

3rd Grade Math Pacing Guide

Unit 1

Board Approved: December 12, 2016

#	CCSS	Unit 1: Represent and solve problems involving multiplication and division	September/October 31 Days	Go Math Chapters Covered:	Completed
		Student Learning Objective:	Go Math Lessons		
1	3.OA.1	Interpret products of whole numbers as repeated addition or equal groups of objects (up to 100).	Lessons: 3.1,3.2,3.3		
2	3.OA.2	Explain division as a set of objects partitioned equally into a number of shares (up to 100).	Lessons: 6.2,6.3,6.4		
3	3.OA.4	Determine the unknown in a division or multiplication equation with an unknown relating 3 whole numbers up to 100 (does not require students to solve from memory).	Lessons : 5.2, 7.8		
4	3.NBT.1	Round whole numbers to the nearest 10 or 100.	Lessons: 1.2,1.3,1.8		
5	3.NBT.2	Fluently add and subtract (with regrouping) two 2-digit whole numbers within 100.	Lessons : 1.4, 1.5, 1.6,1.7, 1.9, 1.10, 1.11, 2.2 , 2.3, 2.4, 2.5, 2.7		
6	3.NBT.3	Multiply one-digit whole numbers by multiples of 10 (10 - 90).	Lessons : 5.3, 5.4, 5.5		
7	3.MD.6	Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).	Lessons: 11.5p		

3rd Grade Math Pacing Guide

Unit 1

8	3.MD.7a,b	Explain the relationship between tiling/multiplying side lengths to find the area of rectangles.	Lessons: 11.6, 11.7, 11.8	
---	------------------	--	----------------------------------	--

3rd Grade Math Pacing Guide

Unit 2 Board Approved: December 12, 2016

#	CCSS	Unit 2: Understand properties of multiplication and the relationship between multiplication and division	Recommended Pacing: November & December (Instructional Days: 50)	Go Math Chapters Covered: 3, 4, 6, 7, 11	Completed
		Student Learning Objective:	Go Math Lessons		
1	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.	Lessons 3.3 (Skip count); 3.5 (Model w/ arrays); 4.1 (Mult w/2 & 4); 4.2 (mult w/ 5 & 10); 4.3 (mult w/ 3& 6); 6.1 (Model Division); 6.5 (div as repeated sub); 6.6 (model di with arrays); 7.1 (div by 2); 7.3 (div by 5); 7.8 (div by 8)		
2	3.OA.5	Apply properties of operations as strategies to multiply and divide. Examples: If $6 \times 4 = 24$ is known, then $4 \times 6 = 24$ is also known. (Commutative property of multiplication.) $3 \times 5 \times 2$ can be found by $3 \times 5 = 15$, then $15 \times 2 = 30$, or by $5 \times 2 = 10$, then $3 \times 10 = 30$. (Associative property of multiplication) Knowing that $8 \times 5 = 40$ and $8 \times 2 = 16$, one can find 8×7 as $8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40 + 16 = 56$ (Distributive property). (Students need not use formal terms for these properties)	Lessons 3.6 (div by 6); 3.7 (div by 7); 4.5 (distributive Ppty); 4.6 (Associa ppty); 6.9 (Div rules for 1 and 0)		
3	3.OA.6	Understand division as an unknown factor problem. For example, find $32 \div 8$ by finding the number that makes 32 when multiplied by 8.	Lesson 6.6 (
4	3.OA.7	Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 \div 5 = 8$) or properties of operations.	Lessons 4.5 ; 4.8 ; 4.9 ; 6.8 ; 7.2 ; 7.4 ; 7.5 ; 7.6 ; 7.7 ; 7.9		

3rd Grade Math Pacing Guide

Unit 2 Board Approved: December 12, 2016

5	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.	Lessons 1.1; 4.7; 4.10; 5.1	
6	3.MD.7c,d	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 $a \times b$ and $a \times c$. Use area models to represent the distributive property in mathematical reasoning. 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.	Lessons; 11.6;11.8	

3rd Grade Math Pacing Guide

Unit 3

Board Approved: December 12, 2016

#	CCSS	Unit 3: Solve Problems Involving the Four Operations & Understand Fractions as Numbers on the Number Line	Recommended Pacing: January/February (Instructional Days): 28	Go Math Chapters Covered: 1, 6, 8, 9 and 10	Completed
		Student Learning Objective:	Go Math Lessons		
1	3.OA.7	Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 \div 5 = 8$) or properties of operations.	6.7 (relating \times and \div) 6.8 (write relating facts) (Revisited from units 1 and 2)		
2	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.	1.2 (rounding) 1.3 (estimating sums) 1.8 (estimating differences) 1.12 (problem solving: addition and subtraction) 4.10 (problem solving: multiplication) 6.1 (problem solving: modeling \div) 7.10 (2 step problems)		
3	3.NF.1	Understand a fraction $\frac{1}{b}$ as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction $\frac{a}{b}$ as the quantity formed by a parts of size $\frac{1}{b}$.	8.1 (equal parts of a whole) 8.2 (equal shares)		
4	3.NF.2	Understand a fraction as a number on the number line; represent fractions on a number line diagram. a) Represent a fraction $\frac{1}{b}$ 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 $\frac{1}{b}$ and that the endpoint of the part based at 0 locates the number $\frac{1}{b}$ on the number line. b) Represent a fraction $\frac{a}{b}$ on a number line diagram by marking off a lengths $\frac{1}{b}$ from 0.	8.5 (fractions on a # line) 9.6 (model equivalent fractions)		

3rd Grade Math Pacing Guide Unit 3

		Recognize that the resulting interval has size a/b and that its endpoint locates the number a/b on the number line.		
5	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.	10.1 (nearest minute) 10.3 (time intervals) 10.4 (using time intervals) 10.5 (problem solving- time intervals)	
6	3.MD.2	Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). 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 beaker with a measurement scale) to represent the problem.	10.7 (measure liquid volume) 10.8 (measure mass) 10.9 (problem solving using vol/mass)	
7	3.G.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>	8.1 (parts of a whole) 8.2 (equal shares) 8.3 (unit fractions) 8.4 (fractions of a whole)	

3rd Grade Math Pacing Guide

Unit 4

Board Approved: December 12, 2016

#	CCSS	Unit 4: Build equivalent fractions and compare fractions; apply to measurement quantities	Recommended Pacing: March/April (Instructional Days)20-25	Go Math Chapters Covered:	Completed
		Student Learning Objective:	Go Math Lessons		
1	3.OA.7	Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 \div 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.	3.6, 3.7,4.5, 4.8, 4.9, 6.8, 7.4, 7.5, 7.6, 7.7, 7.8, 7.9		
2	3.NF.3a	Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line.	9.6		
3	3.NF.3b	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.	9.7		
4	3.NF.3c	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.	8.6		
5	3.NF.3a	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 $>$, $=$, $<$, and justify the conclusions, e.g., by using a visual fraction model.	9.1, 9.2, 9.3, 9.4, 9.5, 9.6		

3rd Grade Math Pacing Guide

Unit 4

6	3.MD.5a	Recognize area as an attribute of plane figures and understand concepts of area measurement. 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.	11.4	
7	3.MD.5b	A plane figure can be covered without gaps or overlaps by n squares is said to have an area of n square units.	11.5	

3rd Grade Math Pacing Guide

Unit 5

Board Approved: December 12, 2016

#	CCSS	Unit 5: Understand decimal notation for fractions and compare decimal fractions	Recommended Pacing: April / May 40-45 days	Go Math Chapters Covered:	Completed
		Student Learning Objective:	Go Math Lessons		
1	3.OA.7	Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 \div 5 = 8$) or properties of operations. Know from memory all products of two 1-digit numbers.	4.5, 4.8, 4.9, 6.8, 7.2, 7.4, 7.5, 7.6, 7.7, 7.9		
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.	1.4, 1.5, 1.6, 1.7, 1.9, 1.10, 1.11, 2.2, 2.3, 2.4, 2.5, 2.7		
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. <i>For example, draw a bar graph in which each square in the bar graph might represent 5 pets.</i>	2.1, 2.2, 2.3, 2.4, 2.5, 2.6		
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.	2.7, 10.6		
5	3.MD.6	Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).	11.5		

3rd Grade Math Pacing Guide Unit 5

6	3.MD.7a	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.	11.6	
7	3.MD.8	Solve real world and mathematical problems involving perimeters of polygons, 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.	11.1, 11.2, 11.3, 11.9, 11.10	
8	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.	12.1-9 all lessons	