Third Grade * Common Core Mathematics

Domain Target	Cluster Target	Domain & Standard	Standard	Learning Target	A Specific Example	ONE Example of Assessment
Operations & Algebra *	**Operations & Algebra** *	**Operations & Algebra** *	**Operations & Algebra** *	**Operations & Algebra** *	**Operations & Algebra** *	**Operations & Algebra** *
		3.OA-1	3.OA-1. Interpret products of whole numbers, e.g., interpret 5 × 7 as the total number of objects in 5 groups of 7 objects each. *For example, describe a context in which a total number of objects can be expressed as 5 × 7.*	I can identify the total number of objects when given groups of objects. Example 7 groups of 5 objects is equal to 35 objects.	4 groups of 5 stars is 20 stars. ☆ ☆ ☆ ☆	Write two ways you could find the total number of stars shown. ☆ ☆ ☆ ☆
		3.OA-2	3.OA-2. Interpret whole-number quotients of whole numbers, e.g., interpret 56 ÷ 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. For example, describe a context in which a number of shares or a number of groups can be expressed as 56 ÷ 8.	I can determine the number of objects when dividing a product into equal groups.	When I put 12 objects into four equal groups I get 3 objects in each group. ☆ ☆ ☆ ☆	Write a number expression that would explain how many pieces of candy 8 students would get if they share 56 pieces equally?
	I can solve real world problems using multiplication and division.	3.OA-3	3.OA-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]**	I can solve multiplication and division problems up to 100 involving equal groups.	Give student any multiplication or division problem up to 100 without a remainder and they can accurately solve. 10 x 10 = 100	If 48 plums are shared equally into 4 bags, then how many plums will be in each bag?
				I can solve multiplication and division problems up to 100 involving arrays.	3 x 4 = 12 ☆ ☆ ☆ ☆ ☆ ☆ ☆ ☆ ☆ ☆ ☆ ☆	A rectangle has an area of 36 square centimeters. If one side is 9 cm long, how long is a side that is next to it?
				I can solve multiplication and division problems up to 100 involving measurement quantities.	20 in. x 5 in. = 100 sq. in. 60 cm. ÷ 30 cm. = 2 cm.^{2}	You have 18 inches of string, which you will cut into pieces that are 6 inches long. How many pieces of string will you have?
		3.OA-4	3.OA-4. Determine the unknown whole number in a multiplication or division equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations 8 × ? = 48, 5 = □ ÷ 3, 6 × 6 = ?.*	I can determine the unknown number in a multiplication equation when there is a variable (missing number) in the equation.	8 x □ = 48	Find the missing number to make the equation true. □ X 12 = 36
				I can determine the unknown number in a division equation when there is a variable (missing number) in the equation.	5 = □ ÷ 3	Find the missing number to make the equation true. 7 = □ ÷ 8
I can solve real world problems involving addition, subtraction, multiplication, and division. **I can explain how these operations work and how they are related to one another.**	**I can explain the properties of multiplication and division and how they relate to each other.**	3.OA-5	3. OA-5. Apply properties of operations as strategies to multiply and divide. **[2]** Examples: If 6 × 4 = 24 is known, then 4 × 6 = 24 is also known. (Commutative property of multiplication.) 3 × 5 × 2 can be found by 3 × 5 = 15, then 15 × 2 = 30, or by 5 × 2 = 10, then 3 × 10 = 30. (Associative property of multiplication.) Knowing that 8 × 5 = 40 and 8 × 2 = 16, one can find 8 × 7 as 8 × (5 + 2) = (8 × 5) + (8 × 2) = 40 + 16 = 56. (Distributive property.)	I can use numbers to demonstrate (show) the commutative property of multiplication.	6 x 4 = 24 so 4 x 6 = 24	Explain how the anwer to 27 + 48 can be found easily if someone has already told you that 48 + 27 = 75?
				I can use numbers to demonstrate (show) the associative property of multiplication.	3 x 5 x 2 can be found by (3 x 5) x 2 = 30 OR 3 x (5 x 2) = 30	Mary says that she can multiply 17 x 5 x 2 more easily if she multiplies the 56 x 2 first. Explain why this should still give the correct answer.
				I can use numbers to demonstrate (show) the distributive property of multiplication.	Knowing that 8 × 5 = 40 and 8 × 2 = 16, one can find 8 × 7 as 8 × (5 + 2) = (8 × 5) + (8 × 2) = 40 + 16 = 56	Kelsey says that to multiply 17 x 5, she first multiplies 10 x 5. What must she do next to get the correct answer to 17 x 5?
		3.OA-6	3.OA-6. Understand division as an unknown-factor problem. *For example, find 32 ÷ 8 by finding the number that makes 32 when multiplied by 8.*	I can find the missing factor (number) in a division problem.	To find 32 ÷ 8 use 8 x □ = 32	John says he solves the problem of 56 ÷ 8 by solving the related multiplication fact. What is the related multiplication fact?

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	I can comfortably and efficiently mulitply and divide within 100.	3.OA-7	3.OA-7. Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.	I can easily (quickly) and accurately multiply any 2 one-digit numbers with products up to 100.	9 x 9 = 81	Recite the given multiplication facts in the allotted time.
				I can easily (quickly) and accurately divide any two-digit number with the quotient up to 9.	72 ÷ 8 = 9	Recite the given division facts in the allotted time.
	I can solve real world problems using addition, subtraction, multiplication, and division and explain the patterns that appear with these operations.	3.OA-8	3.OA-8. Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. [3]	I can solve 2 step word problems using addition, subtraction, multiplication, and division.	Eliza had $24 to spend on seven notebooks. After buying them she had $10. How much did each notebook cost?	Eliza had $24 to spend on seven notebooks. After buying them she had $10. How much did each notebook cost?
				I can solve 2 step word problems using addition, subtraction, multiplication, and division with one unknown number.	Henry bought 6 hotdogs and 2 hamburgers. He spent $5.00. The hotdogs cost $.50 each. How much did one hamburger cost?	Henry bought 6 hotdogs and 2 hamburgers. He spent $5.00. The hotdogs cost $.50 each. How much did one hamburger cost?
				I can determine if the answer makes sense by using mental math, estimation, and rounding.	78-39=39 This makes sense because 78 rounds to 80 and 39 rounds to 40. 80-40 is 40. 39 is about 40.	John knows that he and his friend has $78 and $94. Explain how he can quickly figure out if that is enough to cover a $200 expense. (do not calculate the answer)
		3.OA-9	3.OA-9. Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. *For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.*	I can identify and explain addition patterns.	Find the various patterns in an addition table.	Explain why whenever you add a number to itself the answer is always even.
				I can identify and explain subtraction patterns.	81-9=72, 72-9=63, 63-9=54, 54-9=45. The difference is 9 because you are subtracting 9.	You are given two numbers whose difference is 8. If the one number is increased by 5 what needs to happen to the other number to have the difference remain 5?
				I can identify and explain multiplication patterns.	8x2=16, 8x3=24, 8x4=32. The product is increasing by eight each time because the factor being multiplied by 8 is increasing by 1 each time.	Explain why multiples of 6 are always even and divisible by three.
				I can identify and explain division patterns.	5÷5=1, 50÷5=10, 500÷5=100, 5,000÷5 =1,000. The dividend and quotient are each increasing by a factor of 10.	Describe the pattern of answers whenever a number is divided by 10.
Number Base Ten *	**Number Base Ten ***	**Number Base Ten ***	**Number Base Ten ***	**Number Base Ten ***	**Number Base Ten ***	**Number Base Ten * Number Base Ten * Number Base Ten ***
I can use my understanding of place value to help solve arithmetic problems in various ways.	**I can use my understanding of place value to help solve arithmetic problems in various ways.**	3.NBT-1	3.NBT-1. Use place value understanding to round whole numbers to the nearest 10 or 100.	I can round whole numbers to the nearest 10.	21 rounded to the nearest 10 is 20. 68 rounded to the nearest 10 is 70.	What multiple of 10 is immediately above and below the number 66? Which number is closer?
				I can round whole numbers to the nearest 100.	423 rounded to the nearest 100 is 400. 598 rounded to the nearest 100 is 600.	What multiple of 100 is immediately above and below 478? Which is closer?
		3.NBT-2	3.NBT-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.	I can add using numbers up to the thousands place value .	482 + 364 = 846	Add a number to 361 that will increse the hundreds digit by 3, the tens digit by 2, and not change the ones digit.
				I can subtract using numbers to the thousands place value.	8,967 - 7,896 = 1071	Vinnie accidently added 235 to a number and got 537 when she was suppose to subtract 235. What should the answer be?

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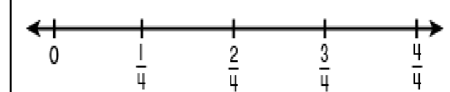
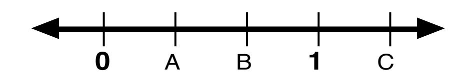
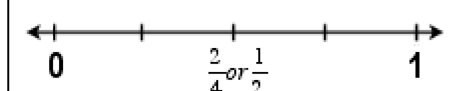
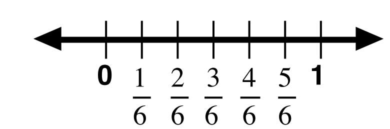
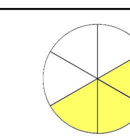
		3.NBT-3	3.NBT-3. Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g., 9 × 80, 5 × 60) using strategies based on place value and properties of operations.	I can multiply a one-digit number by 10, 20, 30, 40, 50, 60, 70, 80, 90.	8 x 80 = 640; 7 x 90 = 630	Explain in words how a person could mentally multiply 70 by 4.
Number and Operations- Fractions * Number and Operations- Fractions * Number and Operations Fractions * Number and Operations Fractions * Number and Operations Fractions * Number and Operations						
I can begin to explain how fractions are related to whole numbers. **I can begin to explain how arithmetic with fractions is related (similar) to arithmetic with whole numbers.**	**I can begin to explain how fractions are related to whole numbers.** **I can begin to explain how arithmetic with fractions is related (similar) to arithmetic with whole numbers.**	3.NF-1	3.NF-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.	I can explain how a fraction like 1/b means the whole is divided into "b" equal parts	I can explain that the fraction 1/4 means the whole has been divided into four equal parts.	Explain what John means when he says that he has divided the shape into thirds.
				I can explain how a fraction like a/b refers to "a" parts when the whole is divided into "b" equal parts	I can explain that the fraction of 3/4 means the whole has been divided into four equal parts and we have three of those parts.	What does the fraction 2/3 mean? A. 3 halves B. 2 parts of thirds C. 2 wholes cut into thirds
		3.NF-2a	3.NF-2. Understand a fraction as a number on the number line; represent fractions on a number line diagram. 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.	I can label a number line using fractions.		Which of the following letters represents the fraction 2/3 on the number line shown. A. A B. B C. C 
		3.NF-2b	3.NF-2. Understand a fraction as a number on the number line; represent fractions on a number line diagram. 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.	I can create a number line with even intervals representing fractions.		Mark the number line shown into fourths and label the mark that represents 3/4. 
		3.NF-3a	3.NF-3. Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. a. Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line.	I can explain how two different fractions can be equivalent (equal in size).	2/4 and 5/10 are the equivalent because they are both equal to 1/2.	Write a paragraph explaining to your friend why 2/4 and 1/2 are equivalent.
				I can explain and show how two fractions can be at the same spot on the number line.	 The fraction of 1/2 and 2/4 are the same place on a number line.	On the number line shown, label the places where 1/3 and 2/3 should appear. 
		3.NF-3b	3.NF-3. Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. 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.	I can identify equivalent fractions.	5/10 and 3/6 are equivalent fractions because they are both equal to 1/2.	Which of the following are equivalent? 2/4; 2/6; 1/2
				I can create equivalent fractions.	Given 2/3 I can find that 4/6 is an equivalent fraction.	Write two fractions equivalent to 3/5.
				I can explain why two fractions are equal by using a visual model.	When I look at the pictures of the cookies, I can tell that 1/2, 2/4, 3/6 are equivalent. 	What two fractions does this figure show to be equivalent? 

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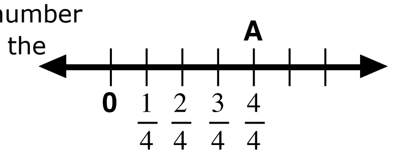
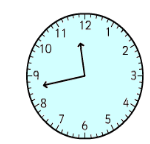
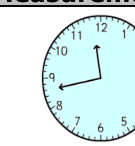
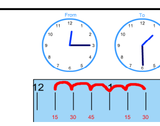
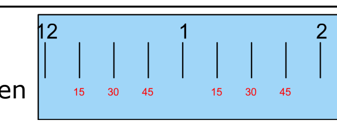
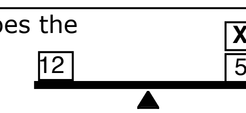
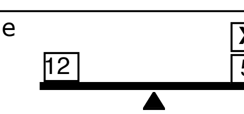
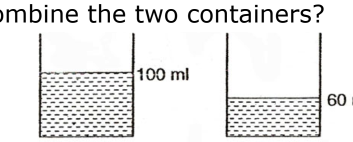
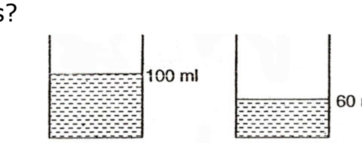
		3.NF-3c	3.NF-3. Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. c. Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. *Examples: Express 3 in the form 3 = 3/1; recognize that 6/1 = 6; locate 4/4 and 1 at the same point of a number line diagram.*	I can write a whole number as a fraction.	$3 = \frac{3}{1}$	Which of the following is equivalent to 5? A. 1/5 B. 5/1 C. 5/5
				I can identify a fraction that is a whole number.	$\frac{10}{2} = 5$	What whole number could replace the faction at A? 
		3.NF-3d	3.NF-3. Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. 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.	I can compare two fractions with the same numerator using >, =, or <.	$\frac{1}{4} < \frac{1}{2}$	What symbol, <, =, or >, should placed in the ☐ to make the sentence true? $\frac{1}{3}$ ☐ $\frac{1}{6}$
				I can compare two fractions with the same denominator using <, =, or <.	$\frac{4}{5} > \frac{2}{5}$	What symbol, <, =, or >, should placed in the ☐ to make the sentence true? $\frac{4}{6}$ ☐ $\frac{2}{6}$
Measurement & Data *	Measurement & Data *	Measurement & Data *	Measurement & Data *	Measurement & Data *	Measurement & Data *	Measurement & Data * Measurement
	I can solve real world problems involving time, liquid volumes, and the mass of objects.	3.MD-1	3.MD-1. Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.	I can tell and write time to the nearest minute.	 The time is 11:43	Which of the following times does the clock show?  A. 11:89 B. 11:43 C. 12:43
				I can measure time intervals in minutes.	Soccer practice started at 4:12 and ended at 4:56. Soccer practice lasted 44 minutes.	Time how long it takes for your heart to beat 100 times.
				I can add and subtract intervals of time using minutes.	Lunch started at 12:05 and ended 30 minutes later. Lunch ended at 12:35.	Sally left for school at 7:45am. Mary left at 8:05am. How many minutes later did Mary leave than Sally?
				I can solve time problems by adding or subtracting minutes on a number line.	 A link for instruction	Use the number line to find the difference between 12:45 & 2:15. 
		3.MD-2	3.MD-2. Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). [6] Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem. [7]	I can measure liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l).	I measured the water and found there was 2.5 liters.	Use the balance scale to find the weight of the pencil.
				I can estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l).	The apple weighs about 100 grams	What is the approximate weight of a pencil? A. 10 grams B. 10 kilograms C. 10 liters
				I can use drawings to solve one step word problems involving grams and kilograms.	How much does the box marked "X" weigh? 	How much does the box marked "X" weigh? 
				I can use drawings to solve one step word problems involving milliliters and liters.	How many milliliters when you combine the two containers? 	How many milliliters when you combine the two containers? 

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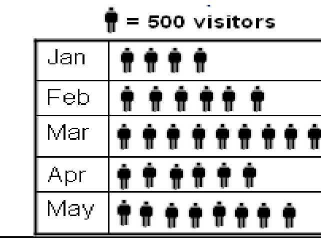
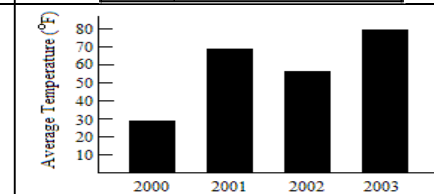
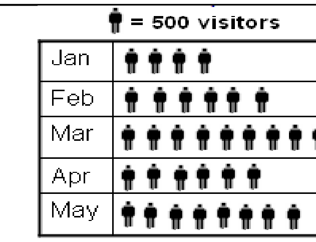
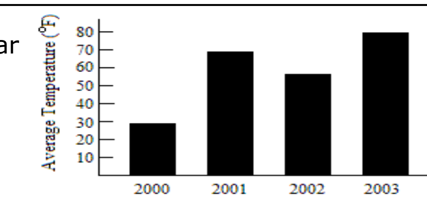
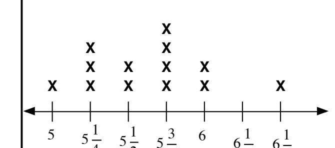
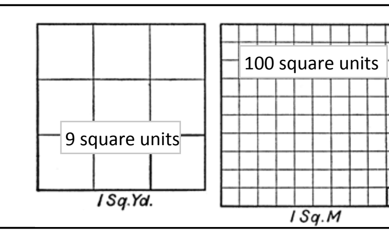
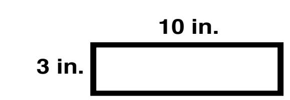
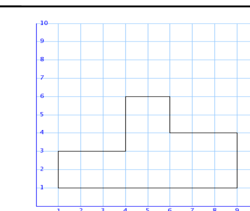
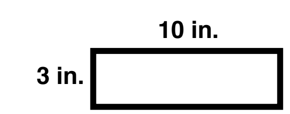
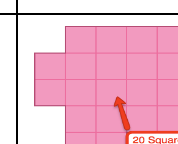
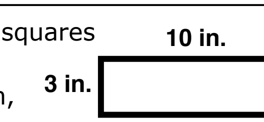
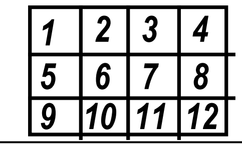
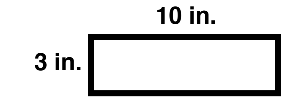
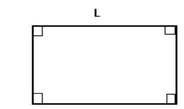
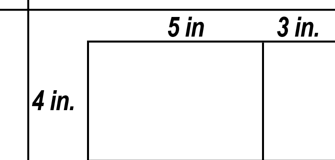
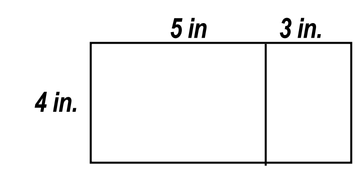
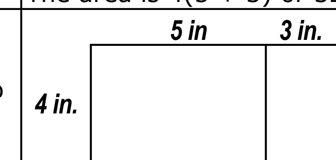
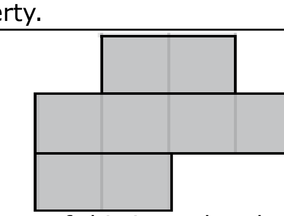
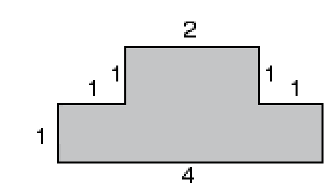
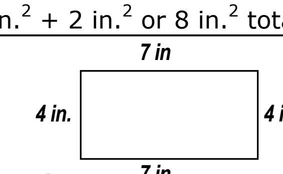
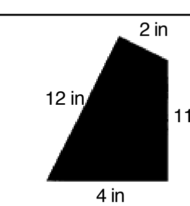
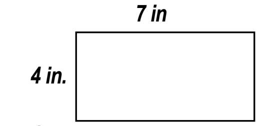
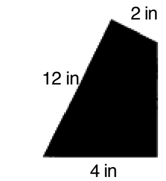
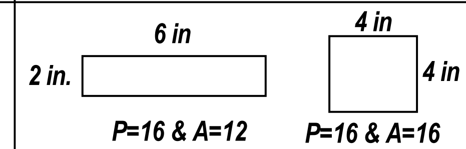
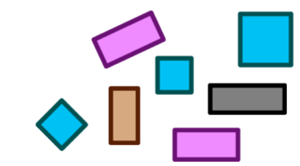
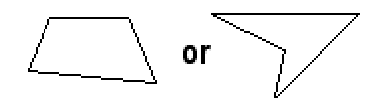
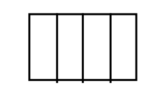
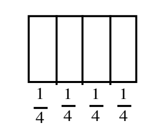
	I can draw charts and graphs with data and explain what these charts and graphs say about the data.	3.MD-3	3.MD-3. Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. *For example, draw a bar graph in which each square in the bar graph might represent 5 pets.*	I can draw a scaled picture graph to show data.		Draw a picture graph to represent the data shown. **Easter Eggs Found on Hunt** Leah 3 Carrie 4 Kelsey 5 Amy 2
				I can draw a scaled bar graph to show data.		Draw a bar graph from the data shown. **Money Donated for Charity** Monday $25 Tuesday $12 Wednesday $5 Thursday $22
				I can answer one and two step questions about a picture graph.	One Step- How many visitors were seen in April? Two Step- How many more visitors were in May over January?	From the picture graph shown what is the difference between the number of visitors between February and May? 
				I can answer one and two step questions about a bar graph.	One Step- What was the average temperature in 2002? Two Step- How much less was the temp. in 2002 than the highest year?	What year had the highest average temp? 
		3.MD-4	3.MD-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.	I can measure to the half inch.	The pencil is 3 1/2 inches long.	**Performance Task** Measure the lengths of all the pencils belonging to the students in your classroom to the nearest quarter of an inch. Create a line graph to display this data.
				I can measure to the fourth inch.	My finger is 2 3/4 inches long.	
				I can create a line plot based on my measurement data.	 The graph shows my data after measuring 13 pencils.	
I can solve real world problems involving various measurements such as time, liquid volume, mass, perimeter, and area. **I can use drawings, charts, and graphs to help me solve these problems.**		3.MD-5a	3.MD-5. Recognize area as an attribute of plane figures and understand concepts of area measurement. a. A square with side length 1 unit, called "a unit square," is said to have "one square unit" of area, and can be used to measure area.	I can use a unit square to measure area.		What figure would you use to completely cover the shape shown? 
		3.MD-5b	3.MD-5. Recognize area as an attribute of plane figures and understand concepts of area measurement. b. 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.	I can use unit squares to measure the area of a plane figure.	 25 square units	Draw the unit squares necessary to cover the shape shown. 
		3.MD-6	3.MD-6. Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).	I can measure the area by counting unit squares.		After drawing the unit squares that would completely cover the shape shown, determine the area. 

Domain Target	Cluster Target	Domain & Standard	Standard	Learning Target	A Specific Example	ONE Example of Assessment
	I can explain what area means and how the area of a shape is related to multiplication and addition.	3.MD-7a	3.MD-7. Relate area to the operations of multiplication and addition. a. Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths.	I can find the area of a rectangle by using tiles.		Find the are of the figure shown by first drawing the squares that completely fill the shape and then explain how this area can also be calculated by using the measurements of the sides. 
				I can find the area of a rectangle by multiplying the length and the width.	L = 4 in. W = 3 in. Area is 4 x 3 or 12 $in.^2$	
				I can compare the area using tiles to the area found by multiplication.	The student can explain how the two are calculations above relate to one another.	
		3.MD-7b	3.MD-7. Relate area to the operations of multiplication and addition. b. 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.	I can find the area of a rectangle in real world situations.	My bedroom is 13 feet long and 10 feet wide. I need to buy carpet. How many square feet should I buy?	Find the area of the living room floor if it measures 14 feet wide and 20 feet long.
				I can find rectangles with a given area to solve real world problems.	The student can describe a variety of rectangles that would have an area of 36 square feet.	Show all the rectangular arrays that are possible to represent the number 12.
		3.MD-7c	3.MD-7. Relate area to the operations of multiplication and addition. c. Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and b + c is the sum of a × b and a × c. Use area models to represent the distributive property in mathematical reasoning.	I can find the area of a rectangle using tiles when the rectangle is divided into two rectangles.	The area is 4(5 + 3) or 32 $in.^2$	Mrs. Jones gave each student two pieces of paper. One measured 4in by 5in and the other 4in by 3in. Students were told to tape them together as shown below. Find two different way to calculate the total area of the paper and explain why it works. 
				I can find the area of a rectangle that is divided into two rectangles by adding the area of both rectangles.	The area is 4(5) + 4(3) or 32 $in.^2$	
				I can show how this is an example of the distributive property.	The student can explain why the above two examples will always work and how it illustrates the distributive property.	
		3.MD-7d	3.MD-7. Relate area to the operations of multiplication and addition. d. Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems.	I can find the area of a large rectangle by dividing it into smaller rectangles and adding their areas.	The area of this irregular shape is 2 $in.^2$ + 4 $in.^2$ + 2 $in.^2$ or 8 $in.^2$ total.	Find the area of the figure below. 
			3.MD-8. Solve real world and mathematical problems involving perimeters of polygons,	I can find the perimeter of an shape given side lengths.	The perimeter is 7 in. + 7 in. + 4 in. + 4 in. = 22 in.	Find the perimeter of the figure shown. 

Third Grade * Common Core Mathematics

Domain Target	Cluster Target	Domain & Standard	Standard	Learning Target	A Specific Example	ONE Example of Assessment
	I can explain what perimeter means and how it is different from area.	3.MD-8	including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.	I can find the perimeter of a shape with an unknown side length.	 The perimeter is 2(7 in.) + 2(4 in.) = 22 in.	If the perimeter of the figure shown is 29 inches, what is the length of the side labeled "x"? 
				I can determine how two rectangles can have the same perimeters and different areas.		Draw two different rectangles so both have a perimeter of 24 feet but their areas are different.
Geometry * Geometry * Geometry * Geometry	**Geometry * Geometry**	**Geometry**	**Geometry * Geometry * Geometry**	**Geometry * Geometry * Geometry**	**Geometry * Geometry**	**Geometry * Geometry * Geometr**
I can put shapes into proper groups based on their properties and explain how to divide a shape into fractional parts.	**I can put shapes into proper groups based on their properties and explain how to divide a shape into fractional parts.**	3.G-1	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.	I can explain how a rhombus, rectangle and a square are alike and different.	A rhombus and square are alike because they each have four congruent sides. They are different because a square has four 90 degree angles and a rhombus only needs opposite angles congruent.	What attribute(s) do these figures have in common? 
				I can draw a quadrilateral that is not a rhombus, rectangle, or square.		Draw an example of a quadralateral that is not a rhombus, rectangle, or square.
		3.G-2	3.G-2. Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. *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 can divide an area into equal parts.		Partition the shape shown into eight equal parts and label each part with the correct fraction that describes each part. 
				I can express the area of each part as a fraction.		

[1] See Glossary, Table 2 (shown below).
[2] Students need not use formal terms for these properties.
[3] This standard is limited to problems posed with whole numbers and having whole number answers; students should know how to perform operations in the conventional order when there are no parentheses to specify a particular order (Order of Operations).
[4] A range of algorithms may be used.
[5] Grade 3 expectations in this domain are limited to fractions with denominators 2, 3, 4, 6, and 8.
[6] Excludes compound units such as cm3 and finding the geometric volume of a container.
[7] Excludes multiplicative comparison problems (problems involving notions of "times as much", see Glossary, Table 2).

	Unknown Product	Group Size Unknown ("How many in each group?" Division)	Number of Groups Unknown ("How many groups?" Division)
	3 × 6 = ?	3 × ? = 18, and 18 ÷ 3 = ?	? × 6 = 18, and 18 ÷ 6 = ?
Equal Groups	There are 3 bags with 6 plums in each bag. How many plums are there in all? *Measurement example.* You need 3 lengths of string, each 6 inches long. How much string will you need altogether?	If 18 plums are shared equally into 3 bags, then how many plums will be in each bag? *Measurement example.* You have 18 inches of string, which you will cut into 3 equal pieces. How long will each piece of string be?	If 18 plums are to be packed 6 to a bag, then how many bags are needed? *Measurement example.* You have 18 inches of string, which you will cut into pieces that are 6 inches long. How many pieces of string will you have?
Arrays,[4] Area[5]	There are 3 rows of apples with 6 apples in each row. How many apples are there? *Area example.* What is the area of a 3 cm by 6 cm rectangle?	If 18 apples are arranged into 3 equal rows, how many apples will be in each row? *Area example.* A rectangle has area 18 square centimeters. If one side is 3 cm long, how long is a side next to it?	If 18 apples are arranged into equal rows of 6 apples, how many rows will there be? *Area example.* A rectangle has area 18 square centimeters. If one side is 6 cm long, how long is a side next to it?
Compare	A blue hat costs $6. A red hat costs 3 times as much as the blue hat. How much does the red hat cost? *Measurement example.* A rubber band is 6 cm long. How long will the rubber band be when it is stretched to be 3 times as long?	A red hat costs $18 and that is 3 times as much as a blue hat costs. How much does a blue hat cost? *Measurement example.* A rubber band is stretched to be 18 cm long and that is 3 times as long as it was at first. How long was the rubber band at first?	A red hat costs $18 and a blue hat costs $6. How many times as much does the red hat cost as the blue hat? *Measurement example.* A rubber band was 6 cm long at first. Now it is stretched to be 18 cm long. How many times as long is the rubber band now as it was at first?
General	$a \times b = ?$	$a \times ? = p$, and $p \div a = ?$	$? \times b = p$, and $p \div b = ?$

[4]The language in the array examples shows the easiest form of array problems. A harder form is to use the terms rows and columns: The apples in the grocery window are in 3 rows and 6 columns. How many apples are in there? Both forms are valuable.

[5]Area involves arrays of squares that have been pushed together so that there are no gaps or overlaps, so array problems include these especially important measurement situations.

[1] These take apart situations can be used to show all the decompositions of a given number. The associated equations, which have the total on the left of the equal sign, help children understand that the = sign does not always mean makes or results in b

[2] Either addend can be unknown, so there are three variations of these problem situations. Both Addends Unknown is a productive extension of this basic situation, especially for small numbers less than or equal to 10.

[3] For the Bigger Unknown or Smaller Unknown situations, one version directs the correct operation (the version using more for the bigger unknown and using less for the smaller unknown). The other versions are more difficult.

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