

New York State Testing Program Next Generation Learning Standards Mathematics Test

Performance Level Descriptions

Grade 3

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New York State Testing Program Next Generation Mathematics Test

Performance Level Descriptions

GRADE 3

Performance level descriptions (PLDs) help communicate to students, families, educators, and the public the specific knowledge and skills expected of students when they demonstrate proficiency of a learning standard. The PLDs serve several purposes in classroom instruction and assessment. They are the foundation of rich discussion around what students need to do to perform at higher levels and to explain the progression of learning within a subject area. PLDs are also crucial in explaining student performance on the NYS assessments since they make a connection between the scale score, the performance level, and specific knowledge and skills typically demonstrated at that level.

Policy Definitions of Performance Levels

For each subject area, students perform along a continuum of the knowledge and skills necessary to meet the demands of the Learning Standards for English Language Arts and Mathematics. There are students who excel in standards, students who are proficient, students who are partially proficient, and students who are below proficient. New York State assessments are designed to classify student performance into one of four levels based on the knowledge and skills the student has demonstrated. These performance levels are defined as:

NYS Level 4

Students performing at this level **excel** in standards for their grade. They demonstrate knowledge, skills, and practices embodied by the Learning Standards that are considered **more than sufficient** for the expectations at this grade.

NYS Level 3

Students performing at this level are **proficient** in standards for their grade. They demonstrate knowledge, skills, and practices embodied by the Learning Standards that are considered **sufficient** for the expectations at this grade.

NYS Level 2

Students performing at this level are **partially proficient** in standards for their grade. They demonstrate knowledge, skills, and practices embodied by the Learning Standards that are considered partial but insufficient for the expectations at this grade. Students performing at Level 2 are considered on track to meet current New York high school graduation requirements but are **not yet proficient** in Learning Standards at this grade.

NYS Level 1

Students performing at this level are **below proficient** in standards for their grade. They may demonstrate **limited** knowledge, skills, and practices embodied by the Learning Standards that are considered **insufficient** for the expectations at this grade.

How were the PLDs developed?

Following best practice for the development of PLDs, the number of performance levels and their definitions were specified prior to the articulation of the full descriptions. New York State educators certified in the appropriate grade-levels and subject areas convened in separate meetings to develop the initial draft PLDs for Grades 3-8 English Language Arts and Mathematics, respectively. In developing PLDs, participants considered policy definitions of the performance level and the knowledge and skill expectations for each grade level in the Learning Standards. Once they established the appropriate knowledge and skills from a particular standard for NYS Level 3 (i.e., proficient in standards), panelists worked together to parse the knowledge and skills across the other performance levels in such a way that the progression of the knowledge and skills was clearly seen moving from Level 1 to Level 4. This process was repeated for all of the standards for each grade and subject area.

The draft PLDs were reviewed by the New York State Education Department's (NYSED's) Content Advisory Panels which consist of classroom teachers from elementary, middle and high school, school and district administrators, English Language Learners (ELLs) and students with disabilities (SWD) specialists, and higher education faculty members from across the state. The drafts then went through additional rounds of review and edits from a number of NYS-certified educators, content specialists, and assessment experts under NYSED supervision.

How can the PLDs be used by Educators and in Instruction?

The PLDs should be used as a guidance document to show the overall continuum of learning of the knowledge and skills from the Learning Standards. NYSED encourages the use of the PLDs for a variety of purposes, including differentiating instruction to maximize individual student outcomes, creating formative classroom assessments and rubrics to help identify target performance levels for individual or groups of students, and tracking student growth along the proficiency continuum as described by the PLDs. The knowledge and skills shown in the PLDs describe *typical* performance and progression, however the order in which students will demonstrate the knowledge and skills within and between performance levels may be staggered (i.e. a student who predominantly demonstrates Level 2 knowledge and skills may simultaneously demonstrate certain knowledge and skills indicative of Level 3.).

How are the PLDs used in Assessment?

PLDs are essential in setting performance standards (i.e., "cut scores") for New York State assessments. Standard setting panelists use PLDs to determine the expectations for students to demonstrate the knowledge and skills necessary to *just barely* attain a Level 2, Level 3, or Level 4 on the assessment. These knowledge and skills drive discussions that influence the panelists as they recommend the cut scores on the assessment.

PLDs are also used in question development. Question writers are assigned to write questions that draw on the specific knowledge and skills from a PLD. This ensures that each test has questions that distinguish performance all along the continuum. Teachers can use the PLDs in the same manner when developing both formative and summative classroom assessments. Tasks that require students to demonstrate knowledge and skills from the PLDs can be tied back to the performance level with which the PLD is associated, providing the teacher with feedback about the students' progress as well as a wealth of other skills that the student is likely able to demonstrate (or can aspire to in the case of the next-highest PLD).



Next Generation Learning Standards Grade 3 Mathematics Performance Level Descriptions

Cluster	Performance Level 4	Performance Level 3	Performance Level 2	Performance Level 1
Students represent and solve problems involving multiplication and division. (NY-3.OA.1-4)	Interpret products and quotients of whole numbers in real-world problems.	Interpret products and quotients of whole numbers involving whole number factors less than or equal to 10.* (3.OA.1 & 3.OA.2)	Interpret products and quotients involving whole number factors less than 10.*	Given a visual model or manipulative, explore the interpretation of products involving whole number factors less than or equal to 5.
	Use multiplication and division to solve two-step word problems involving one- or two-digit numbers, equal groups, arrays, and measurement quantities other than area.	Use multiplication and division within 100 to solve one-step word problems involving equal groups, arrays, and measurement quantities other than area. Both factors are less than 10. (3.OA.3)	Given a visual model, use multiplication and division within 50 to solve one-step word problems involving equal groups and arrays. Both factors are less than 10.	Given a visual model or manipulative, compute products within and including 25 in the context of word problems.
	Determine the unknown whole number in multiplication or division equations in real-world problems.	Determine the unknown whole number in a multiplication or division equation relating three whole numbers with factors less than 10. A symbol can be used for the unknown and the unknown can be in any position. (3.OA.4)	Determine the unknown factor in a multiplication equation relating three whole numbers with factors less than or equal to 5.	Determine the unknown product in a multiplication equation relating three whole numbers with factors less than or equal to 5.

* A variety of representations can be used such as equations, drawings, verbal descriptions, and other models for the interpretation of products and quotients.

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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 factor or multiplication problem involving factors less than or equal to 5.	
Students solve problems involving the four operations and identify and explain patterns in arithmetic. (NY-3.OA.8,9)	Represent or solve two-step word problems using any two of the four operations with a letter standing for the unknown, the unknown is in a variety of positions, and involving factors greater than or equal to 10.	Represent or solve two-step word problems involving multiplication or division with a letter standing for the unknown in an expression or equation and involving factors less than 10. [‡] (3.OA.8a)	Represent or solve two-step word problems involving addition and subtraction in which the sum or difference is unknown with a letter standing for the unknown and factors are less than 10.*	Given a visual model or manipulative, represent or solve one-step word problems involving addition or subtraction in which the sum or difference is unknown with a letter standing for the unknown and factors are less than or equal to 5.

* A variety of representations can be used such as equations, drawings, verbal descriptions, and other models for the interpretation of products and quotients.

† A variety of representations can be used when applying the properties of operations, which may or may not include parentheses.

‡ Two-step problems need not be represented by a single expression or equation.

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Cluster	Performance Level 4	Performance Level 3	Performance Level 2	Performance Level 1
Students solve problems involving the four operations and identify and explain patterns in arithmetic. (NY-3.OA.8,9)	Access and explain the reasonableness of answers using mental computation and estimation strategies including rounding in a two-step word problem involving factors greater than or equal to 10.	Assess the reasonableness of answers using mental computation and estimation strategies including rounding in a two-step word problem within 100 and involving factors less than 10. (3.OA.8b)	Assess the reasonableness of answers using mental computation and estimation strategies including rounding in a two-step word problem involving factors less than or equal to 5.	Assess the reasonableness of answers using mental computation and estimation strategies including rounding in a one-step word problem involving factors less than 5.
	Apply arithmetic patterns and explain how the properties of the arithmetic pattern can lead to generalizations that can be used to solve mathematical and real-world word problems.	Extend arithmetic patterns involving addition of numbers less than or equal to 10 or multiplication using 2, 5, or 10 in mathematical problems (including patterns in tables). (3.OA.9)	Identify arithmetic patterns or missing numbers in a pattern that involve addition of numbers less than or equal to 10 or multiplication using 2, 5, or 10 in mathematical problems.	Distinguish between sequences that appear to have an arithmetic pattern and those that do not appear to have an arithmetic pattern in mathematical problems.
Use place value understanding and properties of operations to perform multi-digit arithmetic. (NY-3.NBT.1-4)	Use place value understanding to round four- or five-digit whole numbers to the nearest 10, 100, or 1000.	Use place value understanding to round three-digit whole numbers to the nearest 10 or 100. (3.NBT.1)	Given a visual aid, use place value understanding to round three-digit whole numbers to the nearest 10 or 100.	Given a visual aid, use place value understanding to round two-digit whole numbers to the nearest 10.

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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 explain the patterns in multiplication when multiplying by multiples of 10.	Multiply one-digit whole numbers by multiples of 10 in the range 10–90 using strategies based on place value and properties of operations (associative or distributive property). (3.NBT.3)	Multiply one-digit whole numbers by multiples of 10 in the range 10–50 using equal groups or skip counting.	Write an expression to represent the product of one-digit numbers multiplied by multiples of 10.
	Understand that the digits of a five-digit number represent amounts of ten thousands, thousands, hundreds, tens, and ones, identify place value, and know that a group of 10 thousands is equal to 10,000.	Understand that the digits of a four-digit number represent amounts of thousands, hundreds, tens, and ones, identify place value, and know that a group of 10 hundred is equal to 1,000. (3.NBT.4a)	Understand that the digits of a three-digit number represent amounts of hundreds, tens, and ones, identify place value, and know that a group of 10 tens is equal to 100.	Understand that the digits of a two-digit number represent amounts of tens, and ones, identify place value, and know that a group of 10 ones is equal to 10.
	Read and write five-digit numbers using base-ten numerals, number names, and expanded form.	Read and write four-digit numbers using base-ten numerals, number names, and expanded form. (3.NBT.4b)	Read and write three-digit numbers using base-ten numerals and expanded form.	Read and write three-digit numbers using number names.

Next Generation Learning Standards Grade 3 Mathematics Performance Level Descriptions

Cluster	Performance Level 4	Performance Level 3	Performance Level 2	Performance Level 1
<p>Students develop understanding of fractions as numbers. (NY-3.NF.1-3)</p> <p>(Note: Grade 3 expectations in this domain are limited to fractions with denominators 2, 3, 4, 6, 8)</p>	<p>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).</p>	<p>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)</p>	<p>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.</p>	<p>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.</p>
		<p>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)</p>	<p>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.</p>	<p>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.</p>
		<p>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)</p>	<p>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.</p>	<p>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.</p>

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Cluster	Performance Level 4	Performance Level 3	Performance Level 2	Performance Level 1
<p>Students develop understanding of fractions as numbers. (NY-3.NF.1-3)</p> <p>(Note: Grade 3 expectations in this domain are limited to fractions with denominators 2, 3, 4, 6, 8)</p>		Understand two fractions as equivalent if they are the same size or the same point on a number line. (3.NF.3a)	Understand two fractions as equivalent if they are the same size or the same point on a number line involving denominators of 2, 4, and/or 8.	Understand two fractions as equivalent if they are the same size or the same point on a number line involving denominators of 2 and 4.
	Given a number a/b , generate an equivalent number c/d and explain why the fractions are equivalent.	Recognize and generate equivalent fractions with denominators of 2, 3, 4, 6, and/or 8. (3.NF.3b)	Given visual models, recognize or generate equivalent fractions with denominators of 2, 4, and/or 8.	Given a visual model or manipulative, recognize equivalent fractions with denominators 2 and 4.
	Recognize or generate equivalent fractions for whole numbers greater than 1.	Express whole numbers as fractions and recognize fractions that are equivalent to whole numbers. (3.NF.3c)	Express whole numbers as fractions involving denominators of 2, 4 and/or 8 and recognize that b/b is equal to 1 whole.	Given a visual model or manipulative and a fraction involving denominators of 2 and 4, recognize that b/b is equal to 1 whole.
	Compare more than two fractions with the same numerator or same denominator using the symbols $>$, $<$, or $=$ and recognize that the fractions must refer to the same whole and justify the conclusions.	Compare two fractions with the same numerator or same denominator using the symbols $>$, $<$, or $=$ and recognize that the fractions must refer to the same whole and justify the conclusions. (3.NF.3d)	Compare two fractions with the same numerator or same denominator of 2, 4, or 8 using greater than, less than, or equal to or the symbols $>$, $<$, or $=$ and recognize that the fractions must refer to the same whole.	Given a visual model or manipulative, compare two fractions with the same denominator of 2 or 4 using greater than, less than, or equal to and recognize that the fractions must refer to the same whole.

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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”.

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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
<p>Students understand concepts of area and relate area to multiplication and to addition (geometric measurement). (NY-3.MD.5-7) (Unit squares include square cm, square m, square in., square ft, and improvised units.)</p>	<p>Recognize area as an attribute of plane figures, and understand that area is measured in square units and can be found by covering a plane figure with unit squares, without gaps or overlaps, and counting them.</p>	<p>Given a visual model or description of a plane figure, recognize that a square with side lengths of 1 unit is called a “unit square” and is said to have “one square unit” of area, and can be used to measure area. (3.MD.5a)</p>	<p>Given a visual model, recognize that a square with side lengths of 1 unit is called a “unit square” and said to have “one square unit” of area.</p>	<p>Given a visual model, recognize that a square with side lengths of 1 unit is called a “unit square”.</p>
		<p>Understand that a plane figure which can be covered without gaps or overlaps by n unit squares is said to have an area of n square units. (3.MD.5b)</p>	<p>Understand the relationship between “a unit square” and “one square unit” as they relate to area.</p>	
	<p>Solve real-world problems involving finding the area of plane figures or comparing the areas of two or more figures using unit squares to cover the figures without gaps or overlaps.</p>	<p>Determine the area of plane figures based on unit squares that can cover the figure without gaps or overlaps. (3.MD.6)</p>	<p>Determine the area of plane figures composed of unit squares and a unit square model by counting the number of unit squares.</p>	
	<p>Explain why the number of unit squares covering a rectangle is equivalent to multiplying its whole number side lengths.</p>	<p>Determine the area of a rectangle by tiling it and using a multiplication equation to show that the area is the same regardless of counting the unit squares or multiplying the side lengths. (3.MD.7a)</p>	<p>Given a visual model of a rectangle with all sides labeled and a unit square model, determine the area of the rectangle by tiling it using unit squares.</p>	

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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 $a \times b$ and $a \times c$ and use area models to represent the distributive property in mathematical reasoning. (3.MD.7c)	Given a visual model of a combined figure made of unit squares, use tiling to identify the whole number side length a and its adjacent side length $b + c$ and use the area model partitioned into two smaller areas to represent how to find the combined area using the distributive property.	
Students understand concepts of area and relate area to multiplication and addition (geometric measurement). (NY-3.MD.5-7)	Recognize area as additive. Find areas of figures composed of non-overlapping rectangles and apply this technique to solve real-world problems that include more than one unknown side length.	Recognize area as additive. Find areas of figures composed of two non-overlapping rectangles and apply this technique to solve real-world problems that include no more than one unknown side length. (3.MD.7d)	Recognize area as additive. Find areas of figures composed of two non-overlapping rectangles with no unknown sides.	

Next Generation Learning Standards Grade 3 Mathematics Performance Level Descriptions

Cluster	Performance Level 4	Performance Level 3	Performance Level 2	Performance Level 1
<p>Students recognize perimeter as an attribute of plane figures and distinguish between linear and area measures. (NY-3.MD.8)</p>	<p>Solve mathematical or real-world problems involving the perimeters of two different polygons given most of the side lengths in each figure.</p>	<p>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)</p>	<p>Solve mathematical problems involving finding the perimeter of a polygon with all side lengths given.</p>	<p>Given a visual model of a polygon with all side lengths provided, determine the perimeter of the shape.</p>
		<p>Identify rectangles with the same perimeter and different areas or with the same area and different perimeters. (3.MD.8b)</p>	<p>Understand that rectangles with the same perimeter can have different areas and rectangles with the same area can have different perimeters.</p>	<p>Given a visual model of a rectangle, identify a rectangle with the same perimeter or the same area.</p>
<p>Reason with shapes and their attributes. (NY-3.G.1-2)</p> <p>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.</p>	<p>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 the formal terms “regular” and “irregular”.</p>	<p>Recognize and classify polygons based on the number of sides and vertices and identify shapes that do not belong to one of the given subcategories. (triangles, quadrilaterals, pentagons, and hexagons) (3.G.1)</p>	<p>Given a visual model, recognize and classify polygons based on the number of sides and vertices. (triangles, quadrilaterals, pentagons, and hexagons)</p>	<p>Given a visual model, recognize and classify polygons based on the number of sides and vertices. (triangles and quadrilaterals)</p>

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<p>(NY-3.G.1-2)</p> <p>Note: Can include regular and irregular polygons. The formal terms “regular” and “irregular” are not a grade level expectation.</p>	<p>Create and partition shapes into parts with equal areas and express the area of each part as a unit fraction of the whole.</p>	<p>Given shapes partitioned into 3 or 6 parts with equal areas, express the area of each part as a unit fraction of the whole or given the unit fraction of the whole, identify the shape that is partitioned into equal parts that are equivalent to the fraction given. (1/3 or 1/6) (3.G.2)</p>	<p>Given shapes partitioned into 8 parts with equal areas, express the area of each part as a unit fraction of the whole or given the unit fraction of the whole, identify the shape that is partitioned into equal parts that are equivalent to the fraction given. (1/8)</p>	<p>Given shapes partitioned into 2 or 4 parts with equal areas, express the area of each part as a unit fraction of the whole or given the unit fraction of the whole, identify the shape that is partitioned into equal parts that are equivalent to the fraction given. (1/2 or 1/4)</p>