

## Math – Fourth Grade

### First Quarter 2024-2025

#### **Week 1...Aug. 5-9...Topic 1 Generalize Place Value Understanding** **Diagnostic Screener**

**4.NBT.A.2** Read and write multi-digit whole numbers (less than or equal to 1,000,000) using standard form, word form, and expanded notation (e.g. the expanded notation of 4256 is written as  $(4 \times 1000) + (2 \times 100) + (5 \times 10) + (6 \times 1)$ ). Compare two multi-digit numbers based on meanings of the digits in each place and use the symbols  $>$ ,  $=$ , and  $<$  to show the relationship.

#### **Week 2...Aug 12-16...Topic 1 Generalize Place Value Understanding Cont.**

**4.NBT.A.1** Recognize that in a multi-digit whole number (less than or equal to 1,000,000), a digit in one place represents 10 times as much as it represents in the place to its right. For example, recognize that 7 in 700 is 10 times bigger than the 7 in 70 because  $700 \div 70 = 10$  and  $70 \times 10 = 700$ .

**4.NBT.A.2** Read and write multi-digit whole numbers (less than or equal to 1,000,000) using standard form, word form, and expanded notation (e.g. the expanded notation of 4256 is written as  $(4 \times 1000) + (2 \times 100) + (5 \times 10) + (6 \times 1)$ ). Compare two multi-digit numbers based on meanings of the digits in each place and use the symbols  $>$ ,  $=$ , and  $<$  to show the relationship.

**4.NBT.A.3** Round multi-digit whole numbers to any place (up to and including the hundred-thousand place) using understanding of place value and use a number line to explain how the number was rounded.

#### **Week 3...Aug. 19-23... Topic 2 Fluently Add and Subtract Multi-Digit Whole Numbers**

**4.NBT.B.4** Fluently add and subtract within 1,000,000 using efficient strategies and algorithms.

**4.OA.A.3** Solve multi-step contextual 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.

#### **Week 4...Aug. 26-30...Topic 2 Fluently Add and Subtract Multi-Digit Whole Numbers**

**Cont.**

**4.NBT.B.4** Fluently add and subtract within 1,000,000 using efficient strategies and algorithms.

**4.OA.A.3** Solve multi-step contextual 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.

#### **Week 5...Sept. 2-6...Topic 3 Use Strategies and Properties to Multiply by 1-Digit Numbers**

**4.NBT.B.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.

**4.OA.A.2** Multiply or divide to solve contextual problems involving multiplicative comparison and distinguish multiplicative comparison from additive comparison. For example, school A has 300 students and school B has 600 students: to say that school B has two times as many students is an example of multiplicative comparison; to say that school B has 300 more students is an example of additive comparison.

**4.OA.A.3** Solve multi-step contextual 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.

Fluency Standard: 4.NBT.B.4 Fluently add and subtract within 1,000,000 using efficient strategies and algorithms.

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## Math – Fourth Grade

### First Quarter 2024-2025 Continued

#### **Week 6...Sept. 9-13...Topic 3 Use Strategies and Properties to Multiply by 1-Digit Numbers**

**4.NBT.B.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.

**4.OA.A.2** Multiply or divide to solve contextual problems involving multiplicative comparison and distinguish multiplicative comparison from additive comparison. For example, school A has 300 students and school B has 600 students: to say that school B has two times as many students is an example of multiplicative comparison; to say that school B has 300 more students is an example of additive comparison.

**4.OA.A.3** Solve multi-step contextual 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.

#### **Week 7...Sept. 16-20... Topic 4 Use Strategies and Properties to Multiply by 2-Digit Numbers**

**4.NBT.B.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.

**4.OA.A.3** Solve multi-step contextual 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.

#### **Week 8...Sept. 23-27...Topic 4 Use Strategies and Properties to Multiply by 2-Digit Numbers**

**4.NBT.B.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.

**4.OA.A.3** Solve multi-step contextual 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.

**4.OA.A.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 much as 5). Represent verbal/written statements of multiplicative comparisons as multiplication equations.

#### **Week 9...Sept. 30-Oct 4... Multiplicative Comparison**

**4.OA.A.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 much as 5). Represent verbal/written statements of multiplicative comparisons as multiplication equations.

**4.OA.A.2** Multiply or divide to solve contextual problems involving multiplicative comparison and distinguish multiplicative comparison from additive comparison. For example, school A has 300 students and school B has 600 students: to say that school B has two times as many students is an example of multiplicative comparison; to say that school B has 300 more students is an example of additive comparison.

Fluency Standard: 4.NBT.B.4 Fluently add and subtract within 1,000,000 using efficient strategies and algorithms.

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### Second Quarter 2023-2024

#### **Week 1... Oct. 14-18...Topic 5 Use Strategies and Properties to Divide by 1-Digit Numbers**

**4.NBT.B.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.

**4.OA.A.3** Solve multi-step contextual 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.

#### **Week 2... Oct. 21-25...Topic 5 Use Strategies and Properties to Divide by 1-Digit Numbers Cont.**

**4.NBT.B.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.

**4.OA.A.3** Solve multi-step contextual 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.

**Connect:** 4.NBT.B.5 & 4.MD.A.2

#### **Week 3... Oct. 28-Nov. 1...Topic 7 Factors and Multiples**

**4.OA.B.4** Find factor pairs for whole numbers in the range 1–100 using models. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number is prime or composite and whether the given number is a multiple of a given one-digit number.

**Connect** 4.NBT.B.5

#### **Week 4... Nov. 4-8...Topic 7 Factors and Multiples Cont.**

**4.OA.B.4** Find factor pairs for whole numbers in the range 1–100 using models. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number is prime or composite and whether the given number is a multiple of a given one-digit number.

**Connect** 4.NBT.B.5, 4.OA.A.2, 4.OA.A.3, & 4.NBT.B.6

#### **Week 5...Nov. 11-15...Topic 8 Extend Understanding of Fraction Equivalence (Begin Volume 2)**

**4.NF.A.1** Explain why a fraction  $a/b$  is equivalent to a fraction  $(a \times n)/(b \times n)$  or  $(a \div n)/(b \div n)$  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. For example,  $3/4 = (3 \times 2)/(4 \times 2) = 6/8$ .

**Connect** 4.NBT.B.5 & 4.NBT.B.6

#### **Week 6...Nov. 18-22...Topic 8 Comparing Fractions**

**Thanksgiving Week**

**4.NF.A.2** Compare two fractions with different numerators and different denominators by creating common denominators or common numerators or by comparing to a benchmark such as 0 or  $1/2$  or 1. Recognize that comparisons are valid only when the two fractions refer to the same whole. Use the symbols  $>$ ,  $=$ , or  $<$  to show the relationship and justify the conclusions.

**Connect** 4.NF.A.1, 4.NBT.B.5, & 4.NBT.B.6

Fluency Standard: 4.NBT.B.4 Fluently add and subtract within 1,000,000 using efficient strategies and algorithms.

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## Math – Fourth Grade

### Second Quarter 2024-2025

#### **Week 7... Nov. 25-29...Topic 9 Understand Addition and Subtraction of Fractions**

**4.NF.B.3a** Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.

#### **Week 8... Dec. 2-6...Topic 9 Understand Addition and Subtraction of Fractions**

**4.NF.B.3a** Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.

**4.NF.B.3b** Decompose a fraction into a sum of fractions with the same denominator in more than one way (e.g.,  $\frac{3}{8} = \frac{1}{8} + \frac{1}{8} + \frac{1}{8}$ ;  $\frac{3}{8} = \frac{1}{8} + \frac{2}{8}$ ;  $2\frac{1}{8} = 1 + 1 + \frac{1}{8} = \frac{8}{8} + \frac{8}{8} + \frac{1}{8}$ ) recording each decomposition by an equation. Justify decompositions using a visual fraction model.

**4.NF.B.3d** Solve contextual problems involving addition and subtraction of fractions referring to the same whole and having like denominators.

#### **Week 9... Dec. 9-13...Topic 9 Understand Addition and Subtraction of Fractions**

**4.NF.B.3c** Add and subtract mixed numbers with like denominators 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.B.3d** Solve contextual problems involving addition and subtraction of fractions referring to the same whole and having like denominators.

**Connect 4.NF.B.3a & 4.NF.B.3b**

#### **Week 10...Dec. 16-20...Topic 9 Understand Addition and Subtraction of Fractions**

**4.NF.B.3a** Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.

**4.NF.B.3b** Decompose a fraction into a sum of fractions with the same denominator in more than one way (e.g.,  $\frac{3}{8} = \frac{1}{8} + \frac{1}{8} + \frac{1}{8}$ ;  $\frac{3}{8} = \frac{1}{8} + \frac{2}{8}$ ;  $2\frac{1}{8} = 1 + 1 + \frac{1}{8} = \frac{8}{8} + \frac{8}{8} + \frac{1}{8}$ ) recording each decomposition by an equation. Justify decompositions using a visual fraction model.

**4.NF.B.3c** Add and subtract mixed numbers with like denominators 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.B.3d** Solve contextual problems involving addition and subtraction of fractions referring to the same whole and having like denominators.

**Connect 4.NF.B.3a & 4.NF.B.3b**

Fluency Standard: 4.NBT.B.4 Fluently add and subtract within 1,000,000 using efficient strategies and algorithms.

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### Third Quarter 2024-2025

#### **Week 1...Jan. 7-10...Topic 10 Extend Multiplication Concepts to Fractions**

- 4.NF.B.4a** 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  $5 \times 1/4$ , recording the conclusion by the equation  $5/4 = 5 \times 1/4$ .
- 4.NF.B.4b** Understand a multiple of  $a/b$  as a multiple of  $1/b$  and use this understanding to multiply a whole number by a fraction. For example, use a visual fraction model to express  $3 \times 2/5$  as  $6 \times 1/5$ , recognizing this product as  $6/5$ . (In general,  $n \times a/b = (n \times a)/b = (n \times a) \times 1/b$ .)
- 4.NF.B.4c** Solve contextual problems involving multiplication of a whole number by a fraction (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 4 people at the party, how many pounds of roast beef will be needed? Between what two whole numbers does your answer lie?

#### **Week 2...Jan. 13-17... Topic 10 Extend Multiplication Concepts to Fractions**

- 4.NF.B.4c** Solve contextual problems involving multiplication of a whole number by a fraction (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 4 people at the party, how many pounds of roast beef will be needed? Between what two whole numbers does your answer lie?
- 4.MD.A.2** Solve one- or two-step real-world problems involving whole number measurements (including length, liquid volume, mass/weight, time, and money) with all four operations within a single system of measurement. (Contexts need not include conversions.)
- Connect 4.NF.B.3d**

#### **Week 3...Jan. 20-24...Topic 11 Represent and Interpret Data on Line Plots**

- 4.MD.B.4** Make a line plot to display a data set of measurements in fractions of the same unit ( $1/2$  or  $1/4$  or  $1/8$ ). Use operations on fractions for this grade to solve problems involving 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.
- Connect 4.NF.B.3a, 4.NF.B.3c, 4.NF.B.3d**

#### **Week 4...Jan. 27-31...Topic 12 Understand and Compare Decimals**

- 4.NF.C.6** Read and write decimal notation for fractions with denominators 10 or 100. Locate these decimals on a number line.
- 4.NF.C.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. Use the symbols  $>$ ,  $=$ , or  $<$  to show the relationship and justify the conclusions.

#### **Week 5...Feb. 3-7...Topic 12 Understand and Compare Decimals Cont.**

- 4.NF.C.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.
- 4.MD.A.2** Solve one- or two-step real-world problems involving whole number measurements (including length, liquid volume, mass/weight, time, and money) with all four operations within a single system of measurement. (Contexts need not include conversions.)
- Connect 4.NF.C.6 & 4.NF.C.7**

Fluency Standard: 4.NBT.B.4 Fluently add and subtract within 1,000,000 using efficient strategies and algorithms.

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## Math – Fourth Grade

### Third Quarter 2024-2025 Continued

#### **Week 6...Feb. 10-14...Topic 13 Measurement: Find Equivalence in Units of Measurement**

**4.MD.A.1** Measure and estimate to determine relative sizes of measurement units within a single system of measurement involving length, liquid volume, and mass/weight of objects using customary and metric units.

**4.MD.A.2** Solve one- or two-step real-world problems involving whole number measurements (including length, liquid volume, mass/weight, time, and money) with all four operations within a single system of measurement. (Contexts need not include conversions.)

#### **Week 7...Feb. 17-21...Topic 13 Measurement: Area and Perimeter**

**4.MD.A.3** Know and apply the area and perimeter formulas for rectangles in real- world and mathematical contexts. 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.

**Connect 4.NF.B.3c, 4.NF.B.4c, 4.NBT.B.5, 4.OA.A.3**

#### **Week 8...Feb. 24-28...Topic 14 Algebra: Generate and Analyze Patterns**

**4.OA.C.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. 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.

**Connect 4.OA.B.4, 4.NBT.B.4, 4.NBT.B.5, 4.NBT.B.6**

#### **Week 9...Mar. 3-7...Topic 15 Geometric Measurement: Understand Concepts of Angles and Angle Measurement**

**4.G.A.1** Draw points, lines, line segments, rays, angles (right, acute, obtuse, straight, reflex), and perpendicular and parallel lines. Identify these in two- dimensional figures.

**4.MD.C.5** Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint and understand concepts of angle measurement.

**4.MD.C.5a** Understand that an angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle.

**4.MD.C.5b** Understand that an angle that turns through  $\frac{1}{360}$  of a circle is called a "one-degree angle," and can be used to measure angles. An angle that turns through  $n$  one-degree angles is said to have an angle measure of  $n$  degrees and represents a fractional portion of the circle.

**4.MD.C.6** Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.

#### **Week 10...Mar. 10-14...Topic 15 Geometric Measurement: Understand Concepts of Angles and Angle Measurement**

**4.MD.C.5, 4.MD.C.5a, 4.MD.C.5b, 4.MD.C.6**

Fluency Standard: 4.NBT.B.4 Fluently add and subtract within 1,000,000 using efficient strategies and algorithms.

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#### **Week 1...Mar. 24-28...Topic 15 Geometric Measurement: Understand Concepts of Angles and Angle Measurement Cont.**

**4.MD.C.6** Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.

**4.MD.C.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).

**Connect 4.NBT.B.4, 4.MD.A.1, & 4.NF.B.3c**

#### **Week 2...Mar. 31- Apr. 4...Topic 16 Lines, Angles, and Shapes**

**4.G.A.1** Draw points, lines, line segments, rays, angles (right, acute, obtuse, straight, reflex), and perpendicular and parallel lines. Identify these in two-dimensional figures.

**4.G.A.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. Classify triangles based on the measure of the angles as right, acute, or obtuse.

**4.G.A.3** Recognize and draw lines of symmetry for two-dimensional figures.

**Connect 4.OA.C.5**

#### **Week 3...Apr. 7-11...Topic 16 Lines, Angles, and Shapes**

**4.G.A.3** Recognize and draw lines of symmetry for two-dimensional figures.

**Connect 4.OA.C.5**

#### **Week 4...Apr. 14-18...Strengthen Fluency & TCAP Review**

**TCAP Testing Window**

#### **Week 5...Apr. 21-25...Strengthen Fluency and Problem Solving**

**TCAP Testing Window**

**4.NBT.B.4, 4.OA.A.3**

Fluency Standard: 4.NBT.B.4 Fluently add and subtract within 1,000,000 using efficient strategies and algorithms.

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## Math – Fourth Grade

### Fourth Quarter 2024-2025

#### **Week 6... Apr. 28-May 2... Preparing for 5th Grade...Place Value**

**5.NBT.A.1** Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and  $\frac{1}{10}$  of what it represents in the place to its left.

**5.NBT.A.3** Read and write decimals to thousandths using standard form, word form, and expanded notation (e.g., the expanded notation of 347.392 is written as  $(3 \times 100) + (4 \times 10) + (7 \times 1) + (3 \times (\frac{1}{10})) + (9 \times (\frac{1}{100})) + (2 \times (\frac{1}{1000}))$ ). Compare two decimals to thousandths based on meanings of the digits in each place and use the symbols  $>$ ,  $=$ , and  $<$  to show the relationship.

#### **Week 7...Apr. 5-9...Preparing for 5th Grade...Multiplication**

**5.NBT.B.5** Fluently multiply multi-digit whole numbers (up to three-digit by four-digit factors) using efficient strategies and algorithms.

#### **Week 8...May 12-16...Preparing for 5th Grade...Fractions**

##### **Basic Fraction Sense: Equivalent Fractions, Simplifying Fractions, Mixed/Improper Fractions**

**5.NF.A.1** Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. For example,  $\frac{2}{3} + \frac{5}{4} = \frac{8}{12} + \frac{15}{12} = \frac{23}{12}$  or  $\frac{3}{5} + \frac{7}{10} = \frac{6}{10} + \frac{7}{10} = \frac{13}{10}$ .

#### **Week 9...May 19-23...Preparing for 5th Grade...Fractions**

**5.NF.A.1** Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. For example,  $\frac{2}{3} + \frac{5}{4} = \frac{8}{12} + \frac{15}{12} = \frac{23}{12}$  or  $\frac{3}{5} + \frac{7}{10} = \frac{6}{10} + \frac{7}{10} = \frac{13}{10}$ .

Fluency Standard: 4.NBT.B.4 Fluently add and subtract within 1,000,000 using efficient strategies and algorithms.

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