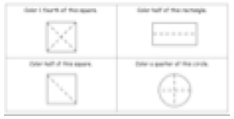
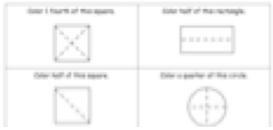
Grade Level	First Grade	**Content Area**	Mathematics
Course Title (grades 9-12 Only)	N/A		
Expected Prior Knowledge *List the knowledge/skills mastered earlier in the year that are foundational to the mastery of the Standard identified as the focus for review.*	The scholars can correctly name shapes regardless of their orientations or overall size. They are able to identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid"). The scholars have previously had to analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length). They are able to compose simple shapes to form larger shapes. For example, "Can you join these two triangles with full sides touching to make a rectangle?"		
Alignment to Program of Instruction *Describe how the methods of instruction found in this sequence of lessons align to the Program of Instruction described in the charter contract.*	The AZ College and Career Standards form the basis for The Grande Innovation Academy's math curriculum. Scholars will learn standards using the AZ College and Career strands building from year to year. EngageNY will be used along with manipulatives to build conceptual understanding. First in Math online will be used for developing automaticity with math facts to increase mathematical fluency. Scholars, Kindergarten through Eighth Grade, will annually participate in The Grande Innovative Academy's Math Olympics program to generate motivation for math fluency.		
Standard Number* and Description *The standard number and description (see instructions) of the Standard being instructed and assessed to mastery in the curriculum sample*	**1.G.A.3**. *Partition circles and rectangles into two and four equal shares, describe the shares using the words halves, fourths, and quarters, and use the phrases half of, fourth of, and quarter of. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.*		
Materials/Resources Needed *List all items the teacher and students will need for the entire sequence of instruction (excluding common consumables)*	* Yellow marker per scholar * Personal white boards * Dry erase crayons and erasers * Document camera * Shapes cut out of construction paper		

- ***Standard Number**: For English Language Arts (Reading and Writing), use Grade, Strand, Standard (e.g., 3.RI.2). For K-8 Math, use Grade, Domain, Cluster, Standard (e.g., 6.EE.B.7). For HS Math, use Conceptual Category-Domain, Cluster, Standard (e.g., A-REI.C.6).*

Lesson (add as needed)	**Instructional Strategies -** *List and describe teacher actions, lesson by lesson, which will provide students with opportunities to engage the grade-level rigor defined by the Required Standard(s). Indicate alignment of instructional strategies to specific component(s) or content/skill(s) of the Required Standard/component.*	**Student Activities -** *Describe the activities, lesson by lesson, in which students will engage to allow them to master the grade-level rigor defined by the Required Standard(s). Indicate alignment of student activities to specific component(s) or content/skill(s) of the Required Standard/component.*
1	**Anticipatory Set:** TW tell the scholars to walk around the room and in their minds find 3 different shapes. After 2 minutes, TW direct scholars to only use their finger and point to one of the shapes they found. Once all scholars are pointing to their shape, teacher will direct scholars to point to another shape they found, then again to the last shape they found. **Objective and Purpose:** The scholars will partition shapes and identify halves and quarters of circles and rectangles. **Instructional Delivery:** TW have scholars go to the carpet and read the objective to the scholars and explain what that means in his/her own words. TW define vocabulary words such as equal shares, halves, fourths, quarters of, and partition. TW have scholars echo definition. **Guided Practice:** TW display image of pizza on the board. Each scholar will receive the same template inserted into a personal white board. TW read story problem, "Last night, my brother and I bought a small pizza to share. We agreed we would each eat **half** of the pizza, or one out of two equal shares. My brother cut the pizza for us to share, and it looked like this. Why do you think I was mad? What's wrong with my brother's version of fair shares?" TW continue story problem, "If my brother and I are going to share this pizza fairly, we need to each have an equal share. To have one	**Anticipatory Set:** The scholars will walk around the room looking for 3 different shapes. When directed by the teacher, the scholars will point to one of the shapes they found. The scholars will point to another shape they found as directed by a teacher, and then to the last shape they found. **Objective and Purpose:** The scholars will partition shapes and identify halves and quarters of circles and rectangles. **Instructional Delivery:** The scholars will echo the definitions of equal shares, halves, fourths, quarters of, and partition. **Guided Practice:** The scholars will discuss that one piece of pizza is much bigger than the other piece. The scholars will identify this as two shares that are not equal. The scholars will use their dry erase crayons to partition the pizza correctly, showing half of the pizza, or two equal shares on their personal white boards. The scholars will use their personal white boards and dry erase crayons to partition the rectangular pizza to show two halves of the pizza.

	half of the pizza, the two parts need to be the same size. TW direct scholars to draw a line on their personal white boards showing where the line should have been cut. TW use a scholar example to share with the class stating, "Now I can get one half of the pizza because each of the two shares is the same size". TW will explain, "Sometimes we buy Sicilian pizza, which is shaped like a rectangle." "How can we cut this to be in two equal shares, or two **halves of** the pizza?" TW direct scholars to draw a line to show how to cut the rectangular pizza on their personal white board. TW allow scholars to share multiple ways to cut the pizza. TW then ask, "Will my brother and I both get the exact same amount to eat?" TW point out that the scholars found three different ways to cut the pizza into halves and then ask for further help from the scholars, "Sometimes our mom and dad eat with us. How can we share that rectangular pizza equally between all four of us?" TW have scholars divide their rectangular pizza into four equal shares. TW call on scholars to show multiple ways to divide pizza into fourths. TW explain that the pieces are all **fourths of,** or **quarters of**, the pizza. It is cut into four equal pieces that are the same size. **Independent Practice:** TW have scholars use the circular pizza template to make fourths, or quarters, from the circle-shaped pizza. TW individually ask scholars to explain how they cut their pizza into four equal shares, which we call fourths or quarters. TW individually ask scholars, "if four people are sharing a pizza, whichever shape we are using, we need the whole pizza to be cut into…?" as well as, "if two people	 The scholars will answer chorally, "yes". The scholars will raise their hands and give advice to the teacher once the have been called on, "you need to cut the pizza into four pieces. The pieces need to be the same size. You can cut it one more time, the other way". The scholars will use their personal white board and dry erase crayons to partition the rectangular pizza into four equal shares. **Independent Practice/Exit Ticket:** The scholars will use the circular pizza template to partition the pizza into fourths, or quarters. The scholars will explain how they partitioned their pizza into four equal shares, "I cut across (horizontally) and up and down (vertically)". The scholars will respond that when four people are sharing a pizza that it must be cut into fourths or quarters. The scholar will explain that when two people are sharing a pizza that the pizza must be cut into halves, or two equal shares. **Closure/Exit Ticket:**

	are sharing, we need the whole pizza to be cut into…?” **Closure/Exit Ticket:** TW hand out exit ticket, explaining that they will color in halves, fourths, and quarters according to the directions. TW individually check each scholars finished work. Scholar must correctly complete all four problems to show mastery.	The scholars will complete an exit ticket of four problems. The scholars will partition circles, squares, and rectangles into halves, fourths, and quarters. Scholars must correctly answer all four problems for mastery. 
2	**Anticipatory Set:** TW direct scholars to pick out three different shapes from a tub of construction paper made shapes. TW tell the scholars to find a partner and work together to partition their shapes in either half, or two equal shares. **Objective:** The scholars will partition shapes and identify halves and quarters of circles and rectangles. **Instructional Delivery:** TW introduce key points. TW pass out four problem sets from lesson 1. Upon completion scholars duplicate these into their interactive math journals. **Guided Practice:** TW instruct scholars to work in pairs using the dry erase crayons and template inserted in their personal white boards. TW direct scholar A to draw one line to cut their pizza into halves and scholar B to draw two lines to cut their pizza into quarters. TW ask who has more slices? TW instruct each scholar to color one slice of their pizza and show their slice to the teacher. TW direct scholars to hold their piece up	**Anticipatory Set:** The scholars will pick three shapes out of a tub of construction paper made shapes. The scholars will then find a partner and work together to partition the shapes they chose into halves, or two equal shares. **Objective:** The scholars will partition shapes and identify halves and quarters of circles and rectangles. **Instructional Delivery:** The scholars will complete template containing four problem sets. Upon completion, they will duplicate these into their interactive daily math journals.  **Guided Practice:** The scholars will use their dry erase crayons to partition their pizza into either halves or quarters on their personal white boards. The scholars will explain that the person who cut their pizza into

	next to their partner's piece. TW inquire about, "whose piece is bigger? Who has a larger number of pieces?" TW direct scholars to discuss with their partner whether they would rather have one half of a yummy pizza or one quarter of a yummy pizza. TW guide the scholars in completing this activity with rectangles. TW use paper to actually cut and compare looking for which will be bigger, one half of the paper or one fourth of the paper. TW fold the paper to ensure the parts are equal and then cut. TW have a volunteer hold one section of the cut paper asking, "How much paper is he holding?" TW now fold and cut another same-size piece of rectangular paper into fourths. TW ask scholars if all parts of the rectangle are equal before cutting. TW ask scholars how much one piece of the paper is and have another volunteer hold one piece. TW ask the two volunteer scholars to hold their shapes next to each other to compare. TW ask which piece is bigger, or greater, one half or one fourth of the paper. TW ask, "how many pieces we made when we cut the paper into halves?" and "how many pieces we made when we cut the paper into quarters?" TW show that when we cut the rectangle into two pieces to make halves that our pieces were this size. TW ask scholars what happened to the size of the pieces when we cut the same size paper into four pieces to make quarters. **Independent Practice:** TW explain that on their templates in their personal white boards are pairs of the same shape. TW direct scholars to draw lines and color in one half of the first shape, and then draw lines and color in one quarter, or one fourth of the other shape. Once completed, the scholars will talk to their partner to see if one fourth is smaller than	quarters has more pieces of pizza. The scholars will compare one piece of their pizza and describe that one half of a pizza is larger than one quarter of a pizza. The scholars will look at the whole pizza and discuss that the person who cut their pizza into quarters has more pieces even though they are smaller. The scholars will tell their partner they would rather have one half of a yummy pizza because one half is larger than one quarter. The scholars will discuss that one would need two-quarter pieces to equal half of a pizza. The scholars will watch the teacher fold and cut the paper into halves. The scholars will state that the volunteer is holding one half of the rectangle. The scholars will watch the teacher fold and cut the paper into quarter. The scholars will state that the volunteer is holding one fourth of the rectangle. The scholars will describe that one half of the rectangle is larger than one fourth of the rectangle. The scholars will give thumbs up or thumbs down to show that when the rectangle was cut in half we had two pieces and when the rectangle was cut into quarters we had four pieces. The scholars will discuss that the parts became smaller when the rectangle was cut into more pieces. The pieces of paper were the same size to begin with so if you cut it up into more equal shares, the parts become smaller. **Independent Practice/Exit Ticket:** For each pair of shapes on their template, the scholars will draw lines and color in one half of the first shape. The scholars will then draw lines and color in one quarter of the other shape. Once they are finished they will work with their partner to discuss that one

	one half every time, or just sometimes. TW circulate the room checking the four problems. **Closure/Exit Ticket:** TW hand out exit ticket for scholars to complete, explaining that they will be partitioning a circle into halves, fourths, and quarters and answering questions about the differences in size of shares.	fourth is smaller than one half every single time. **Closure/Exit Ticket:** Scholars will complete an exit ticket, partitioning circles into halves, fourth, and quarters. The scholars will be answering questions about the difference in sizes of shares on the exit ticket. Scholar must correctly answer all questions for mastery.
S.A.	*Provide an opportunity for the student to complete the summative assessment items which is clearly separate from instruction and guided or independent practice, and in which the student is assessed independently. In the Student Activities column, provide a brief description of the summative assessment (S.A.) items that will allow students to demonstrate mastery of the rigor of the Required Standard(s)/components, and the context in which the items will be administered.*	**Direct Instruction:** TW explain, "Today we are going to be taking an assessment on how to partition circles and rectangles into equal shares of halves fourths, and quarters. You will sit at your desks to complete three math problems. Remember this is an assessment, so there is to be no talking until everyone is finished. **Independent Practice:** TW hand out the math assessment and tell the scholars to begin.

Summative Assessment #1: Given the following instructions, the scholar will solve. A total of 12 points is possible for this assessment. Scholars will receive a maximum of 4 points for correctly partitioning $1/4^{th}$, 4 points for correctly partitioning one quarter, and a maximum of 4 points for correctly identifying "the same as" Scholar mastery will be set at 9 points. (75%)

Color part of the shape to match each label.

Circle the phrase that would make the statement true.

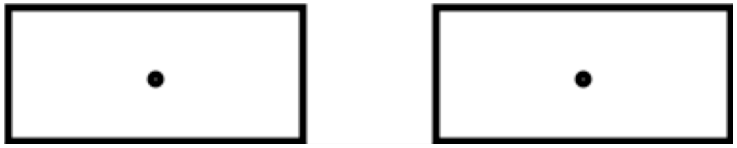
One quarter of the rectangle

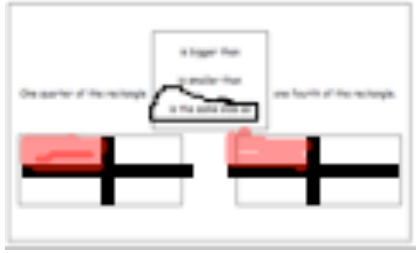
is bigger than

is smaller than

is the same size as

one fourth of the rectangle

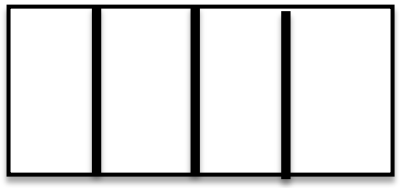




SA 1: Answer Key

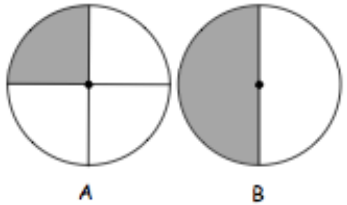
Summative Assessment #2: Given the following instructions, the scholar will solve. A total of 12 points is possible for this assessment. Scholars will receive a maximum of 4 points for correctly answering each a) b) and c) Scholar mastery will be set at 9 points. (75%)

2. a) Color one fourth of the rectangle blue. b) Color one half of the rectangle red. c) What shapes were used to make the rectangle?



SA 2: Answer Key (c: rectangles)

Summative Assessment #3: Given the following instructions, the scholar will solve. A total of 12 points is possible for this assessment. Scholars will receive a maximum of 4 points for correctly answering each a) b) and c) Scholar mastery will be set at 9 points. (75%)



a. Which shape has been cut into more equal parts? _____
b. Which shape has larger equal parts? _____
c. Which shape has smaller equal parts? _____

SA 3: Answer Key (a, b, a)