

GRADE 4 MATHEMATICS

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GLE content to be taught and *tested* in Grade 4 Math in 2012-13 and 2013-14

GLE #	Grade-Level Expectation Text	Aligned CCSS #
M.4.1	Read and write place value in word, standard, and expanded form through 1,000,000	4.NBT.1 4.NBT.2
M.4.2	Read, write, compare, and order whole numbers using place value concepts, standard notation, and models through 1,000,000	4.NBT.1 4.NBT.2
M.4.4	Know all basic facts for multiplication and division through 12×12 and $144 \div 12$, and recognize factors of composite numbers less than 50	4.OA.4
M.4.5	Read, write, and relate decimals through hundredths and connect them with corresponding decimal fractions	4.NF.6
M.4.6	Model, read, write, compare, order, and represent fractions with denominators through twelfths using region and set models	4.NF.2
M.4.7	Give decimal equivalents of halves, fourths, and tenths	4.NF.6
M.4.9	Estimate fractional amounts through twelfths, using pictures, models, and diagrams	Retained ¹
M.4.10	Solve multiplication and division number sentences including interpreting remainders	Retained ¹
M.4.11	Multiply 3-digit by 1-digit numbers, 2-digit by 2-digit numbers, and divide 3-digit numbers by 1-digit numbers, with and without remainders	4.NBT.5 4.NBT.6
M.4.15	Write number sentences or formulas containing a variable to represent real-life problems	Retained
M.4.17	Use manipulatives to represent the distributive property of multiplication over addition to explain multiplying numbers	4.NBT.5
M.4.19	Solve one-step equations with whole number solutions	Retained ¹
M.4.22	Select and use the appropriate standard units of measure, abbreviations, and tools to measure length and perimeter (i.e., in., cm, ft., yd., mile, m, km), area (i.e., square inch, square foot, square centimeter), capacity (i.e., fl. oz., cup, pt., qt., gal., l, ml), weight/mass (i.e., oz., lb., g, kg, ton), and volume (i.e., cubic cm, cubic in.)	4.MD.1 4.MD.3
M.4.25	Use estimates and measurements to calculate perimeter and area of rectangular objects (including squares) in U.S. (including square feet) and metric units	4.MD.3
M.4.27	Use unit conversions within the same system to solve real-life problems (e.g., 60 sec. = 1 min., 12 objects = 1 dozen, 12 in. = 1 ft., 100 cm = 1 m, 1 pt. = 2 cups)	4.MD.1 4.MD.2
M.4.32	Draw, identify, and classify angles that are acute, right, and obtuse	4.G.1

¹ This GLE was moved to another grade but will be taught and tested in this grade to decrease the possibility that the transition will create curricular gaps.

GLE content to be taught and *tested* in Grade 4 Math in 2012-13 and 2013-14

GLE #	Grade-Level Expectation Text	Aligned CCSS #
M.4.36	36. Analyze, describe, interpret, and construct various types of charts and graphs using appropriate titles, axis labels, scales, and legends	4.MD.2 4.MD.4
M.4.43	43. Identify missing elements in a number pattern	Retained ¹

CCSS and extended CCSS content (highlighted) taught but *not tested* in 2012-13 and 2013-14

CCSS #	Common Core State Standard Text	Year to be Implemented
4.G.1	Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.	2012-13
4.MD.2	Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.	2012-13
4.MD.4	Make a line plot to display a data set of measurements in fractions of a unit ($\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$). Solve problems involving addition and subtraction of fractions by using information presented in line plots. <i>For example, from a line plot find and interpret the difference in length between the longest and shortest specimens in an insect collection.</i>	2012-13
4.MD.7	Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.	2012-13
4.NBT.1	Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right. <i>For example, recognize that $700 \div 70 = 10$ by applying concepts of place value and division.</i>	2012-13
4.NBT.2	Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using $>$, $=$, and $<$ symbols to record the results of comparisons.	2012-13
4.NBT.3	Use place value understanding to round multi-digit whole numbers to any place.	2012-13
4.NBT.5	Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	2012-13
4.NBT.6	Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	2012-13

CCSS and extended CCSS content (highlighted) taught but *not tested* in 2012-13 and 2013-14

CCSS #	Common Core State Standard Text	Year to be Implemented
4.NF.1	Explain why a fraction a/b is equivalent to a fraction $(n \times a)/(n \times b)$ by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.	2012-13
4.NF.3	Understand a fraction a/b with $a > 1$ as a sum of fractions $1/b$.	2012-13
4.OA.1	Interpret a multiplication equation as a comparison, e.g., interpret $35 = 5 \times 7$ as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.	2012-13
4.OA.2	Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.	2012-13
4.OA.4	Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1–100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1–100 is prime or composite.	2012-13
4.OA.5	Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. <i>For example, given the rule “Add 3” and the starting number 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and even numbers. Explain informally why the numbers will continue to alternate in this way.</i>	2012-13
4.G.2	Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.	2013-14
4.G.3	Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.	2013-14
4.MD.5	Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement:	2013-14
4.NBT.4	Fluently add and subtract multi-digit whole numbers using the standard algorithm.	2013-14
4.NF.4	Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.	2013-14
4.NF.5	Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100. <i>For example, express $3/10$ as $30/100$, and add $3/10 + 4/100 = 34/100$.</i>	2013-14
4.OA.3	Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. 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.	2013-14

Underlined – Will be moved to another grade, but will be taught and tested in this grade to decrease possibility of gaps

- GLEs not incorporated until 2013 – 2014

Number and Operation – 55% of iLEAP (GLE #s: 1,2,4,10,11,15,17,19,43)

Fractions – 30% of iLEAP (GLE #s: 5,6,7,9)

Measurement, Data, and Geometry – 15% of iLEAP (GLE #s: 22,25,27,32,36)

Not Tested Until 2014 – 2015

W – Writing Standards

SL – Speaking and Listening Standards

L – Language Standards

2012 – 2013 and 2013 – 2013 Fourth Grade Math Transitional Curriculum Map