Cluster	Performance Level 4	Performance Level 3	Performance Level 2	Performance Level 1
Students understand properties of multiplication and the relationship between multiplication and division. (NY-3.OA.5,6)	Explain how the properties of operations (commutative, associative, distributive) can be utilized as strategies to multiply and divide.	Apply the properties of operations (commutative, associative, distributive) as strategies to multiply and divide involving factors less than 10.† (3.OA.5)	Apply the commutative property as a strategy to multiply using factors less than or equal to 5. Explore how the distributive property can be utilized to multiply more challenging multiplication facts.	Given a visual model or manipulative, identify equivalent expressions that illustrate the commutative property involving factors less than or equal to 5.
	Use the relationship between multiplication and division to explain how to use multiplication to solve a division problem or use division to solve a multiplication problem involving factors less than 10.	Understand division as an unknown factor problem involving factors less than 10. Rewrite a division problem as an unknown factor or multiplication problem by relating the unknown factor to the number or size of a group. (3.OA.6)	Given a division problem, recognize an equivalent unknown facy t aon pr70.003 Tc 0 (r3 (t)-J 0.003 Tc 0003 Tc 0 -0.9 (ca)9(v) a	

Next Generation Learning Standards Grade 3 Mathematics Performance Level Descriptions

Cluster	Performance Level 4	Performance Level 3	Performance Level 2	Performance Level 1
Use place value understanding and properties of operations to perform multi-digit arithmetic. (NY-3.NBT.1-4)	Use the properties of operations (associative or distributive property) to			

Cluster	Performance Level 4	Performance Level 3	Performance Level 2	Performance Level 1
Students develop understanding of fractions as numbers. (NY-3.NF.1-3) (Note: Grade 3 expectations in this domain are limited to fractions with denominators 2, 3, 4, 6, 8)	Apply and explain the construct of a unit fraction, 1/b, as the quantity formed by 1 part when a whole is partitioned into b equal parts or the construct a/b as the quantity formed by a parts of size 1/b (any denominator up to 10).	Understand a unit fraction, 1/b, as the quantity formed by 1 part when a whole is partitioned into b equal parts and a/b as the quantity formed by a parts of size 1/b. (3.NF.1)	Recognize the unit fraction, 1/b, as the quantity formed by 1 part when a whole is partitioned into b equal parts using denominators of 2, 4, or 8.	Given a visual model, recognize the unit fraction, 1/b, as the quantity formed by 1 part when a whole is partitioned into b equal parts using denominators of 2 or 4.
		Represent a fraction 1/b on a number line from 0 to 1 and partitioned into b equal parts and recognize that each part has size of 1/b based on starting at 0 and that b in 1/b is the total number of equal parts in the whole. (3.NF.2a)	Represent 1/b on a number line with an interval of 0 to 1 by partitioning the number line into b equal parts and recognize that b is the total number of equal parts using denominators of 2, 4, or 8.	Recognize the location of the fractions 1/2 and 1/4 on a number line with an interval of 0 to 1 and partitioned into 2, 4, or 8 equal parts.
		Represent a/b on a number line from 0 to 1 by marking off a lengths of 1/b and recognize that the resulting interval has size a/b and that its endpoint locates the number a/b on the number line. (3.NF.2b)	Represent a/b on a number line from 0 to 1 based on identifying equal lengths of 1/b involving denominators of 2, 4 or 8 and recognize that the resulting interval has size a/b and that its endpoint locates the number a/b on the number line.	Represent a/b on a number line from 0 to 1 based on identifying equal lengths of 1/b involving denominators of 2 or 4 and recognize that the resulting interval has size a/b and that its endpoint locates the number a/b on the number line.

Next Generation Learning Standards Grade 3 Mathematics Performance Level Descriptions

Cluster	Performance Level 4	Performance Level 3	Performance Level 2	Performance Level 1
Students develop understanding of fractions as numbers. (NY-3.NF.1-3) (Note: Grade 3 expectations in this domain are limited to fractions with denominators				

Cluster	Performance Level 4	Performance Level 3	Performance Level 2	Performance Level 1
Students solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects. (NY-3.MD.1,2)	Read, write, or measure time intervals in minutes and solve two-step word problems involving addition or subtraction of time intervals in minutes, including crossing into a new hour or going from a.m. to p.m.	Read, write, or measure time intervals in minutes and solve one-step word problems involving addition or subtraction of time intervals in minutes, including crossing into a new hour or going from a.m. to p.m. (3.MD.1)	Read, write, or measure time in intervals of one, five, fifteen, and thirty minutes, including common terms like quarter past, half past, and quarter to and solve one-step word problems involving addition of time intervals in minutes.	Solve one-step word problems involving addition of time intervals in hours and read, write, or measure time in intervals of thirty minutes, including common terms like o'clock, half-hour, or half past.
		Measure or estimate liquid volumes and masses of objects using standard units of liters (l), grams (g), and kilograms (kg) with or without the use of a model.[§] (3.MD.2a)	Given a visual model, estimate liquid volumes and masses of objects using standard units of kilograms (kg).	Given a visual model, estimate liquid volumes and masses of objects involving standard units of liters (l) and grams (g).
	Add, subtract, multiply, or divide to solve two-step word problems involving masses or volumes that are given in the same units, and assess or explain the solution using estimation.	Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units.[**] (3.MD.2b)	Subtract to solve a one-step word problem involving masses or volumes that are given in the same units by using drawings with a measurement scale to represent the problem.	Add to solve a one-step word problem involving masses or volumes that are given in the same units by using drawings with a measurement scale to represent the problem.

[§] Does not include compound units such as cubic centimeters or find the geometric volume of a container.
[**] Does not include multiplicative comparison problems involving notions of "times as much".

Cluster	Performance Level 4	Performance Level 3	Performance Level 2	Performance Level 1
Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects. (NY-3.MD.3-4, 8)	Draw or interpret a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve multi-step problems comparing more than two categories of data presented in a scaled picture graph or a scaled bar graph.	Draw or interpret a scaled picture graph and a scaled bar graph to represent a data set with up to 5 categories. Solve two-step "how many more" and "how many less" problems using information presented in a scaled picture graph or a scaled bar graph. (3.MD.3)	Given a scaled picture graph and a scaled bar graph to represent a data set with up to 5 categories. Solve one-step "how many more" and "how many less" problems using information presented in a scaled picture graph or a scaled bar graph.	Given a scaled picture graph and a scaled bar graph to represent a data set with up to 5 categories, identify the category with the most or least amount of data.
	Generate measurement data by measuring lengths to the nearest eighth of an inch using rulers marked with halves, fourths, and eighths of an inch.	Generate measurement data by measuring lengths to the nearest quarter of an inch using rulers marked with halves and fourths of an inch. (3.MD.4)	Generate measurement data by measuring lengths to the nearest half of an inch using rulers marked with halves of an inch. May include an image of a rule next to the object being measured.	Generate measurement data by measuring lengths to the nearest whole unit using rulers. May include an image of a rule next to the object being measured.
	Show the data by making or using a line plot where the horizontal scale is marked off in appropriate units (whole numbers, halves, quarters, or eighths).	Show the data by making or using a line plot where the horizontal scale is marked off in appropriate units (whole numbers, halves, or quarters). (3.MD.4)	Show the data by using a given line plot where the horizontal scale is marked off in appropriate units (whole numbers or halves).	Show the data by using a given line plot where the horizontal scale is marked off in appropriate units (whole numbers).

Next Generation Learning Standards Grade 3 Mathematics Performance Level Descriptions

Cluster	Performance Level 4	Performance Level 3	Performance Level 2	Performance Level 1
Students understand concepts of area and relate area to multiplication and to addition (geometric measurement). (NY-3.MD.5-7)	Create real-world or mathematical problems that involve finding the area of rectangles by multiplying whole-number side lengths and represent whole-number products as rectangular areas in mathematical reasoning.	Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real-world and mathematical problems and represent whole-number products as rectangular areas in mathematical reasoning. (3.MD.7b)	Given a visual model of a rectangle with sides labeled, determine the area by multiplying the side lengths in a mathematical problem.	
	Use area models to represent various ways the distributive property can be used in mathematical reasoning and apply this technique to solve real-world area problems that may include more than one unknown side.	Use tiling to show in a concrete case that the area of a rectangle with whole-number side length a and side length b + c is the sum of a × b and a × c and use area models to represent the distributive property in mathematical reasoning. [760.9 (s)-19.6 (t)-15.3 (h(r)-13tb a)2.1 (nd)]TJ /TT4 1vv7 q 0.00)24 245.76 141.12 150.6 re W2n BT -0.0043 and .9 (r)-4.4 (ea)-6.9-4.51-0.004 Tc tels to r9.96 1-3.9 (t)-3.4 (h)-6.--4.51-ibutoo 0 -1.229 TD [e(ob)-2.69 (n)(h)		

Next Generation Learning Standards Grade 3 Mathematics Performance Level Descriptions

Cluster	Performance Level 4	Performance Level 3	Performance Level 2	Performance Level 1
Students recognize perimeter as an attribute of plane figures and distinguish between linear and area measures. (NY-3.MD.8)	Solve mathematical or real-world problems involving the perimeters of two different polygons given most of the side lengths in each figure.	Solve real-world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths or finding one unknown side length given the perimeter and other side lengths. (3.MD.8a)	Solve mathematical problems involving finding the perimeter of a polygon with all side lengths given.	Given a visual model of a polygon with all side lengths provided, determine the perimeter of the shape.
		Identify rectangles with the same perimeter and different areas or with the same area and different perimeters. (3.MD.8b)	Understand that rectangles with the same perimeter can have different areas and rectangles with the same area can have different perimeters.	Given a visual model of a rectangle, identify a rectangle with the same perimeter or the same area.
Reason with shapes and their attributes. (NY-3.G.1-2) Note: Can include regular and irregular polygons. The formal terms “regular” and “irregular” are not a grade level expectation. Reason with shapes and their attributes.	Recognize and classify regular and irregular polygons based on the number of sides and vertices and identify shapes that do not belong to one of the given subcategories using thn3.3 (e)recMt4srecMts “ree not s. “			

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