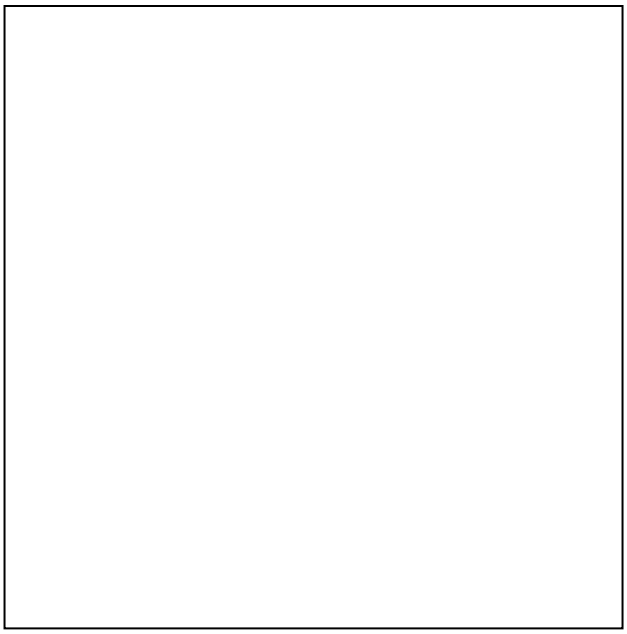
Bacon Pie

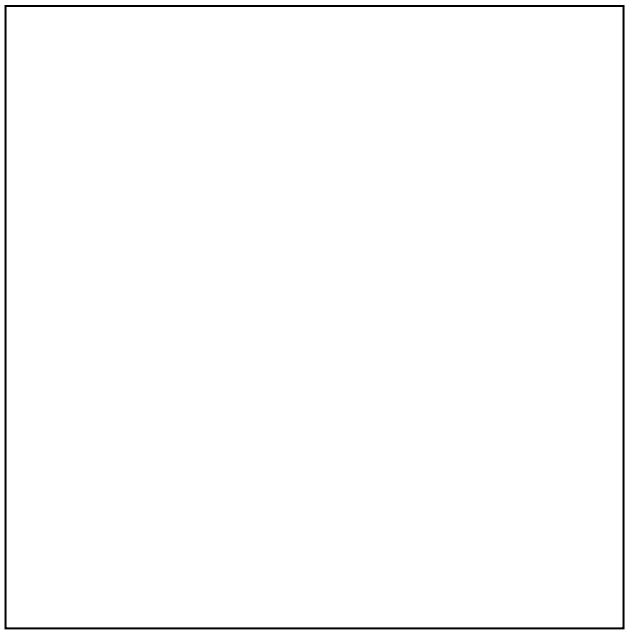
In order for each person to receive an equal share, Peter needs to buy a pie that is cut into fourths. Which of the pies could he buy? Use pictures, numbers, or words to explain your reasoning.

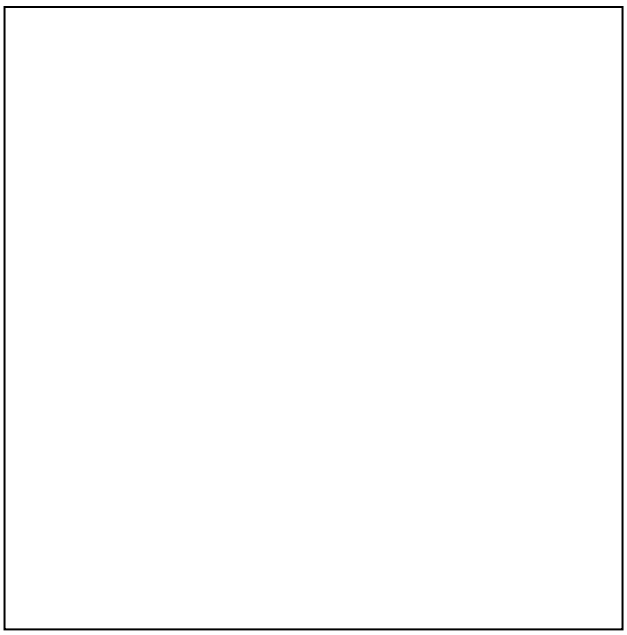
Peter decides to make his own pie using a square-shaped baking pan.
How many different ways can he partition his pie into fourths?

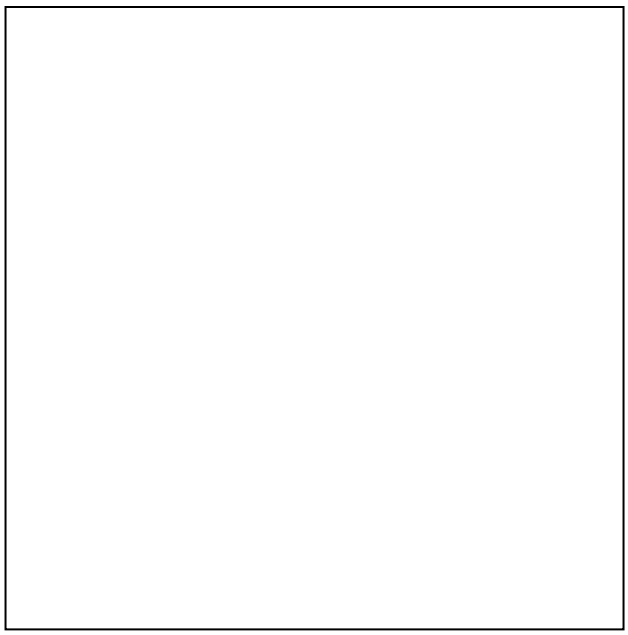
Formative Instructional and Assessment Tasks

Square Pan Template *(optional)*









Formative Instructional and Assessment Tasks

Ben's Backyard 3.G.2 – Task 2	
Domain	**Geometry**
Cluster	**Reason with shapes and their attributes.**
Standard(s)	**3.G.1** Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.
Materials	Ben's Backyard handout, rulers, pencils, scissors (optional)
Task	**Part 1:** • Distribute Ben's Backyard handouts to students. • Draw students' attention to the representation of Ben's backyard.  **Ben's Backyard** • Read task: *Ben is drawing plans for his new backyard. He wants to partition his yard into thirds. One third will be a garden. One third of the yard will be grass, and one third will be a pool. Show one way Ben could partition his backyard. How can you prove that your drawing is equally partitioned into thirds?* **Part 2:** • Ask: *How many other ways could Ben partition his yard?*

Rubric		
Level I	**Level II**	**Level III**
Limited Performance • Student is unable to partition Ben's yard into thirds. • Student provides little to no explanation.	Not Yet Proficient Student does 1-2 of the following: • Student partitions Ben's yard into thirds. • Student accurately proves that the backyard is equally partitioned into thirds using precise language and clear mathematical reasoning. • Student identifies additional ways to partition Ben's backyard.	Proficient in Performance • Student partitions Ben's yard into thirds. • Student accurately proves that the backyard is equally partitioned into thirds using precise language and clear mathematical reasoning. • Student identifies additional ways to partition Ben's backyard.

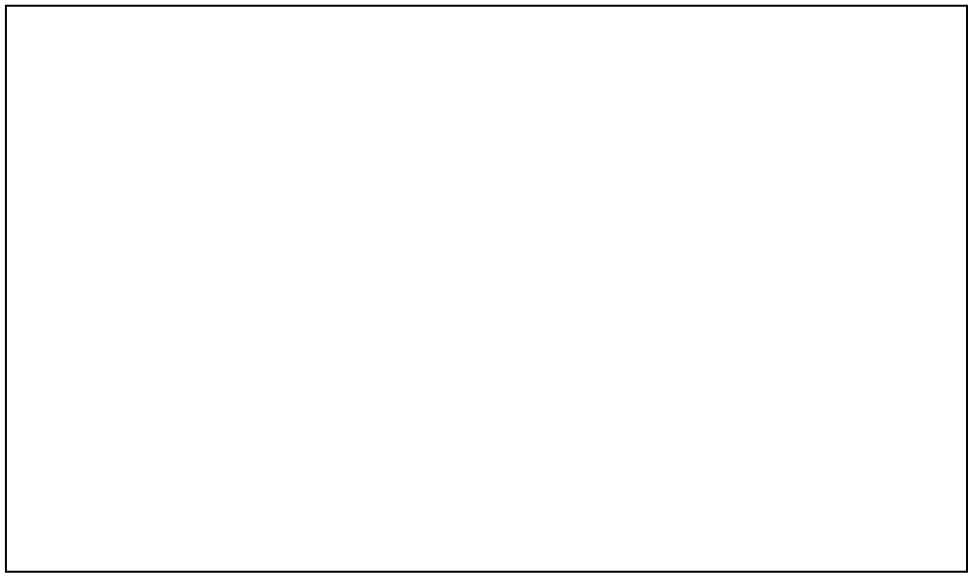
Formative Instructional and Assessment Tasks

Standards for Mathematical Practice
1. Makes sense and perseveres in solving problems.
2. Reasons abstractly and quantitatively.
3. Constructs viable arguments and critiques the reasoning of others.
4. Models with mathematics.
5. Uses appropriate tools strategically.
6. Attends to precision.
7. Looks for and makes use of structure.
8. Looks for and expresses regularity in repeated reasoning.

Formative Instructional and Assessment Tasks

Ben's Backyard

Ben is drawing plans for his new backyard. He wants to partition his yard into thirds. One third will be a garden. One third of the yard will be grass, and one third will be a pool. Show one way Ben could partition his backyard.



Ben's Backyard

How can you prove that your drawing is equally partitioned into thirds?

How many other ways could Ben partition his yard?
Show your solutions on the back of your paper.