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**Access**

**Mathematics**

**Grade 4**

**(#7712050)**

[MA.4.AR.1.1:](https://www.cpalms.org//PreviewStandard/Preview/15361) Solve real-world problems involving multiplication and division of whole numbers including problems in which remainders must be interpreted within the context.

**Clarifications:**
*Clarification 1:* Problems involving multiplication include multiplicative comparisons. Refer to [Situations Involving Operations with Numbers (Appendix A)](https://cpalmsmediaprod.blob.core.windows.net/uploads/docs/standards/best/ma/appendixa.pdf).

*Clarification 2:* Depending on the context, the solution of a division problem with a remainder may be the whole number part of the quotient, the whole number part of the quotient with the remainder, the whole number part of the quotient plus 1, or the remainder.

*Clarification 3:* Multiplication is limited to products of up to 3 digits by 2 digits. Division is limited to up to 4 digits divided by 1 digit.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.4.AR.1.AP.1:](https://www.cpalms.org/PreviewAccessPoint/Preview/18085)  | Solve one-step real-world problems involving multiplication and division of whole numbers. Multiplication may not exceed two-digit by one-digit and division must be related to one-digit by one-digit multiplication facts. |  |  |  |
| EssentialUnderstandings | * Represent multiplication and division situations involving equal groups and rectangular arrays with objects or drawings
* Multiply two-digit by one-digit whole numbers
* Perform division related to one-digit by one-digit multiplication facts
 |  |  |  |
| Resources: | [Element Card](https://www.accesstofls.org/core_curriculum_resources/Math/BEST/Element_Cards/Elementary/fourth/MA.4.AR.1.1_ADA.docx) |  |  |  |

[MA.4.AR.1.2:](https://www.cpalms.org//PreviewStandard/Preview/15362) Solve real-world problems involving addition and subtraction of fractions with like denominators, including mixed numbers and fractions greater than one.

**Clarifications:**
*Clarification 1:* Problems include creating real-world situations based on an equation or representing a real-world problem with a visual model or equation.

*Clarification 2:* Fractions within problems must reference the same whole.

*Clarification 3:* Within this benchmark, the expectation is not to simplify or use lowest terms.

*Clarification 4:* Denominators limited to 2, 3, 4, 5, 6, 8, 10, 12, 16 and 100.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.4.AR.1.AP.2:](https://www.cpalms.org/PreviewAccessPoint/Preview/18086) | Solve one-step real-world problems involving addition and subtraction of fractions less than one with like denominators. Denominators limited to 2, 3, 4, 6, 8 or 10. |  |  |  |
| EssentialUnderstandings | * Represent addition and subtraction situations with drawings or objects
* Add or subtract fractions less than one with like denominators limited to 2, 3, 4, 6, 8, or 10
 |  |  |  |
| Resources: | [Element Card](https://www.accesstofls.org/core_curriculum_resources/Math/BEST/Element_Cards/Elementary/fourth/MA.4.AR.1.2_ADA.docx) |  |  |  |

[MA.4.AR.1.3:](https://www.cpalms.org//PreviewStandard/Preview/15363) Solve real-world problems involving multiplication of a fraction by a whole number or a whole number by a fraction.

**Clarifications:**
*Clarification 1:* Problems include creating real-world situations based on an equation or representing a real-world problem with a visual model or equation.

*Clarification 2:* Fractions within problems must reference the same whole.

*Clarification 3:* Within this benchmark, the expectation is not to simplify or use lowest terms.

*Clarification 4:* Fractions limited to fractions less than one with denominators of 2, 3, 4, 5, 6, 8, 10, 12, 16 and 100.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.4.AR.1.AP.3:](https://www.cpalms.org/PreviewAccessPoint/Preview/18087) | Solve one-step real-world problems involving multiplication of a unit fraction by a whole number (e.g., 3 $×$ $\frac{1}{4}$, 2 $×$ $\frac{1}{6}$, 5 $×$ $\frac{1}{2}$). Denominators limited to 2, 3, 4, 6, 8 or 10. |  |  |  |
| EssentialUnderstandings | * Represent situations involving multiplication with drawings or objects
* Multiply a unit fraction by a whole number with denominators limited to 2, 3, 4, 6, 8, or 10
 |  |  |  |
| Resources: | [Element Card](https://www.accesstofls.org/core_curriculum_resources/Math/BEST/Element_Cards/Elementary/fourth/MA.4.AR.1.3_ADA.docx) |  |  |  |

[MA.4.AR.2.1:](https://www.cpalms.org//PreviewStandard/Preview/15364) Determine and explain whether an equation involving any of the four operations with whole numbers is true or false.

**Clarifications:**
*Clarification 1:* Multiplication is limited to whole number factors within 12 and related division facts.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.4.AR.2.AP.1:](https://www.cpalms.org/PreviewAccessPoint/Preview/18088)  | Determine whether an equation (with no more than three terms) involving any of the four operations with whole numbers is true or false. Sums may not exceed 100 and their related subtraction facts. Multiplication may not exceed two-digit by one-digit and division must be related to one-digit by one-digit multiplication facts. |  |  |  |
| EssentialUnderstandings | * Find sums within 100 and their related subtraction facts
* Find products of two-digit by one-digit whole numbers
* Find quotients of related one-digit by one-digit multiplication facts.
* Understand the concept of “equality” as the balance of two values (e.g., if a balance scale is level, then the values are equal and if it is not level, then the values are not equal)
* Understand that = is “equal to”
* Understand that if the values on either side of the equal sign are the same, then the equation is true and if the values on either side of the equal side are not the same, then the equation is false
 |  |  |  |
| Resources: | [Element Card](https://www.accesstofls.org/core_curriculum_resources/Math/BEST/Element_Cards/Elementary/fourth/MA.4.AR.2.1_ADA.docx) |  |  |  |

[MA.4.AR.2.2:](https://www.cpalms.org//PreviewStandard/Preview/15365) Given a mathematical or real-world context, write an equation involving multiplication or division to determine the unknown whole number with the unknown in any position.

**Clarifications:**
*Clarification 1:* Instruction extends the development of algebraic thinking skills where the symbolic representation of the unknown uses a letter.

*Clarification 2:* Problems include the unknown on either side of the equal sign.

*Clarification 3:* Multiplication is limited to factors within 12 and related division facts.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.4.AR.2.AP.2:](https://www.cpalms.org/PreviewAccessPoint/Preview/18089)  | Given a real-world context, identify or generate an equation involving multiplication or division to determine the unknown product or quotient. Multiplication may not exceed two-digit by one-digit and division must be related to one-digit by one-digit multiplication facts. |  |  |  |
| EssentialUnderstandings | * Understand $×$ as a symbol representing the operation of multiplication and $÷$ as a symbol representing the operation of division
* Understand = as a symbol representing the equality of two values
* Understand a symbol (e.g., \_\_\_ or ) may be used to represent an unknown number in an equation
* Interpret relevant information in a real-world context
* Find products of two-digit by one-digit whole numbers
* Find quotients of related one-digit by one-digit multiplication facts
 |  |  |  |
| Resources: | [Element Card](https://www.accesstofls.org/core_curriculum_resources/Math/BEST/Element_Cards/Elementary/fourth/MA.4.AR.2.2_ADA.docx) |  |  |  |

[MA.4.AR.3.1:](https://www.cpalms.org//PreviewStandard/Preview/15366) Determine factor pairs for a whole number from 0 to 144. Determine whether a whole number from 0 to 144 is prime, composite or neither.

**Clarifications:**
*Clarification 1:* Instruction includes the connection to the relationship between multiplication and division and patterns with divisibility rules.

*Clarification 2:* The numbers 0 and 1 are neither prime nor composite.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.4.AR.3.AP.1:](https://www.cpalms.org/PreviewAccessPoint/Preview/18090) | Explore factor pairs for a whole number. Factors may not exceed single-digit whole numbers. |  |  |  |
| EssentialUnderstandings | * Understand products can be represented as the accumulation of equal groups and may be represented in more than one way
 |  |  |  |
| Resources: | [Element Card](https://www.accesstofls.org/core_curriculum_resources/Math/BEST/Element_Cards/Elementary/fourth/MA.4.AR.3.1_ADA.docx) |  |  |  |

[MA.4.AR.3.2:](https://www.cpalms.org//PreviewStandard/Preview/15367) Generate, describe and extend a numerical pattern that follows a given rule.

**Clarifications:**
*Clarification 1:* Instruction includes patterns within a mathematical or real-world context.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.4.AR.3.AP.2:](https://www.cpalms.org/PreviewAccessPoint/Preview/18091)  | Generate a numerical pattern when given a starting term and a one-step addition rule (e.g., starting at the number 5 use the rule add 5 and generate the pattern). |  |  |  |
| EssentialUnderstandings | * Understand that patterns are repeated and predictable
* Perform basic addition
 |  |  |  |
| Resources: | [Element Card](https://www.accesstofls.org/core_curriculum_resources/Math/BEST/Element_Cards/Elementary/fourth/MA.4.AR.3.2_ADA.docx) |  |  |  |

[MA.4.DP.1.1:](https://www.cpalms.org//PreviewStandard/Preview/15377) Collect and represent numerical data, including fractional values, using tables, stem-and-leaf plots or line plots.

**Clarifications:**
*Clarification 1:* Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, 16 and 100.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.4.DP.1.AP.1:](https://www.cpalms.org/PreviewAccessPoint/Preview/18104) | Sort and represent numerical data, including fractional values using tables or line plots (when given a scaled number line). Data set to include only whole numbers and halves. |  |  |  |
| EssentialUnderstandings | * Understand how data in a table is organized
* Understand how to locate values on a horizontal number line that is labeled with whole numbers
* Understand that each X or dot on the line plot represents 1 object with that length, temperature, liquid volume, or weight
* Recognize two equal parts of a whole as halves
* Recognize that mixed numbers represent an amount of wholes and additional parts of a whole
 |  |  |  |
| Resources: |  |  |  |  |

[MA.4.DP.1.2:](https://www.cpalms.org//PreviewStandard/Preview/15378) Determine the mode, median or range to interpret numerical data including fractional values, represented with tables, stem-and-leaf plots or line plots.

**Clarifications:**
*Clarification 1:* Instruction includes interpreting data within a real-world context.

*Clarification 2:* Instruction includes recognizing that data sets can have one mode, no mode or more than one mode.

*Clarification 3:* Within this benchmark, data sets are limited to an odd number when calculating the median.

*Clarification 4:* Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, 16 and 100.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.4.DP.1.AP.2:](https://www.cpalms.org/PreviewAccessPoint/Preview/18105) | Determine the mode or range to interpret numerical data including fractional values, represented with tables or line plots. Data set to include only whole numbers and halves. Limit the greatest and least number in a data set to a whole number. |  |  |  |
| EssentialUnderstandings | * Understand how data in a table is organized
* Understand how to locate values on a horizontal number line that is labeled with whole numbers and halves
* Understand reading a horizontal number line that is labeled with whole numbers and halves
* Understand that each X or dot on the line plot represents 1 object with that length, temperature, liquid volume, or weight
* Understand that when identifying the least and greatest measurement value in a data set displayed on a line plot, the location of each measurement value on the number line will be used
* Recognize that mixed numbers represent an amount of wholes and additional parts of a whole
 |  |  |  |
| Resources: |  |  |  |  |

[MA.4.DP.1.3:](https://www.cpalms.org//PreviewStandard/Preview/15379) Solve real-world problems involving numerical data.

**Clarifications:**
*Clarification 1:* Instruction includes using any of the four operations to solve problems.

*Clarification 2:* Data involving fractions with like denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, 16 and 100. Fractions can be greater than one.

*Clarification 3:* Data involving decimals are limited to hundredths.

Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.4.DP.1.AP.3:](https://www.cpalms.org/PreviewAccessPoint/Preview/18106)  | Solve one-step real-world problems involving numerical data represented with tables or line plots. Data set to include only whole numbers and halves. Required operations to involve only the whole number data points in the data set. |  |  |  |
| EssentialUnderstandings | * Understand how data in a table is organized
* Understand reading a horizontal number line that is labeled with whole numbers and halves
* Understand that each X or dot on the line plot represents 1 object with that length, temperature, liquid volume, or weight
* Perform grade level Access Point appropriate operations for whole numbers
 |  |  |  |
| Resources: |  |  |  |  |

[MA.4.FR.1.1:](https://www.cpalms.org//PreviewStandard/Preview/15353) Model and express a fraction, including mixed numbers and fractions greater than one, with the denominator 10 as an equivalent fraction with the denominator 100.

**Clarifications:**
*Clarification 1:* Instruction emphasizes conceptual understanding through the use of manipulatives, visual models, number lines or equations.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.4.FR.1.AP.1:](https://www.cpalms.org/PreviewAccessPoint/Preview/18076)  | Using a visual model, recognize fractions less than one, with the denominator 10 as an equivalent fraction with the denominator 100 (e.g., $\frac{2}{10}$ is equivalent to $\frac{20}{100}$). |  |  |  |
| EssentialUnderstandings | * Understand that when a whole is partitioned into more parts, the parts are smaller and when a whole is partitioned into less parts, the parts are larger
* Understand that a greater quantity of smaller parts can be combined to cover the same area as a lesser quantity of larger parts
 |  |  |  |
| Resources: |  |  |  |  |

[MA.4.FR.1.2:](https://www.cpalms.org//PreviewStandard/Preview/15354) Use decimal notation to represent fractions with denominators of 10 or 100, including mixed numbers and fractions greater than 1, and use fractional notation with denominators of 10 or 100 to represent decimals.

**Clarifications:**
*Clarification 1:* Instruction emphasizes conceptual understanding through the use of manipulatives visual models, number lines or equations.

*Clarification 2:* Instruction includes the understanding that a decimal and fraction that are equivalent represent the same point on the number line and that fractions with denominators of 10 or powers of 10 may be called decimal fractions.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.4.FR.1.AP.2:](https://www.cpalms.org/PreviewAccessPoint/Preview/18077) | Use decimal notation to represent fractions less than one with denominators of 10 or 100 and use fractional notation with denominators of 10 or 100 to represent decimals less than one. |  |  |  |
| EssentialUnderstandings | * Understand that fractions and decimals can be used to describe parts of a whole
* Understand that a tenth is one-tenth (1/10 or 0.1) of a whole
* Understand that a hundredth is one-hundredth (1/100 or 0.01) of a whole
* Use objects to represent numbers less than one using tenths and hundredths
* Given a fraction less than 1, understand the denominator is the size of the equal parts of the whole and the numerator is the number of equal parts being described
* Given a decimal less than 1, understand that the digit in the ones place represents the number of ones, the digit in the tenths place represents the number of tenths, the digit in the hundredths place represents then number of hundredths
 |  |  |  |
| Resources: |  |  |  |  |

[MA.4.FR.1.3:](https://www.cpalms.org//PreviewStandard/Preview/15355) Identify and generate equivalent fractions, including fractions greater than one. Describe how the numerator and denominator are affected when the equivalent fraction is created.

**Clarifications:**
*Clarification 1:* Instruction includes the use of manipulatives, visual models, number lines or equations.

*Clarification 2:* Instruction includes recognizing how the numerator and denominator are affected when equivalent fractions are generated.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.4.FR.1.AP.3:](https://www.cpalms.org/PreviewAccessPoint/Preview/18078)  | Using a visual model, generate fractions less than a whole that are equivalent to fractions with denominators 2, 3, 4, 6, 8 or 10. Explore how the numerator and denominator are affected when the equivalent fraction is created. |  |  |  |
| EssentialUnderstandings | * Understand that when a whole is partitioned into more parts, the parts are smaller and when a whole is partitioned into less parts, the parts are larger
* Understand that a greater quantity of smaller parts can be combined to cover the same area as a lesser quantity of larger parts
* Understand the denominator is the size of the equal parts of the whole and the numerator is the number of equal parts being described
 |  |  |  |
| Resources: |  |  |  |  |

[MA.4.FR.1.4:](https://www.cpalms.org//PreviewStandard/Preview/15356) Plot, order and compare fractions, including mixed numbers and fractions greater than one, with different numerators and different denominators.

**Clarifications:**
*Clarification 1:* When comparing fractions, instruction includes using an appropriately scaled number line and using reasoning about their size.

*Clarification 2:* Instruction includes using benchmark quantities, such as 0, , , and 1, to compare fractions.

*Clarification 3:* Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, 16 and 100.

*Clarification 4:* Within this benchmark, the expectation is to use symbols (<, > or =).

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.4.FR.1.AP.4a:](https://www.cpalms.org/PreviewAccessPoint/Preview/18079) | Explore mixed numbers and fractions greater than one. |  |  |  |
| Essential Understandings | * Understand fractions in the form of *m*/n is the result of adding the unit fraction 1/n to itself *m* times
* Understand the denominator is the size of the equal parts of the whole and the numerator is the number of equal parts being described
* Understand that if the number of equal parts being described is the same as the number of equal parts in the whole, then the fraction is equal to 1
 |  |  |  |
| Resources: |  |  |  |  |
| [MA.4.FR.1.AP.4b:](https://www.cpalms.org/PreviewAccessPoint/Preview/18080) | Using visual models, compare fractions less than one with different numerators and different denominators. Denominators limited to 2, 3, 4, 6, 8 or 10. |  |  |  |
| EssentialUnderstandings | * Understand the denominator is the size of the equal parts of the whole and the numerator is the number of equal parts being described
* Understand that when a whole is partitioned into more parts, the parts are smaller and when a whole is partitioned into less parts, the parts are larger
* Understand that a greater quantity of smaller parts can be combined to cover the same area as a lesser quantity of larger parts
* Compare fractional numbers with the same denominator
 |  |  |  |
| Resources: |  |  |  |  |

[MA.4.FR.2.1:](https://www.cpalms.org//PreviewStandard/Preview/15357) Decompose a fraction, including mixed numbers and fractions greater than one, into a sum of fractions with the same denominator in multiple ways. Demonstrate each decomposition with objects, drawings and equations.

**Clarifications:**
*Clarification 1:* Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, 16 and 100.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.4.FR.2.AP.1:](https://www.cpalms.org/PreviewAccessPoint/Preview/18081) | Decompose a fraction less than one into a sum of unit fractions with the same denominator (e.g., $\frac{3}{4}$ = $\frac{1}{4}$ + $\frac{1}{4}$ + $\frac{1}{4}$). Denominators limited to 2, 3, 4, 6, 8 or 10. Demonstrate each decomposition with objects, drawings or equations. |  |  |  |
| EssentialUnderstandings | * Understand fractions in the form of *m*/n is the result of adding the unit fraction 1/n to itself *m* times reliability.
 |  |  |  |
| Resources: |  |  |  |  |

[MA.4.FR.2.2:](https://www.cpalms.org//PreviewStandard/Preview/15358) Add and subtract fractions with like denominators, including mixed numbers and fractions greater than one, with procedural reliability.

**Clarifications:**
*Clarification 1:* Instruction includes the use of word form, manipulatives, drawings, the properties of operations or number lines.

*Clarification 2:* Within this benchmark, the expectation is not to simplify or use lowest terms.

*Clarification 3:* Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, 16 and 100.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.4.FR.2.AP.2:](https://www.cpalms.org/PreviewAccessPoint/Preview/18082) | Explore adding and subtracting fractions less than one with like denominators. Denominators limited to 2, 3, 4, 6, 8 or 10. |  |  |  |
| EssentialUnderstandings | * Understand the denominator is the size of the equal parts of the whole and the numerator is the number of equal parts being described
* Understand fractions in the form of *m*/n is the result of adding the unit fraction 1/n to itself *m* times
* Represent addition and subtraction situations involving “adding to” and “taking from” with objects
 |  |  |  |
| Resources: |  |  |  |  |

[MA.4.FR.2.3:](https://www.cpalms.org//PreviewStandard/Preview/15359) Explore the addition of a fraction with denominator of 10 to a fraction with denominator of 100 using equivalent fractions.

**Clarifications:**
*Clarification 1:* Instruction includes the use of visual models.

*Clarification 2:* Within this benchmark, the expectation is not to simplify or use lowest terms.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.4.FR.2.AP.3:](https://www.cpalms.org/PreviewAccessPoint/Preview/18083)  | Explore the addition of a fraction with denominator of 10 to a fraction with denominator of 100 using visual models to find equivalent fractions. |  |  |  |
| EssentialUnderstandings | * Understand the denominator is the size of the equal parts of the whole and the numerator is the number of equal parts being described
* Understand fractions in the form of *m*/n is the result of adding the unit fraction 1/n to itself *m* times
* Understand that when a whole is partitioned into more parts, the parts are smaller and when a whole is partitioned into less parts, the parts are larger
* Understand that a greater quantity of smaller parts can be combined to cover the same area as a lesser quantity of larger parts
* Recognize fractions less than one, with the denominator 10 as an equivalent fraction with the denominator 100 (e.g., 2/10 is equivalent to 20/100)
* Represent addition situations involving “adding to” with objects
 |  |  |  |
| Resources: |  |  |  |  |

[MA.4.FR.2.4:](https://www.cpalms.org//PreviewStandard/Preview/15360) Extend previous understanding of multiplication to explore the multiplication of a fraction by a whole number or a whole number by a fraction.

**Clarifications:**
*Clarification 1:* Instruction includes the use of visual models or number lines and the connection to the commutative property of multiplication. Refer to [Properties of Operation, Equality and Inequality (Appendix D)](https://cpalmsmediaprod.blob.core.windows.net/uploads/docs/standards/best/ma/appendixd.pdf).

*Clarification 2:* Within this benchmark, the expectation is not to simplify or use lowest terms.

*Clarification 3:* Fractions multiplied by a whole number are limited to less than 1. All denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, 16, 100.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.4.FR.2.AP.4:](https://www.cpalms.org/PreviewAccessPoint/Preview/18084) | Explore the multiplication of a unit fraction by a whole number (e.g., 3 $×$ $\frac{1}{4}$, 2 $×$ $\frac{1}{6}$, 5 $×$ $\frac{1}{2}$). Denominators limited to 2, 3, 4, 6, 8 or 10. |  |  |  |
| EssentialUnderstandings | * Understand the concept of equal groups
* Distinguish between the number of groups and the number in each group
* Recognize in multiplication situations that the number in each group is the same and can be repeatedly added to find the total
* Represent multiplication situations using objects organized in equal groups and use the representations to find the total
* Understand the denominator is the size of the equal parts of the whole and the numerator is the number of equal parts being described
* Understand fractions in the form of *m*/n is the result of adding the unit fraction 1/n to itself *m* times
 |  |  |  |
| Resources: |  |  |  |  |

[MA.4.GR.1.1:](https://www.cpalms.org//PreviewStandard/Preview/15372) Informally explore angles as an attribute of two-dimensional figures. Identify and classify angles as acute, right, obtuse, straight or reflex.

**Clarifications:**
*Clarification 1:* Instruction includes classifying angles using benchmark angles of 90° and 180° in two-dimensional figures.

*Clarification 2:* When identifying angles, the expectation includes two-dimensional figures and real-world pictures.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.4.GR.1.AP.1:](https://www.cpalms.org/PreviewAccessPoint/Preview/18099) | Informally explore angles as an attribute of two-dimensional figures. Limit angles to acute, obtuse, and right. |  |  |  |
| EssentialUnderstandings | * Recognize points and lines in two-dimensional figures
 |  |  |  |
| Resources: |  |  |  |  |

[MA.4.GR.1.2:](https://www.cpalms.org//PreviewStandard/Preview/15373) Estimate angle measures. Using a protractor, measure angles in whole-number degrees and draw angles of specified measure in whole-number degrees. Demonstrate that angle measure is additive.

**Clarifications:**

*Clarification 1:* Instruction includes measuring given angles and drawing angles using protractors.
*Clarification 2:* Instruction includes estimating angle measures using benchmark angles (30°, 45°, 60°, 90° and 180°).
*Clarification 3:* Instruction focuses on the understanding that angles can be decomposed into non-overlapping angles whose measures sum to the measure of the original angle.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.4.GR.1.AP.2:](https://www.cpalms.org/PreviewAccessPoint/Preview/18100)  | Using a tool with a square angle, identify angles as acute, right or obtuse and construct angles that are acute, right or obtuse. |  |  |  |
| EssentialUnderstandings | * Understand that angles are an attribute of two-dimensional figures
* Understand the terms “acute,” “right,” and “obtuse”
 |  |  |  |
| Resources: |  |  |  |  |

[MA.4.GR.1.3:](https://www.cpalms.org//PreviewStandard/Preview/15374) Solve real-world and mathematical problems involving unknown whole-number angle measures. Write an equation to represent the unknown.

**Clarifications:**
*Clarification 1:* Instruction includes the connection to angle measure as being additive.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.4.GR.1.AP.3:](https://www.cpalms.org/PreviewAccessPoint/Preview/18101)  | Recognize that angle measure is additive by exploring when an angle is decomposed into two non-overlapping parts the angle measure of the whole is the sum of the angle measures of the parts. |  |  |  |
| EssentialUnderstandings | * Understand that angles are an attribute of two-dimensional figures
* Recognize that smaller figures can be formed by taking apart larger two-dimensional figures and that larger figures can be formed by putting together smaller two-dimensional figures
 |  |  |  |
| Resources: |  |  |  |  |

[MA.4.GR.2.1:](https://www.cpalms.org//PreviewStandard/Preview/15375) Solve perimeter and area mathematical and real-world problems, including problems with unknown sides, for rectangles with whole-number side lengths.

**Clarifications:**
*Clarification 1:* Instruction extends the development of algebraic thinking where the symbolic representation of the unknown uses a letter.

*Clarification 2:* Problems involving multiplication are limited to products of up to 3 digits by 2 digits. Problems involving division are limited to up to 4 digits divided by 1 digit.

*Clarification 3:* Responses include the appropriate units in word form.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.4.GR.2.AP.1:](https://www.cpalms.org/PreviewAccessPoint/Preview/18102) | Solve perimeter and area mathematical and real-world problems for rectangles with given whole-number side lengths. |  |  |  |
| EssentialUnderstandings | * Distinguish between the concepts of area and perimeter
* Find the perimeter of a rectangle with whole-number side lengths
* Find the area of a rectangle with whole-number side lengths
 |  |  |  |
| Resources: |  |  |  |  |

[MA.4.GR.2.2:](https://www.cpalms.org//PreviewStandard/Preview/15376) Solve problems involving rectangles with the same perimeter and different areas or with the same area and different perimeters.

**Clarifications:**
*Clarification 1:* Instruction focuses on the conceptual understanding of the relationship between perimeter and area.

*Clarification 2:* Within this benchmark, rectangles are limited to having whole-number side lengths. *Clarification 3:* Problems involving multiplication are limited to products of up to 3 digits by 2 digits. Problems involving division are limited to up to 4 digits divided by 1 digit.

*Clarification 4:* Responses include the appropriate units in word form.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.4.GR.2.AP.2:](https://www.cpalms.org/PreviewAccessPoint/Preview/18103) | Explore the relationship between perimeter and area using rectangles with the same perimeter and different areas or with the same area and different perimeters. |  |  |  |
| EssentialUnderstandings | * Distinguish between the concepts of area and perimeter
* Find the perimeter of a rectangle with whole-number side lengths
* Find the area of a rectangle with whole-number side lengths
 |  |  |  |
| Resources: |  |  |  |  |

[MA.4.M.1.1:](https://www.cpalms.org//PreviewStandard/Preview/15368) Select and use appropriate tools to measure attributes of objects.

**Clarifications:**
*Clarification 1:* Attributes include length, volume, weight, mass and temperature. *Clarification 2:* Instruction includes digital measurements and scales that are not linear in appearance.

*Clarification 3:* When recording measurements, use fractions and decimals where appropriate.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.4.M.1.AP.1a:](https://www.cpalms.org/PreviewAccessPoint/Preview/18092)  | Select and use appropriate tools to measure length (i.e., inches, feet, yards), liquid volume (i.e., gallons, quarts, pints, cups) and temperature (i.e., degrees Fahrenheit). |  |  |  |
| Essential Understandings | * Understand that length is an attribute of objects that can be measured using a ruler or yard stick and the length of the object being measured influences the choice of the tool (i.e., use a ruler to measure the length of a pencil and use a yard stick to measure the length of the classroom)
* Understand that length is an attribute that can be measured in inches, feet, and yards
* Understand that liquid volume is an attribute that can be measured using measuring spoons/cups and the amount of liquid being measured influences the choice of the size of the tool
* Understand that liquid volume is an attribute that can be measured in gallons, quarts, pints, and cups
* Understand that temperature is an attribute that can be measured using a thermometer
* Understand that temperature is an attribute that can be measured in degrees Fahrenheit
* Recognize the end point of a measurement reflects the total measure
 |  |  |  |
| Resources: |  |  |  |  |
| [MA.4.M.1.AP.1b:](https://www.cpalms.org/PreviewAccessPoint/Preview/18093)  | Explore selecting and using appropriate tools to measure weight (i.e., ounces, pounds). |  |  |  |
| EssentialUnderstandings | * Understand that weight is an attribute of objects that can be measured, and the weight of the object being measured influences the choice of the measurement tool
* Convert within a single system of measurement using the units: yards, feet, inches; kilometers, meters, centimeters, millimeters; pounds, ounces; kilograms, grams; gallons, quarts, pints, cups; liter, milliliter; and hours, minutes, seconds
 |  |  |  |
| Resources: |  |  |  |  |

[MA.4.M.1.2:](https://www.cpalms.org//PreviewStandard/Preview/15369) Convert within a single system of measurement using the units: yards, feet, inches; kilometers, meters, centimeters, millimeters; pounds, ounces; kilograms, grams; gallons, quarts, pints, cups; liter, milliliter; and hours, minutes, seconds.

**Clarifications:**
*Clarification 1:* Instruction includes the understanding of how to convert from smaller to larger units or from larger to smaller units.

*Clarification 2:* Within the benchmark, the expectation is not to convert from grams to kilograms, meters to kilometers or milliliters to liters.

*Clarification 3:* Problems involving fractions are limited to denominators of 2, 3, 4, 5, 6, 8, 10, 12, 16 and 100.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.4.M.1.AP.2a:](https://www.cpalms.org/PreviewAccessPoint/Preview/18094)  | Explore relative sizes of measurement units within one system of units including yards, feet, inches; pounds, ounces; gallons, quarts, pints, cups; and hours, minutes. |  |  |  |
| Essential Understandings | * Understand that length is an attribute that can be measured in yards, feet, and inches that the amount of length of an object influences the unit selected for measurement
* Understand that weight is an attribute that can be measured in ounces and pounds and that the amount of weight of an object influences the unit selected for measurement
* Understand that liquid volume is an attribute that can be measured in gallons, quarts, pints, and cups and that the amount of liquid volume influences the unit selected for measurement
* Understand that time is an attribute that can be measured in hours and minutes and that the amount of time influences the unit selected for measurement
 |  |  |  |
| Resources: |  |  |  |  |
| [MA.4.M.1.AP.2b:](https://www.cpalms.org/PreviewAccessPoint/Preview/18095)  | Using a conversion sheet, convert from a larger to a smaller unit within a single system of measurement using the units: yards, feet, inches; pounds, ounces; gallons, quarts, pints, cups; and hours, minutes. Only whole number measurements may be used. |  |  |  |
| EssentialUnderstandings | * Understand the relationship between the size of units of measurements within the same system of units (e.g., yards are longer than inches; pounds are heavier than ounces; gallons hold more than a pint; hours are longer than minutes)
 |  |  |  |
| Resources: |  |  |  |  |

[MA.4.M.2.1:](https://www.cpalms.org//PreviewStandard/Preview/15370) Solve two-step real-world problems involving distances and intervals of time using any combination of the four operations.

**Clarifications:**
*Clarification 1:* Problems involving fractions will include addition and subtraction with like denominators and multiplication of a fraction by a whole number or a whole number by a fraction.

*Clarification 2:* Problems involving fractions are limited to denominators of 2, 3, 4, 5, 6, 8, 10, 12, 16 and 100.
*Clarification 3:* Within the benchmark, the expectation is not to use decimals.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.4.M.2.AP.1a:](https://www.cpalms.org/PreviewAccessPoint/Preview/18096) | Solve one- and two-step real-world problems involving distances (i.e., inches, feet, yards, miles) in whole numbers using any combination of the four operations. |  |  |  |
| Essential Understandings | * Represent situations using any of the four operations with objects or drawings
* Understand the need to represent all actions in a situation and that there may be more than one action required
* Add and subtract 2 two-digit whole numbers
* Multiply two-digit by one-digit whole numbers
* Perform division related to one-digit by one-digit multiplication facts
 |  |  |  |
| Resources: |  |  |  |  |
| [MA.4.M.2.AP.1b:](https://www.cpalms.org/PreviewAccessPoint/Preview/18097) | Solve one-step real-world problems involving intervals of time in whole numbers using any of the four operations. |  |  |  |
| EssentialUnderstandings | * Represent situations using any of the four operations with objects or drawings
* Multiply two-digit by one-digit whole numbers
* Perform division related to one-digit by one-digit multiplication facts
 |  |  |  |
| Resources: |  |  |  |  |

[MA.4.M.2.2:](https://www.cpalms.org//PreviewStandard/Preview/15371) Solve one- and two-step addition and subtraction real-world problems involving money using decimal notation.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.4.M.2.AP.2:](https://www.cpalms.org/PreviewAccessPoint/Preview/18098)  | Solve one- and two-step addition and subtraction real-world problems involving money using decimal notation. Sums not to exceed $0.99 and their related subtraction facts. |  |  |  |
| EssentialUnderstandings | * Represent addition and subtraction situations involving “adding to” and “taking from” with objects or drawings
* Understand the need to represent all actions in a situation and that there may be more than one action required
* Add and subtract decimals less than one to the hundredths
 |  |  |  |
| Resources: |  |  |  |  |

[MA.4.NSO.1.1:](https://www.cpalms.org//PreviewStandard/Preview/15341) Express how the value of a digit in a multi-digit whole number changes if the digit moves one place to the left or right.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.4.NSO.1.AP.1:](https://www.cpalms.org/PreviewAccessPoint/Preview/18064) | Explore how the value of a digit in a multi-digit whole number changes if the digit moves one place to the left. |  |  |  |
| EssentialUnderstandings | * Understand that 10 ones is equal to 1 ten, 10 tens is equal to 1 hundred, 10 hundreds is equal to 1 thousand, and 10 thousands is equal to 1 ten-thousands
* Recognize the location of the ten-thousands place, the thousands place, the hundreds place, the tens place, and the ones place
* Understand that the digit in the ten-thousands place represents the number of ten-thousands, the digit in the thousands place represents the number of thousands, the digit in the hundreds place represents the number of hundreds, the digit in the tens place represents the number of tens, and the digit in the ones place represents the number of ones
 |  |  |  |
| Resources: | [Element Card](https://www.accesstofls.org/core_curriculum_resources/Math/BEST/Element_Cards/Elementary/fourth/MA.4.NSO.1.1_ADA.docx) |  |  |  |

[MA.4.NSO.1.2:](https://www.cpalms.org//PreviewStandard/Preview/15342) Read and write multi-digit whole numbers from 0 to 1,000,000 using standard form, expanded form and word form.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.4.NSO.1.AP.2:](https://www.cpalms.org/PreviewAccessPoint/Preview/18065) | Read and generate numbers from 0 to 10,000 using standard form and expanded form. |  |  |  |
| EssentialUnderstandings | * Express number names (rote count) up to 100
* Skip count by 100’s up to 1,000
* Skip count by 1,000’s up 10,000
* Identify a number written in standard form when given the name of the number up to 1,000
* Understand that the 5 digits of a five-digit number represent an amount of ten-thousands, thousands, hundreds, tens, and further ones
* Understand that expanded form is the value of the ten-thousands, plus the value of the thousands, plus the value of the hundreds, plus the value of the tens, plus the value of the ones.
* Understand that the numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to 1, 2, 3, 4, 5, 6, 7, 8, 9 tens and 0 further ones
* Understand that the numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to 1, 2, 3, 4, 5, 6, 7, 8, 9 hundreds and 0 further tens and 0 further ones
* Understand that the numbers 1,000; 2,000; 3,000; 4,000; 5,000; 6,000; 7,000; 8,000; 9,000 refer to 1, 2, 3, 4, 5, 6, 7, 8, 9 thousands, and 0 further hundreds and 0 further tens and 0 further ones
* Generate numbers 0-1,000 using standard form
 |  |  |  |
| Resources: | [Element Card](https://www.accesstofls.org/core_curriculum_resources/Math/BEST/Element_Cards/Elementary/fourth/MA.4.NSO.1.2_ADA.docx) |  |  |  |

[MA.4.NSO.1.3:](https://www.cpalms.org//PreviewStandard/Preview/15343) Plot, order and compare multi-digit whole numbers up to 1,000,000.

**Clarifications:**
*Clarification 1:* When comparing numbers, instruction includes using an appropriately scaled number line and using place values of the hundred thousands, ten thousands, thousands, hundreds, tens and ones digits. C*larification 2:* Scaled number lines must be provided and can be a representation of any range of numbers.

*Clarification 3:* Within this benchmark, the expectation is to use symbols (<, > or =).

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.4.NSO.1.AP.3:](https://www.cpalms.org/PreviewAccessPoint/Preview/18066)  | Plot, order and compare multi-digit whole numbers up to 10,000. |  |  |  |
| EssentialUnderstandings | * Use visuals to represent numbers up to 10,000 using ten thousands, thousands, hundreds, tens, and ones
* Use matching of same unit visuals to compare starting with the ten thousands place
* Understand that > is “greater than”, < is “less than”, and = is “equal to”
* Understand that numbers on a number line are plotted in sequential order, numbers that are lower on the number line have a lesser value, and numbers higher on the number line have a greater value
 |  |  |  |
| Resources: | [Element Card](https://www.accesstofls.org/core_curriculum_resources/Math/BEST/Element_Cards/Elementary/fourth/MA.4.NSO.1.3_ADA.docx) |  |  |  |

[MA.4.NSO.1.4:](https://www.cpalms.org//PreviewStandard/Preview/15344) Round whole numbers from 0 to 10,000 to the nearest 10, 100 or 1,000.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.4.NSO.1.AP.4:](https://www.cpalms.org/PreviewAccessPoint/Preview/18067) | Round whole numbers from 100 to 10,000 to the nearest 1,000 with visual support. |  |  |  |
| EssentialUnderstandings | * Given a number up to 10,000, understand that the digit in the ten thousands place represents the number of ten thousands, the digit in the thousands place represents the number of thousands, the digit in the hundreds place represents the number of hundreds, the digit in the tens place represents the number of tens, and the digit in the ones place represents the number of ones
* Understand that numbers on a number line are plotted in sequential order, numbers that are lower on the number line have a lesser value, and numbers higher on the number line have a greater value
* Plot whole numbers up to 10,000 on a number line
* Identify which millennium the number being rounded is closest to on a number line
* Understand that if the number being rounded is halfway between two millenniums, then it rounds to the greater millennium
 |  |  |  |
| Resources: | [Element Card](https://www.accesstofls.org/core_curriculum_resources/Math/BEST/Element_Cards/Elementary/fourth/MA.4.NSO.1.4_ADA.docx) |  |  |  |

[MA.4.NSO.1.5:](https://www.cpalms.org//PreviewStandard/Preview/15345) Plot, order and compare decimals up to the hundredths.

**Clarifications:**
*Clarification 1:* When comparing numbers, instruction includes using an appropriately scaled number line and using place values of the ones, tenths and hundredths digits.

*Clarification 2:* Within the benchmark, the expectation is to explain the reasoning for the comparison and use symbols (<, > or =).

*Clarification 3:* Scaled number lines must be provided and can be a representation of any range of numbers.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.4.NSO.1.AP.5:](https://www.cpalms.org/PreviewAccessPoint/Preview/18068)  | Using visual models, compare decimals less than one up to the hundredths. |  |  |  |
| EssentialUnderstandings | * Recognize that decimals are parts of a whole
 |  |  |  |
| Resources: | [Element Card](https://www.accesstofls.org/core_curriculum_resources/Math/BEST/Element_Cards/Elementary/fourth/MA.4.NSO.1.5_ADA.docx) |  |  |  |

[MA.4.NSO.2.1:](https://www.cpalms.org//PreviewStandard/Preview/15346) Recall multiplication facts with factors up to 12 and related division facts with automaticity.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.4.NSO.2.AP.1:](https://www.cpalms.org/PreviewAccessPoint/Preview/18069)  | Recall multiplication facts of one-digit whole numbers multiplied by 1, 2, 5 and 10. |  |  |  |
| EssentialUnderstandings | * Represent multiplication expressions (e.g., 2 x 5) using objects or drawings organized in equal groups or in rectangular arrays and use the representations to find the total
 |  |  |  |
| Resources: | [Element Card](https://www.accesstofls.org/core_curriculum_resources/Math/BEST/Element_Cards/Elementary/fourth/MA.4.NSO.2.1_ADA.docx) |  |  |  |

[MA.4.NSO.2.2:](https://www.cpalms.org//PreviewStandard/Preview/15347) Multiply two whole numbers, up to three digits by up to two digits, with procedural reliability.

**Clarifications:**
*Clarification 1:* Instruction focuses on helping a student choose a method they can use reliably.

*Clarification 2:* Instruction includes the use of models or equations based on place value and the distributive property.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.4.NSO.2.AP.2:](https://www.cpalms.org/PreviewAccessPoint/Preview/18070)  | Explore multiplication of two whole numbers, up to two digits by one digit. |  |  |  |
| EssentialUnderstandings | * Understand that a group of 10 ones is equal to 1 ten (e.g., 10-unit cubes is equal to 1 ten-rod)
* Model two-digit numbers using 10s and 1s (e.g., ten-rods and unit cubes)
* Represent single-digit-by-single-digit multiplication situations using objects organized in equal groups or in rectangular arrays and use the representations to find the total
 |  |  |  |
| Resources: | [Element Card](https://www.accesstofls.org/core_curriculum_resources/Math/BEST/Element_Cards/Elementary/fourth/MA.4.NSO.2.2_ADA.docx) |  |  |  |

[MA.4.NSO.2.3:](https://www.cpalms.org//PreviewStandard/Preview/15348) Multiply two whole numbers, each up to two digits, including using a standard algorithm with procedural fluency.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.4.NSO.2.AP.3:](https://www.cpalms.org/PreviewAccessPoint/Preview/18071)  | Apply a strategy to multiply two whole numbers up to two digits by one digit. |  |  |  |
| EssentialUnderstandings | * Represent multiplication expressions (e.g., 3 x 12) using objects or drawings organized in equal groups or in rectangular arrays and use the representations to find the total
 |  |  |  |
| Resources: | [Element Card](https://www.accesstofls.org/core_curriculum_resources/Math/BEST/Element_Cards/Elementary/fourth/MA.4.NSO.2.3_ADA.docx) |  |  |  |

[MA.4.NSO.2.4:](https://www.cpalms.org//PreviewStandard/Preview/15349) Divide a whole number up to four digits by a one-digit whole number with procedural reliability. Represent remainders as fractional parts of the divisor.

**Clarifications:**
*Clarification 1:* Instruction focuses on helping a student choose a method they can use reliably.

*Clarification 2:* Instruction includes the use of models based on place value, properties of operations or the relationship between multiplication and division.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.4.NSO.2.AP.4:](https://www.cpalms.org/PreviewAccessPoint/Preview/18072) | Explore division of two whole numbers up to two digits by one digit with and without remainders. Represent remainders as whole numbers. |  |  |  |
| EssentialUnderstandings | * Understand that a group of 10 ones is equal to 1 ten (e.g., 10-unit cubes is equal to 1 ten-rod)
* Model two-digit numbers using 10s and 1s (e.g., ten-rods and unit cubes)
* Represent division situations related to single-digit multiplication using objects organized in equal groups and use the representations to find the total number of groups or the number in each group
 |  |  |  |
| Resources: | [Element Card](https://www.accesstofls.org/core_curriculum_resources/Math/BEST/Element_Cards/Elementary/fourth/MA.4.NSO.2.4_ADA.docx) |  |  |  |

[MA.4.NSO.2.5:](https://www.cpalms.org//PreviewStandard/Preview/15350) Explore the multiplication and division of multi-digit whole numbers using estimation, rounding and place value.

**Clarifications:**
*Clarification 1:* Instruction focuses on previous understanding of multiplication with multiples of 10 and 100, and seeing division as a missing factor problem.

*Clarification 2:* Estimating quotients builds the foundation for division using a standard algorithm.

*Clarification 3:* When estimating the division of whole numbers, dividends are limited to up to four digits and divisors are limited to up to two digits.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.4.NSO.2.AP.5:](https://www.cpalms.org/PreviewAccessPoint/Preview/18073)  | Explore the estimation of products and quotients of two whole numbers up to two digits by one digit. |  |  |  |
| EssentialUnderstandings | * Round two-digit numbers in an expression to the nearest 10 to create a simpler problem
* Represent multiplication expressions (e.g., 3 x 20) using objects or drawings organized in equal groups and use the representations to find the total.
* Represent division expressions (e.g., 60 $÷3) $using objects or drawings organized in equal groups and use the representations to find the number of groups or the number in each group
* Recognize that rounding two-digit numbers in an expression prior to multiplying or dividing provides an estimation of a reasonable solution without performing the exact computations required to solve the problem
 |  |  |  |
| Resources: | [Element Card](https://www.accesstofls.org/core_curriculum_resources/Math/BEST/Element_Cards/Elementary/fourth/MA.4.NSO.2.5_ADA.docx) |  |  |  |

[MA.4.NSO.2.6:](https://www.cpalms.org//PreviewStandard/Preview/15351) Identify the number that is one-tenth more, one-tenth less, one-hundredth more and one-hundredth less than a given number.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.4.NSO.2.AP.6:](https://www.cpalms.org/PreviewAccessPoint/Preview/18074) | Identify the number that is one-tenth more and one-tenth less than a given number (i.e., 0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9). |  |  |  |
| EssentialUnderstandings | * Understand that the digit in the ones place represents the number of ones and the digit in the tenths place represents the number of tenths
* Use objects (e.g., tenth rods) to represent the numbers 0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9
* Understand that “more” increases the number of tenths and that “less” decreases the number of tenths
* Understand that a group of 10 tenths is equal to 1 whole (e.g., 10 tenth rods is equal to 1 whole flat)
 |  |  |  |
| Resources: | [Element Card](https://www.accesstofls.org/core_curriculum_resources/Math/BEST/Element_Cards/Elementary/fourth/MA.4.NSO.2.6_ADA.docx) |  |  |  |

[MA.4.NSO.2.7:](https://www.cpalms.org//PreviewStandard/Preview/15352) Explore the addition and subtraction of multi-digit numbers with decimals to the hundredths.

**Clarifications:**
*Clarification 1:* Instruction includes the connection to money and the use of manipulatives and models based on place value.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.4.NSO.2.AP.7:](https://www.cpalms.org/PreviewAccessPoint/Preview/18075) | Explore the addition and subtraction of decimals less than one to the tenths (e.g., 0.3 + 0.5) and hundredths (e.g., 0.25 − 0.12). |  |  |  |
| EssentialUnderstandings | * Understand that the digit in the ones place represents the number of ones, the digit in the tenths place represents the number of tenths, and the digit in the hundredths place represents the number of hundredths
* Use objects (e.g., tenth rods and hundredth unit cubes) to represent decimals less than one to the tenths and hundredths
* Understand that a group of 10 tenths is equal to 1 whole (e.g., 10 tenth rods is equal to 1 whole flat) and that 1 whole is equal to a group of 10 tenths (e.g., 1 whole flat is equal to 10 tenth rods)
* Understand that a group of 10 hundredths is equal to 1 tenth (e.g., 10 hundredth unit cubes is equal to 1 tenth rod) and that 1 tenth is equal to 10 hundredths (e.g., 1 tenth rod is equal to 10 hundredth unit cubes)
* Understand that when adding or subtracting like place value units are added or subtracted
 |  |  |  |
| Resources: | [Element Card](https://www.accesstofls.org/core_curriculum_resources/Math/BEST/Element_Cards/Elementary/fourth/MA.4.NSO.2.7_ADA.docx) |  |  |  |

[MA.K12.MTR.1.1:](https://www.cpalms.org//PreviewStandard/Preview/15875) Actively participate in effortful learning both individually and collectively. Mathematicians who participate in effortful learning both individually and with others:

* Analyze the problem in a way that makes sense given the task.
* Ask questions that will help with solving the task.
* Build perseverance by modifying methods as needed while solving a challenging task.
* Stay engaged and maintain a positive mindset when working to solve tasks.
* Help and support each other when attempting a new method or approach.

**Clarifications:**
Teachers who encourage students to participate actively in effortful learning both individually and with others:

* Cultivate a community of growth mindset learners.
* Foster perseverance in students by choosing tasks that are challenging.
* Develop students’ ability to analyze and problem solve.
* Recognize students’ effort when solving challenging problems.

[MA.K12.MTR.2.1:](https://www.cpalms.org//PreviewStandard/Preview/15876) Demonstrate understanding by representing problems in multiple ways.

Mathematicians who demonstrate understanding by representing problems in multiple ways:

* Build understanding through modeling and using manipulatives.
* Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
* Progress from modeling problems with objects and drawings to using algorithms and equations.
* Express connections between concepts and representations.
* Choose a representation based on the given context or purpose.

**Clarifications:**
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

* Help students make connections between concepts and representations.
* Provide opportunities for students to use manipulatives when investigating concepts.
* Guide students from concrete to pictorial to abstract representations as understanding progresses.
* Show students that various representations can have different purposes and can be useful in different situations.

[MA.K12.MTR.3.1:](https://www.cpalms.org//PreviewStandard/Preview/15877) Complete tasks with mathematical fluency.

Mathematicians who complete tasks with mathematical fluency: Complete tasks with mathematical fluency.

* Select efficient and appropriate methods for solving problems within the given context.
* Maintain flexibility and accuracy while performing procedures and mental calculations.
* Complete tasks accurately and with confidence.
* Adapt procedures to apply them to a new context.
* Use feedback to improve efficiency when performing calculations.

**Clarifications:**
Teachers who encourage students to complete tasks with mathematical fluency:

* Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
* Offer multiple opportunities for students to practice efficient and generalizable methods.
* Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

[MA.K12.MTR.4.1:](https://www.cpalms.org//PreviewStandard/Preview/15878) Engage in discussions that reflect on the mathematical thinking of self and others.

Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

* Communicate mathematical ideas, vocabulary and methods effectively.
* Analyze the mathematical thinking of others.
* Compare the efficiency of a method to those expressed by others.
* Recognize errors and suggest how to correctly solve the task.
* Justify results by explaining methods and processes.
* Construct possible arguments based on evidence.

**Clarifications:**
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

* Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
* Create opportunities for students to discuss their thinking with peers.
* Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
* Develop students’ ability to justify methods and compare their responses to the responses of their peers.

[MA.K12.MTR.5.1:](https://www.cpalms.org//PreviewStandard/Preview/15879) Use patterns and structure to help understand and connect mathematical concepts.

Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

* Focus on relevant details within a problem.
* Create plans and procedures to logically order events, steps or ideas to solve problems.
* Decompose a complex problem into manageable parts.
* Relate previously learned concepts to new concepts.
* Look for similarities among problems.
* Connect solutions of problems to more complicated large-scale situations.

**Clarifications:**
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

* Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
* Support students to develop generalizations based on the similarities found among problems.
* Provide opportunities for students to create plans and procedures to solve problems.
* Develop students’ ability to construct relationships between their current understanding and more sophisticated ways of thinking.

[MA.K12.MTR.6.1:](https://www.cpalms.org//PreviewStandard/Preview/15880) Assess the reasonableness of solutions.

Mathematicians who assess the reasonableness of solutions:

* Estimate to discover possible solutions.
* Use benchmark quantities to determine if a solution makes sense.
* Check calculations when solving problems.
* Verify possible solutions by explaining the methods used.
* Evaluate results based on the given context.

**Clarifications:**
Teachers who encourage students to assess the reasonableness of solutions:

* Have students estimate or predict solutions prior to solving.
* Prompt students to continually ask, “Does this solution make sense? How do you know?”
* Reinforce that students check their work as they progress within and after a task.
* Strengthen students’ ability to verify solutions through justifications.

[MA.K12.MTR.7.1:](https://www.cpalms.org//PreviewStandard/Preview/15881) Apply mathematics to real-world contexts.

Mathematicians who apply mathematics to real-world contexts:

* Connect mathematical concepts to everyday experiences.
* Use models and methods to understand, represent and solve problems.
* Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

**Clarifications:**
Teachers who encourage students to apply mathematics to real-world contexts:

* Provide opportunities for students to create models, both concrete and abstract, and perform investigations.
* Challenge students to question the accuracy of their models and methods.
* Support students as they validate conclusions by comparing them to the given situation.
* Indicate how various concepts can be applied to other disciplines.

[ELA.K12.EE.1.1:](https://www.cpalms.org//PreviewStandard/Preview/15201) Cite evidence to explain and justify reasoning.

**Clarifications:**
K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing.

2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations.

4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they’ve directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor.

6-8 Students continue with previous skills and use a style guide to create a proper citation.

9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.

[ELA.K12.EE.2.1:](https://www.cpalms.org//PreviewStandard/Preview/15202) Read and comprehend grade-level complex texts proficiently.

**Clarifications:**
See [Text Complexity](https://cpalmsmediaprod.blob.core.windows.net/uploads/docs/standards/best/la/appendixb.pdf) for grade-level complexity bands and a text complexity rubric.

[ELA.K12.EE.3.1:](https://www.cpalms.org//PreviewStandard/Preview/15203) Make inferences to support comprehension.

**Clarifications:**
Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like “Why is the girl smiling?” or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.

[ELA.K12.EE.4.1:](https://www.cpalms.org//PreviewStandard/Preview/15204) Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations.

**Clarifications:**
In kindergarten, students learn to listen to one another respectfully.

In grades 1-2, students build upon these skills by justifying what they are thinking. For example: “I think \_\_\_\_\_\_\_\_ because \_\_\_\_\_\_\_.” The collaborative conversations are becoming academic conversations.

In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.

[ELA.K12.EE.5.1:](https://www.cpalms.org//PreviewStandard/Preview/15205) Use the accepted rules governing a specific format to create quality work.

**Clarifications:**
Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.

[ELA.K12.EE.6.1:](https://www.cpalms.org//PreviewStandard/Preview/15206) Use appropriate voice and tone when speaking or writing.

**Clarifications:**
In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.

[ELD.K12.ELL.MA.1:](https://www.cpalms.org//PreviewStandard/Preview/8642) English language learners communicate information, ideas and concepts necessary for academic success in the content area of Mathematics.

[ELD.K12.ELL.SI.1:](https://www.cpalms.org//PreviewStandard/Preview/8640) English language learners communicate for social and instructional purposes within the school setting.