

## 4th Grade FSA Learn-At-Home Video Map

**Reporting Category: *Operations and Algebraic Thinking (21% of Test)***

| Standard  | Video Link  |
|---|---|
| <p><b>MAFS.4.OA.1.1</b> Interpret a multiplication equation as a comparison, e.g., interpret <math>35 = 5 \times 7</math> 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.</p>       | <p><a href="https://www.khanacademy.org/math/cc-fourth-grade-math/imp-multiplication-and-division-2/imp-comparing-with-multiplication/v/compare-with-multiplication-examples">https://www.khanacademy.org/math/cc-fourth-grade-math/imp-multiplication-and-division-2/imp-comparing-with-multiplication/v/compare-with-multiplication-examples</a></p>  |
| <p><b>MAFS.4.OA.1.2</b> 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.</p>                  | <p><a href="https://www.khanacademy.org/math/cc-fourth-grade-math/division/mult-division-word-problems/v/multi-step-word-problems-with-whole-numbers-exercise-1">https://www.khanacademy.org/math/cc-fourth-grade-math/division/mult-division-word-problems/v/multi-step-word-problems-with-whole-numbers-exercise-1</a></p> <p><a href="https://www.khanacademy.org/math/cc-fourth-grade-math/division/mult-division-word-problems/v/multi-step-word-problems-with-whole-numbers-exercise-t2">https://www.khanacademy.org/math/cc-fourth-grade-math/division/mult-division-word-problems/v/multi-step-word-problems-with-whole-numbers-exercise-t2</a></p> |
| <p><b>MAFS.4.OA.1.3</b> 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.</p> | <p><a href="https://www.khanacademy.org/math/cc-fourth-grade-math/division/multi-step-word-problems/v/2-step-estimation-example">https://www.khanacademy.org/math/cc-fourth-grade-math/division/multi-step-word-problems/v/2-step-estimation-example</a></p>  |
| <p><b>MAFS.4.OA.1b</b> Determine the unknown whole number in an equation relating four whole numbers using comparative relational thinking.</p>   |   |
| <p><b>MAFS.4.OA.2.4</b> Investigate factors and multiples.</p>  | <p><a href="https://www.khanacademy.org/math/cc-fourth-grade-math/imp-factors-multiples-and-patterns/imp-factors-and-multiples/v/understanding-factor-pairs">https://www.khanacademy.org/math/cc-fourth-grade-math/imp-factors-multiples-and-patterns/imp-factors-and-multiples/v/understanding-factor-pairs</a></p> <p><a href="https://www.khanacademy.org/math/cc-fourth-grade-math/imp-factors-multiples-and-patterns/imp-prime-and-composite-numbers/v/recognizing-prime-numbers">https://www.khanacademy.org/math/cc-fourth-grade-math/imp-factors-multiples-and-patterns/imp-prime-and-composite-numbers/v/recognizing-prime-numbers</a></p>         |
| <p><b>MAFS.4.OA.3.5</b> 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.</p>  | <p><a href="https://www.khanacademy.org/math/cc-fourth-grade-math/imp-factors-multiples-and-patterns/imp-math-patterns/v/figuring-out-days-of-the-week">https://www.khanacademy.org/math/cc-fourth-grade-math/imp-factors-multiples-and-patterns/imp-math-patterns/v/figuring-out-days-of-the-week</a></p>  |

**Reporting Category: Numbers and Operations in Base Ten (21% of Test)**

| Standard   | Video Link  |
|--|---|
| <p><b>MAFS.4.NBT.1.1</b> 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.</p>   | <p><a href="https://www.khanacademy.org/math/cc-fourth-grade-math/imp-place-value-and-rounding-2/imp-how-10-relates-to-place-value/v/place-value-when-multiplying-and-dividing-by-10">https://www.khanacademy.org/math/cc-fourth-grade-math/imp-place-value-and-rounding-2/imp-how-10-relates-to-place-value/v/place-value-when-multiplying-and-dividing-by-10</a></p>  |
| <p><b>MAFS.4.NBT.1.2</b> 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 <math>&gt;</math>, <math>=</math>, and <math>&lt;</math> symbols to record the results of comparisons.</p>  | <p><a href="https://www.khanacademy.org/math/cc-fourth-grade-math/imp-place-value-and-rounding-2/imp-intro-to-place-value/v/place-value-1">https://www.khanacademy.org/math/cc-fourth-grade-math/imp-place-value-and-rounding-2/imp-intro-to-place-value/v/place-value-1</a></p> <p><a href="https://www.khanacademy.org/math/cc-fourth-grade-math/imp-place-value-and-rounding-2/imp-comparing-multi-digit-numbers/v/comparing-multi-digit-numbers">https://www.khanacademy.org/math/cc-fourth-grade-math/imp-place-value-and-rounding-2/imp-comparing-multi-digit-numbers/v/comparing-multi-digit-numbers</a></p>   |
| <p><b>MAFS.4.NBT.1.3</b> Use place value understanding to round multi-digit whole numbers to any place.</p>  | <p><a href="https://www.khanacademy.org/math/cc-fourth-grade-math/imp-addition-and-subtraction-2/imp-rounding-whole-numbers/v/rounding-whole-numbers-1">https://www.khanacademy.org/math/cc-fourth-grade-math/imp-addition-and-subtraction-2/imp-rounding-whole-numbers/v/rounding-whole-numbers-1</a></p>  |
| <p><b>MAFS.4.NBT.2.4</b> Fluently add and subtract multi-digit whole numbers using the standard algorithm.</p>   | <p><a href="https://www.khanacademy.org/math/cc-fourth-grade-math/imp-addition-and-subtraction-2/imp-subtracting-multi-digit-numbers/v/understanding-place-value-when-subtracting">https://www.khanacademy.org/math/cc-fourth-grade-math/imp-addition-and-subtraction-2/imp-subtracting-multi-digit-numbers/v/understanding-place-value-when-subtracting</a></p> <p><a href="https://www.khanacademy.org/math/cc-fourth-grade-math/imp-addition-and-subtraction-2/imp-adding-multi-digit-numbers/v/adding-multi-digit-numbers-with-place-value">https://www.khanacademy.org/math/cc-fourth-grade-math/imp-addition-and-subtraction-2/imp-adding-multi-digit-numbers/v/adding-multi-digit-numbers-with-place-value</a></p> |
| <p><b>MAFS.4.NBT.2.5</b> 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.</p>  | <p><a href="https://www.khanacademy.org/math/cc-fourth-grade-math/imp-multiplication-and-division-2/imp-multi-digit-multiplication-place-value-and-area-models/v/more-ways-to-think-about-multiplying">https://www.khanacademy.org/math/cc-fourth-grade-math/imp-multiplication-and-division-2/imp-multi-digit-multiplication-place-value-and-area-models/v/more-ways-to-think-about-multiplying</a></p>  |
| <p><b>MAFS.4.NBT.2.6</b> 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.</p> | <p><a href="https://www.khanacademy.org/math/cc-fourth-grade-math/division/division-place-value-and-area/v/division-using-understanding-of-place-value">https://www.khanacademy.org/math/cc-fourth-grade-math/division/division-place-value-and-area/v/division-using-understanding-of-place-value</a></p> <p><a href="https://www.khanacademy.org/math/cc-fourth-grade-math/division/division-with-area-models/v/area-models-to-visualize-division-using-place-value">https://www.khanacademy.org/math/cc-fourth-grade-math/division/division-with-area-models/v/area-models-to-visualize-division-using-place-value</a></p>   |

**Reporting Category: Number and Operations – Fractions (25% of Test)**

| Standard   | Video Link   |
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| <p><b>MAFS.4.NF.1.1</b> Explain why a fraction <math>a/b</math> is equivalent to a fraction <math>(n \times a)/(n \times b)</math> 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.</p> | <p><a href="https://www.khanacademy.org/math/cc-fourth-grade-math/comparing-fractions-and-equivalent-fractions/imp-equivalent-fractions-2/v/equivalent-amount-of-pizza">https://www.khanacademy.org/math/cc-fourth-grade-math/comparing-fractions-and-equivalent-fractions/imp-equivalent-fractions-2/v/equivalent-amount-of-pizza</a></p>   |
| <p><b>MAFS.4.NF.1.2</b> Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction.</p>  | <p><a href="https://www.khanacademy.org/math/cc-fourth-grade-math/comparing-fractions-and-equivalent-fractions/imp-comparing-fractions-with-unlike-denominators/v/comparing-fractions-with-different-denominators">https://www.khanacademy.org/math/cc-fourth-grade-math/comparing-fractions-and-equivalent-fractions/imp-comparing-fractions-with-unlike-denominators/v/comparing-fractions-with-different-denominators</a></p> |
| <p><b>MAFS.4.NF.2.3</b> Understand a fraction <math>a/b</math> with <math>a &gt; 1</math> as a sum of fractions <math>1/b</math>.</p>  | <p><a href="https://www.khanacademy.org/math/cc-fourth-grade-math/imp-fractions-2/imp-decomposing-fractions/v/decomposing-a-fraction-visually">https://www.khanacademy.org/math/cc-fourth-grade-math/imp-fractions-2/imp-decomposing-fractions/v/decomposing-a-fraction-visually</a></p>   |
| <p><b>MAFS.4.NF.2.3a</b> Understand addition and subtraction of fractions as joining and separating parts referring to the same whole</p>  | <p><a href="https://www.khanacademy.org/math/cc-fourth-grade-math/imp-fractions-2/imp-adding-and-subtracting-fractions-with-like-denominators/v/adding-fractions-with-like-denominators">https://www.khanacademy.org/math/cc-fourth-grade-math/imp-fractions-2/imp-adding-and-subtracting-fractions-with-like-denominators/v/adding-fractions-with-like-denominators</a></p>   |
| <p><b>MAFS.4.NF.2.4</b> Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.</p>   | <p><a href="https://www.khanacademy.org/math/cc-fourth-grade-math/4th-multiply-fractions/multiplying-whole-numbers-and-fractions/v/fraction-whole-multiplication-concept">https://www.khanacademy.org/math/cc-fourth-grade-math/4th-multiply-fractions/multiplying-whole-numbers-and-fractions/v/fraction-whole-multiplication-concept</a></p>   |
| <p><b>MAFS.4.NF.3.5</b> 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.</p>  | <p><a href="https://www.khanacademy.org/math/cc-fourth-grade-math/imp-fractions-2/imp-fractions-with-denominators-of-10-and-100/v/visually-converting-from-tenths-to-hundredths">https://www.khanacademy.org/math/cc-fourth-grade-math/imp-fractions-2/imp-fractions-with-denominators-of-10-and-100/v/visually-converting-from-tenths-to-hundredths</a></p>   |
| <p><b>MAFS.4.NF.3.6</b> Use decimal notation for fractions with denominators 10 or 100.</p>  | <p><a href="https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-fractions-decimals/cc-7th-fracs-to-decimals/v/decimals-and-fractions">https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-fractions-decimals/cc-7th-fracs-to-decimals/v/decimals-and-fractions</a></p>   |
| <p><b>MAFS.4.NF.3.7</b> 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 <math>&gt;</math>, <math>=</math>, or</p>  | <p><a href="https://www.khanacademy.org/math/cc-fourth-grade-math/imp-decimals/imp-comparing-decimals/v/comparing-decimals-with-hundredths">https://www.khanacademy.org/math/cc-fourth-grade-math/imp-decimals/imp-comparing-decimals/v/comparing-decimals-with-hundredths</a></p>   |

**Reporting Category: Measurement, Data, and Geometry (33% of Test)**

| Standard   | Video Link   |
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| <p><b>MAFS.4.MD.1.1</b> 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.</p> | <p><a href="https://www.khanacademy.org/math/cc-fourth-grade-math/imp-measurement-and-data-2/imp-converting-units-of-volume/v/liters-to-milliliters-examples">https://www.khanacademy.org/math/cc-fourth-grade-math/imp-measurement-and-data-2/imp-converting-units-of-volume/v/liters-to-milliliters-examples</a></p> <p><a href="https://www.khanacademy.org/math/cc-fourth-grade-math/imp-measurement-and-data-2/imp-converting-units-of-volume/v/converting-us-fluid-volume">https://www.khanacademy.org/math/cc-fourth-grade-math/imp-measurement-and-data-2/imp-converting-units-of-volume/v/converting-us-fluid-volume</a></p>  |
| <p><b>MAFS.4.MD.1.2</b> Use the four operations to solve word problems involving distances, intervals of time, and money, including problems involving simple fractions or decimals. Represent fractional quantities of distance and intervals of time using linear models</p>   | <p><a href="https://www.khanacademy.org/math/cc-fourth-grade-math/imp-measurement-and-data-2/imp-money-word-problems/v/change-from-buying-apples">https://www.khanacademy.org/math/cc-fourth-grade-math/imp-measurement-and-data-2/imp-money-word-problems/v/change-from-buying-apples</a></p> <p><a href="https://www.khanacademy.org/math/cc-fourth-grade-math/imp-measurement-and-data-2/imp-converting-units-of-time/v/time-unit-conversion">https://www.khanacademy.org/math/cc-fourth-grade-math/imp-measurement-and-data-2/imp-converting-units-of-time/v/time-unit-conversion</a></p> <p><a href="https://www.khanacademy.org/math/cc-fourth-grade-math/imp-measurement-and-data-2/imp-conversion-word-problems/v/metric-system-unit-conversion-examples">https://www.khanacademy.org/math/cc-fourth-grade-math/imp-measurement-and-data-2/imp-conversion-word-problems/v/metric-system-unit-conversion-examples</a></p> |
| <p><b>MAFS.4.MD.1.3</b> Apply the area and perimeter formulas for rectangles in real world and mathematical problems.</p>  | <p><a href="https://www.khanacademy.org/math/cc-fourth-grade-math/area-perimeter/imp-area-and-perimeter/v/width-from-perimeter">https://www.khanacademy.org/math/cc-fourth-grade-math/area-perimeter/imp-area-and-perimeter/v/width-from-perimeter</a></p>   |
| <p><b>MAFS.4.MD.2.4</b> Make a line plot to display a data set of measurements in fractions of a unit <math>\frac{1}{2}</math>, <math>\frac{1}{4}</math>, <math>\frac{1}{8}</math>. Solve problems involving addition and subtraction of fractions by using information presented in line plots.</p>                     | <p><a href="https://www.khanacademy.org/math/cc-fourth-grade-math/imp-fractions-2/imp-line-plots-with-fractions/v/making-line-plots-with-fractional-data">https://www.khanacademy.org/math/cc-fourth-grade-math/imp-fractions-2/imp-line-plots-with-fractions/v/making-line-plots-with-fractional-data</a></p>   |
| <p><b>MAFS.4.MD.3.5</b> Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement.</p>  | <p><a href="https://www.khanacademy.org/math/cc-fourth-grade-math/plane-figures/imp-angle-introduction/v/angle-basics">https://www.khanacademy.org/math/cc-fourth-grade-math/plane-figures/imp-angle-introduction/v/angle-basics</a></p> <p><a href="https://www.khanacademy.org/math/cc-fourth-grade-math/imp-geometry-2/imp-angles-in-circles/v/angle-measurement-and-circle-arcs">https://www.khanacademy.org/math/cc-fourth-grade-math/imp-geometry-2/imp-angles-in-circles/v/angle-measurement-and-circle-arcs</a></p>  |
| <p><b>MAFS.4.MD.3.7</b> 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.</p>   | <p><a href="https://www.khanacademy.org/math/cc-fourth-grade-math/imp-geometry-2/imp-decomposing-angles/v/decomposing-angles">https://www.khanacademy.org/math/cc-fourth-grade-math/imp-geometry-2/imp-decomposing-angles/v/decomposing-angles</a></p>   |

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| <p><b>MAFS.4.G.1.1</b> Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.</p>   | <p><a href="https://www.khanacademy.org/math/cc-fourth-grade-math/plane-figures/imp-lines-line-segments-and-rays/v/lines-line-segments-and-rays">https://www.khanacademy.org/math/cc-fourth-grade-math/plane-figures/imp-lines-line-segments-and-rays/v/lines-line-segments-and-rays</a></p> |
| <p><b>MAFS.4.G.1.2</b> 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.</p> | <p><a href="https://www.khanacademy.org/math/cc-fourth-grade-math/plane-figures/imp-classifying-geometric-shapes/v/classifying-shapes-examples">https://www.khanacademy.org/math/cc-fourth-grade-math/plane-figures/imp-classifying-geometric-shapes/v/classifying-shapes-examples</a></p>   |
| <p><b>MAFS.4.G.1.3</b> 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.</p>               | <p><a href="https://www.khanacademy.org/math/cc-fourth-grade-math/plane-figures/imp-line-of-symmetry/v/identifying-symmetrical-figures">https://www.khanacademy.org/math/cc-fourth-grade-math/plane-figures/imp-line-of-symmetry/v/identifying-symmetrical-figures</a></p>                   |