June 2016

4th Grade MATH
Pacing Guide

First 9 Weeks

Week 1

4.OA.1

Interpret a multiplication equation as a comparison, e.g., interpret 35 = 5 × 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.

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.

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.

Week 2

4.NBT.3

Use place value understanding to round multi-digit whole numbers to any place.

4.NBT.4

Fluently add and subtract multi-digit whole numbers using the standard algorithm.

Week 3

4.NBT.4

Fluently add and subtract multi-digit whole numbers using the standard algorithm.

Week 4

4.NBT.4

Fluently add and subtract multi-digit whole numbers using the standard algorithm.

Week 5

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.

Week 6

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.

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.

Week 7

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.

Week 8

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.

Week 9

BMA 1

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2nd 9 Weeks

Week 10

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.

- Model multiplication by using base ten blocks, area model, and rectangular arrays.
- Find the product of up to a four-digit by a one-digit number.
- Explain how to find the product of up to a four digit by a one digit and a two-digit by a two-digit.
- Find the product of a two- digit by two-digit number and explain the strategy that was used.

Week 11

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.

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Week 12

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.

Week 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.

Week 14

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.

Week 15

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.

Week 16

4.NF.1

Explain why a fraction a/b is equivalent to a fraction (n × a)/(n × 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.

Week 17

4.NF.1

Explain why a fraction a/b is equivalent to a fraction (n × a)/(n × 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.

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Week 18

BMA 2

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3rd 9 Weeks

Week 19

4.NF.2
Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as 1/2. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model.

4.NF.3a
Understand a fraction a/b with a > 1 as a sum of fractions 1/b.

Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.

4.NF.3b
Understand a fractiona/b with a > 1 as a sum of fractions 1/b.

Decompose a fraction into a sum of fractions with the same denominator in more than one way recording each decomposition by an equation. Justify decompositions, e.g., by using a visual fraction model. Examples:3/8=1/8+1/8+1/8;3/8=1/8+2/8;21/8=1+1+1/8= 8/8 + 8/8 + 1/8.

Week 20

4.NF.3c
Understand a fraction a/b with a > 1 as a sum of fractions 1/b. Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.

4.NF.4a
Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.

Understand a fraction a/b as a multiple of 1/b. For example, use a visual fraction model to represent 5/4 as the product 5 × (1/4), recording the conclusion by the equation 5/4 = 5 × (1/4).

4.NF.4b
Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.

Understand a multiple of a/b as a multiple of 1/b, and use this understanding to multiply a fraction by a whole number. For example, use a visual fraction model to express 3 × (2/5) as 6 × (1/5), recognizing this product as 6/5. (In general, n × (a/b) = (n × a)/b.

4.NF.4c
Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.

Solve word problems involving multiplication of a fraction by a whole number, e.g., by using visual fraction models and equations to represent the problem. For example, if each person at a party will eat 3/8 of a pound of roast beef, and there will be 5 people at the party, how many pounds of roast beef will be needed? Between what two whole numbers does your answer lie?

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. For example, express 3/10 as 30/100, and add 3/10 + 4/100 = 34/100.

Week 21

4.NF.4a
Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.

Understand a fraction a/b as a multiple of 1/b. For example, use a visual fraction model to represent 5/4 as the product 5 × (1/4), recording the conclusion by the equation 5/4 = 5 × (1/4).

4.NF.6
Use decimal notation for fractions with denominators 10 or 100. For example, rewrite 0.62 as 62/100; describe a length as 0.62 meters; locate 0.62 on a number line diagram.

4.NF.7
Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions, e.g., by using a visual model.

Week 22

4.NF.3d
Understand a fraction a/b with a > 1 as a sum of fractions 1/b. Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual fraction models and equations to represent the problem.

4.MD.1
Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two- column table. For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36),...

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Week 23

4.MD.1

Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two- column table. For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36),...·

Week 24

4.MD.3

Apply the area and perimeter formulas for rectangles in real world and mathematical problems. For example, find the width of a rectangular room given the area of the flooring and the length, by viewing the area formula as a multiplication equation with an unknown factor.

4.MD.5b

Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement:

Week 25

4.MD.5a

Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement:

4.MD.5b

Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement

4.MD.4

Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Solve problems involving addition and subtraction of fractions by using information presented in line plots. For example, from a line plot find and interpret the difference in length between the longest and shortest specimens in an insect collection.

Week 26

4.MD.6

Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.

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.

Week 27

BMA 3

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Geometry
Week 28 4.G.1 Identifying lines/ classifying 2-d figures
Week 29 4.G.2- Classifying triangles Classifying lines and triangles test
Week 30 4.G.3- Symmetry
Week 31 Questar Review
Week 32 Questar Review
Week 33 Questar Review
Week 34 Questar Review

Week 35 Questar Review
Week 36 Questar Review

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