

Draft Mathematics Extensions
for Aligning the New York State Alternate Assessment (NYSAA)
to the Common Core State Standards (CCSS)

GRADE 3

Mathematics – Grade 3

CCSS Domain: Geometry		Page(s): 24
CCSS Code	Cluster (including Standard(s) within the Cluster)	Essence of Cluster
3.G	<p>Reason with shapes and their attributes.</p> <p>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.</p> <p>2. Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. <i>For example, partition a shape into 4 parts with equal area, and describe the area of each part as 1/4 of the area of the shape.</i></p>	<p>Different geometric shapes may share properties.</p> <p>Geometric shapes can be broken up into equal parts.</p>
Extensions		
Less Complex	◀ ◯ ◯ ◯ ◯ ▶ ◯ ◯ ◯ ◯ ▶ ◯ ◯ ◯ ◯ ▶	More Complex
Recognize shapes with common attribute(s).	Sort quadrilaterals into groups. <i>(For example, put all the rhombuses, rectangles, and squares in one group and all other quadrilaterals in another group).</i>	Demonstrate that shapes can be partitioned into parts with equal areas. <i>(For example, place unit squares inside of a given rectangle).</i>
Assessment Task		
<ul style="list-style-type: none"> The student will select a shape with the same attribute(s), when given a set of choices. The student will identify object(s) in the room with common attribute(s), when given a shape (e.g., top of desk, rectangle). The student will identify shape(s) that share a given attribute, from a set of shapes (e.g., transportation signs, safety signs). 	<ul style="list-style-type: none"> The student will sort quadrilaterals from non-quadrilaterals, using manipulatives. The student will sort squares from non-squares, given four sided shape cards. The student will sort quadrilaterals into groups, given a graphic organizer. The student will sort quadrilaterals from non-quadrilaterals, using traffic sign shapes. 	<ul style="list-style-type: none"> The student will indicate which object or pictorial representation is partitioned into equal part. The student will place unit squares inside a given rectangle, using manipulatives. The student will partition shapes into equal parts. The student will partition portions of a classroom garden into sections for each plan, using graphic representation(s).

Career Development and Occupational Studies (CDOS) skills crosswalk to the New York State Alternate Assessment (NYSAA) Essence statements and Extensions

Career Development: Knowledge about the world of work, career options, personal skills, and abilities relating to future career decisions. For example,

- Distinguish between personal preferences

Integrated Learning: Application of academic knowledge and skills to school, community and home settings. For example:

- Apply knowledge of geometric shapes to real life situations (e.g., shape of a pan to be used in a cooking activity).

Universal Foundation Skills: Foundation skills and competencies necessary for success in the workplace. For example:

- Understand concepts of quantity (more/less when measuring quantities; doubling a recipe).
- Use time management and sorting tasks based on amount of time allotted.
- Manage materials and resources to complete a task.
- Understand the division of tasks within a job for equity of effort among workers.

Mathematics – Grade 3

CCSS Domain: Measurement & Data		Page(s): 23
CCSS Code	Cluster (including Standard(s) within the Cluster)	Essence of Cluster
3.MD	<p>Represent and interpret data.</p> <p>3. Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step “how many more” and “how many less” problems using information presented in scaled bar graphs. <i>For example, draw a bar graph in which each square in the bar graph might represent 5 pets.</i></p> <p>4. Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units— whole numbers, halves, or quarters.</p>	<p>Understand that data can be represented on a graph (horizontal or vertical).</p> <p>Understand that a graph can be used to compare data.</p>
Extensions		
Less Complex		More Complex
Recognize information presented in a bar graph or pictograph.	Interpret information from a bar graph or pictograph.	Create a bar graph or pictograph, including labeling the graph’s axes and providing a title.
Assessment Tasks		
<ul style="list-style-type: none"> The student will recognize data on a bar graph or pictograph by attending to multiple graphs and indicating the one that shows the requested data. The student will recognize parts of a bar graph or pictograph (e.g., title, axis, scale, etc.). 	<ul style="list-style-type: none"> The student will interpret data that is displayed on a bar graph or pictograph by answering simple questions or responding to statement(s) related to the data. The student will interpret two bar graphs or pictographs to compare the data represented (e.g., this graph shows the favorite activities of Mr. Smith’s class and this graph shows the favorite activities of Mrs. Jones’ class. Which class likes math more?). The student will interpret the difference between categories represented in a bar graph or pictograph (e.g., how many more students like hot dogs than pizza). 	<ul style="list-style-type: none"> The student will create a bar graph or pictograph from a given set of data, including labeling the graph appropriately. The student will create a graph by gathering and recording data in response to a question.

Career Development and Occupational Studies (CDOS) skills crosswalk to the New York State Alternate Assessment (NYSAA) Essence statements and Extensions

Career Development: Knowledge about the world of work, career options, personal skills, and abilities relating to future career decisions. For example,

- Graph/chart progress toward personal goals.
- Chart or list personal interests and compare them to possible career options.

Integrated Learning: Application of academic knowledge and skills to school, community and home settings. For example:

- Compare personal skills to possible career options.
- Graph performance on a particular skill.
- Apply the ability to read graphs and charts when reading schedules (e.g., using bus, train, personal daily schedules, classroom schedules, monthly calendars).

Universal Foundation Skills: Foundation skills and competencies necessary for success in the workplace. For example:

- Managing Information: Use information from a graph to make decisions (i.e. compare the price of similar items; use a bus schedule-selects the proper bus to take to get to work on time).
- Managing a behavior plan and applying appropriate behavior choices based on data.

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Mathematics – Grade 3

CCSS Domain: Number & Operations in Base Ten		Page(s): 22
CCSS Code	Cluster (including Standard(s) within the Cluster)	Essence of Cluster
3.NBT	<p>Use place value understanding and properties of operations to perform multi-digit arithmetic</p> <ol style="list-style-type: none"> 1. Use place value understanding to round whole numbers to the nearest 10 or 100. 2. Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction. 3. Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g., 9×80, 5×60) using strategies based on place value and properties of operations. 	Understand place value in a number and apply it to operations between numbers.
Extensions		
Less Complex	◀ ⋯ ⋯ ◀ ⋯ ⋯ ▶ ⋯ ⋯ ▶ ⋯ ⋯ ▶	More Complex
Add, subtract and/or multiply one-digit numbers.	Recognize the value of a digit within a given number. <i>(For example, 96 is 90 ones and 6 ones, as well as 96 is 9 tens and 6 ones).</i>	Add and/or subtract multi-digit numbers.
Assessment Tasks		
<ul style="list-style-type: none"> • The student will add, subtract and/or multiply one-digit numbers. • The student will add one-digit numbers (e.g., using a visual model such as number line or numbers chart). • The student will subtract one-digit numbers (e.g., using a visual model such as number line or numbers chart). • The student will multiply one-digit numbers (e.g., using a visual model such as number line or numbers chart). 	<ul style="list-style-type: none"> • The student will recognize the value of digit(s) within a number(s) with at least two digits (e.g., 9 rods and 6 units = 96). • The student will recognize the value of a number by representing the given number with at least two digits (e.g., using base 10 blocks). • The student will represent a three-digit number(s) (e.g., using base 10 blocks). 	<ul style="list-style-type: none"> • The student will add and/or subtract multi-digit numbers. • The student will add two multi-digit numbers. • The student will subtract two multi-digit numbers.

Career Development and Occupational Studies (CDOS) skills crosswalk to the New York State Alternate Assessment (NYSAA) Essence statements and Extensions

Career Development: Knowledge about the world of work, career options, personal skills, and abilities relating to future career decisions. For example,

- Understand the differences between full-time/ part-time work and the relationship to wages earned.
- Calculate the number of career options related to preferences.

Integrated Learning: Application of academic knowledge and skills to school, community and home settings. For example:

- Use skills learned across a variety of settings (purchasing additional items at a grocery store will increase the cost of the bill).
- Integrate mathematical concepts into decision-making when completing a task or project (number of carpet squares needed to cover the classroom).

Universal Foundation Skills: Foundation skills and competencies necessary for success in the workplace. For example:

- Math: Understands concepts of quantity (more/less when measuring quantities; doubling a recipe).
- Determine material/a personal need based on project requirements and an inventory list (number of computers available and number of students in class, inventory of a school store based on sales).

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Mathematics – Grade 3

CCSS Domain: Number & Operations - Fractions		Page(s): 22
CCSS Code	Cluster (including Standard(s) within the Cluster)	Essence of Cluster
3.NF	<p>Develop understanding of fractions as numbers.</p> <ol style="list-style-type: none"> 1. Understand a fraction $1/b$ as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b as the quantity formed by a parts of size $1/b$. 2. Understand a fraction as a number on the number line; represent fractions on a number line diagram. <ol style="list-style-type: none"> a. Represent a fraction $1/b$ on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into b equal parts. Recognize that each part has size $1/b$ and that the endpoint of the part based at 0 locates the number $1/b$ on the number line. b. Represent a fraction a/b on a number line diagram by marking off a lengths $1/b$ from 0. Recognize that the resulting interval has size a/b and that its endpoint locates the number a/b on the number line. 3. Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. <ol style="list-style-type: none"> a. Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line. b. Recognize and generate simple equivalent fractions, e.g., $1/2 = 2/4$, $4/6 = 2/3$. Explain why the fractions are equivalent, e.g., by using a visual fraction model. c. Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. <i>Examples: Express 3 in the form $3 = 3/1$; recognize that $6/1 = 6$; locate $4/4$ and 1 at the same point of a number line diagram.</i> d. Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols $>$, $=$, or $<$, and justify the conclusions, e.g., by using a visual fraction model. 	<p>Develop an understanding that fractions are numbers that represent a part of a whole number.</p>

Extensions		
Less Complex	◀ ⋯ ⋯ ◀ ⋯ ⋯ ▶ ⋯ ⋯ ▶ ⋯ ⋯ ▶	More Complex
Recognize a whole and/or its parts. <i>(For example, 1/2, 1/3, 1/4, 1/6, 1/8).</i>	Compare set(s) of fractions with the same numerator or the same denominator.	Recognize and/or generate simple equivalent fractions using one or more strategies. <i>(For example, 1/2 = 2/4; 4/6 = 2/3).</i>
Assessment Tasks		
<ul style="list-style-type: none"> The student will recognize a whole and/or its parts. The student will recognize a whole from a given set. The student will recognize the unit parts that make up a whole from a given set. 	<ul style="list-style-type: none"> The student will compare set(s) of fractions with the same numerator or the same denominator. The student will compare two fractions with the same denominator by indicating the requested comparison on a number line. 	<ul style="list-style-type: none"> The student will recognize and/or generate simple equivalent fractions using one or more strategies. The student will recognize and generate simple equivalent fractions using a visual fraction model.
<p>Career Development and Occupational Studies (CDOS) skills crosswalk to the New York State Alternate Assessment (NYSAA) Essence statements and Extensions</p> <p>Career Development: Knowledge about the world of work, career options, personal skills, and abilities relating to future career decisions. For example,</p> <ul style="list-style-type: none"> Understand the differences between full-time/ part-time work and the relationship to wages earned. Use fractions to record hours worked to the nearest minute. <p>Integrated Learning: Application of academic knowledge and skills to school, community and home settings. For example:</p> <ul style="list-style-type: none"> Use skills learned across a variety of settings (purchasing sufficient amounts of materials to complete a project or recipe, dividing items among the group members). Solve problems that require the use of fractions and the concept of equalities. <p>Universal Foundation Skills: Foundation skills and competencies necessary for success in the workplace. For example:</p> <ul style="list-style-type: none"> Understand concepts of quantity (more/less when measuring quantities; doubling a recipe). Manage resources by applying the concepts of whole/part to complete a task efficiently. Use understanding of fractions to determine task completion (task is half done, task is completely done). 		

Mathematics – Grade 3

CCSS Domain: Operations & Algebraic Thinking		Page(s): 21
CCSS Code	Cluster (including Standard(s) within the Cluster)	Essence of Cluster
3.OA	<p>Represent and solve problems involving multiplication and division.</p> <ol style="list-style-type: none"> 1. Interpret products of whole numbers, e.g., interpret 5×7 as the total number of objects in 5 groups of 7 objects each. <i>For example, describe a context in which a total number of objects can be expressed as 5×7.</i> 2. Interpret whole-number quotients of whole numbers, e.g., interpret $56 \div 8$ as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. <i>For example, describe a context in which a number of shares or a number of groups can be expressed as $56 \div 8$.</i> 3. Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.¹ 4. Determine the unknown whole number in a multiplication or division equation relating three whole numbers. <i>For example, determine the unknown number that makes the equation true in each of the equations $8 \times ? = 48$, $5 = _ \div 3$, $6 \times 6 = ?$</i> 	Identify and solve problems involving multiplication and division of whole numbers less than 100.

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