****

**Access**

**Mathematics**

**Grade 5**

**(#7712060)**

**Course Standards**

[MA.5.AR.1.1:](https://www.cpalms.org//PreviewStandard/Preview/15395) Solve multi-step real-world problems involving any combination of the four operations with whole numbers, including problems in which remainders must be interpreted within the context.

**Clarifications:**  
*Clarification 1:* 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.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.5.AR.1.AP.1:](https://www.cpalms.org/PreviewAccessPoint/Preview/18123) | Solve one- and two-step real-world problems involving any combination of the four operations with whole numbers. Explore problems in which remainders must be interpreted within the context. |  |  |  |
| Essential  Understandings | * Represent situations involving any combination 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: | [Element Card](https://www.accesstofls.org/core_curriculum_resources/Math/BEST/Element_Cards/Elementary/fifth/MA.5.AR.1.1_ADA.docx) |  |  |  |

[MA.5.AR.1.2:](https://www.cpalms.org//PreviewStandard/Preview/15396) Solve real-world problems involving the addition, subtraction or multiplication of fractions, including mixed numbers and fractions greater than 1.

**Clarifications:**  
*Clarification 1:* Instruction includes the use of visual models and equations to represent the problem.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.5.AR.1.AP.2a:](https://www.cpalms.org/PreviewAccessPoint/Preview/18124) | Solve one-step real-world problems involving addition and subtraction of mixed numbers and fractions greater than one with like denominators. |  |  |  |
| Essential Understandings | * Represent addition and subtraction situations with drawings or objects * Apply a strategy to add or subtract mixed numbers and fractions less than one with like denominators |  |  |  |
| Resources: | [Element Card](https://www.accesstofls.org/core_curriculum_resources/Math/BEST/Element_Cards/Elementary/fifth/MA.5.AR.1.2_ADA.docx) |  |  |  |
| [MA.5.AR.1.AP.2b:](https://www.cpalms.org/PreviewAccessPoint/Preview/18125) | Solve one-step real-world problems involving multiplication of unit fractions. |  |  |  |
| Essential  Understandings | * Represent situations involving multiplication with drawings or objects * Apply a strategy to multiply a unit fraction by a unit fraction |  |  |  |
| Resources: | [Element Card](https://www.accesstofls.org/core_curriculum_resources/Math/BEST/Element_Cards/Elementary/fifth/MA.5.AR.1.2_ADA.docx) |  |  |  |

[MA.5.AR.1.3:](https://www.cpalms.org//PreviewStandard/Preview/15397) Solve real-world problems involving division of a unit fraction by a whole number and a whole number by a unit fraction.

**Clarifications:**  
*Clarification 1:* Instruction includes the use of visual models and equations to represent the problem.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.5.AR.1.AP.3:](https://www.cpalms.org/PreviewAccessPoint/Preview/18126) | Solve one-step real-world problems involving division of a whole number by a unit fraction. |  |  |  |
| Essential  Understandings | * Represent situations involving division with drawings or objects * Apply a strategy to divide a whole number by a unit fraction with denominators limited to 2, 3, or 4 |  |  |  |
| Resources: | [Element Card](https://www.accesstofls.org/core_curriculum_resources/Math/BEST/Element_Cards/Elementary/fifth/MA.5.AR.1.3_ADA.docx) |  |  |  |

[MA.5.AR.2.1:](https://www.cpalms.org//PreviewStandard/Preview/15398) Translate written real-world and mathematical descriptions into numerical expressions and numerical expressions into written mathematical descriptions.

**Clarifications:**  
*Clarification 1:* Expressions are limited to any combination of the arithmetic operations, including parentheses, with whole numbers, decimals and fractions.

*Clarification 2:* Within this benchmark, the expectation is not to include exponents or nested grouping symbols.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.5.AR.2.AP.1:](https://www.cpalms.org/PreviewAccessPoint/Preview/18127) | Translate mathematical descriptions (e.g., five plus two; the product of three and four) into numerical expressions with two terms. |  |  |  |
| Essential  Understandings | * Understand + as a symbol representing the operation of addition and this operation can be indicated by the words “plus” and “sum” * Understand – as a symbol representing the operation of subtraction and this operation can be indicated by the words “minus” and “difference” * Understand as a symbol representing the operation of multiplication and this operation can be indicated by the words “times” and “product” * Understand as a symbol representing the operation of division and this operation can be indicated by the words “divided by” and “quotient” |  |  |  |
| Resources: | [Element Card](https://www.accesstofls.org/core_curriculum_resources/Math/BEST/Element_Cards/Elementary/fifth/MA.5.AR.2.1_ADA.docx) |  |  |  |

[MA.5.AR.2.2:](https://www.cpalms.org//PreviewStandard/Preview/15399) Evaluate multi-step numerical expressions using order of operations.

**Clarifications:**  
*Clarification 1:* Multi-step expressions are limited to any combination of arithmetic operations, including parentheses, with whole numbers, decimals and fractions.

*Clarification 2:* Within this benchmark, the expectation is not to include exponents or nested grouping symbols.

*Clarification 3:* Decimals are limited to hundredths. Expressions cannot include division of a fraction by a fraction.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.5.AR.2.AP.2:](https://www.cpalms.org/PreviewAccessPoint/Preview/18128) | Evaluate an expression containing three terms and one set of parentheses. |  |  |  |
| Essential  Understandings | * Understand that the operation in the parenthesis is performed first * 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: | [Element Card](https://www.accesstofls.org/core_curriculum_resources/Math/BEST/Element_Cards/Elementary/fifth/MA.5.AR.2.2_ADA.docx) |  |  |  |

[MA.5.AR.2.3:](https://www.cpalms.org//PreviewStandard/Preview/15400) Determine and explain whether an equation involving any of the four operations is true or false.

**Clarifications:**  
*Clarification 1:* Problem types include equations that include parenthesis but not nested parentheses.

*Clarification 2:* Instruction focuses on the connection between properties of equality and order of operations.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.5.AR.2.AP.3:](https://www.cpalms.org/PreviewAccessPoint/Preview/18129) | Determine whether an equation (with no more than four terms and up to one set of parentheses) involving any of the four operations with whole numbers is true or false. Limit addition and subtraction to within 100 and limit multiplication and division to the products of two single-digit whole numbers and their related division facts. |  |  |  |
| Essential  Understandings | * 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 * 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: | [Element Card](https://www.accesstofls.org/core_curriculum_resources/Math/BEST/Element_Cards/Elementary/fifth/MA.5.AR.2.3_ADA.docx) |  |  |  |

[MA.5.AR.2.4:](https://www.cpalms.org//PreviewStandard/Preview/15401)

Given a mathematical or real-world context, write an equation involving any of the four operations to determine the unknown whole number with the unknown in any position.

**Clarifications:**  
*Clarification 1:* Instruction extends the development of algebraic thinking where the unknown letter is recognized as a variable.

*Clarification 2:* Problems include the unknown and different operations on either side of the equal sign **Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.5.AR.2.AP.4:](https://www.cpalms.org/PreviewAccessPoint/Preview/18130) | Given a mathematical or real-world context, generate an equation involving any of the four operations to determine the unknown sum, difference, product or quotient. Sums may not exceed 100 and their related subtraction facts. Multiplication and division may not exceed two-digit by one-digit. |  |  |  |
| Essential  Understandings | * Understand as a symbol representing the operation of addition and as a symbol representing the operation of subtraction * 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 the sum or differences of 2 two-digit whole numbers * Find products or quotients of two-digit by one-digit whole numbers |  |  |  |
| Resources: | [Element Card](https://www.accesstofls.org/core_curriculum_resources/Math/BEST/Element_Cards/Elementary/fifth/MA.5.AR.2.4_ADA.docx) |  |  |  |

[MA.5.AR.3.1:](https://www.cpalms.org//PreviewStandard/Preview/15402) Given a numerical pattern, identify and write a rule that can describe the pattern as an expression.

**Clarifications:**  
*Clarification 1:* Rules are limited to one or two operations using whole numbers.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.5.AR.3.AP.1:](https://www.cpalms.org/PreviewAccessPoint/Preview/18131) | Given a numerical pattern, identify a one-step rule that can describe the pattern. |  |  |  |
| Essential  Understandings | * Understand that patterns are repeated and predictable and can be described using a rule * Perform basic operations Given a rule for a numerical pattern, use a two-column table to record the inputs and outputs. |  |  |  |
| Resources: | [Element Card](https://www.accesstofls.org/core_curriculum_resources/Math/BEST/Element_Cards/Elementary/fifth/MA.5.AR.3.1_ADA.docx) |  |  |  |

[MA.5.AR.3.2:](https://www.cpalms.org//PreviewStandard/Preview/15403) Given a rule for a numerical pattern, use a two-column table to record the inputs and outputs.

**Clarifications:**  
*Clarification 1:* Instruction builds a foundation for proportional and linear relationships in later grades.

*Clarification 2:* Rules are limited to one or two operations using whole numbers.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.5.AR.3.AP.2:](https://www.cpalms.org/PreviewAccessPoint/Preview/18132) | Given the inputs and a one-step addition or subtraction rule for a numerical pattern, use a two-column table to record the outputs. |  |  |  |
| Essential  Understandings | * Understand how data in a table is organized * Understand that patterns are repeated and predictable and can be extended by following a rule * Find the sum or differences of up to 2 two-digit whole numbers |  |  |  |
| Resources: | [Element Card](https://www.accesstofls.org/core_curriculum_resources/Math/BEST/Element_Cards/Elementary/fifth/MA.5.AR.3.2_ADA.docx) |  |  |  |

[MA.5.DP.1.1:](https://www.cpalms.org//PreviewStandard/Preview/15414) Collect and represent numerical data, including fractional and decimal values, using tables, line graphs or line plots.

**Clarifications:**  
*Clarification 1:* Within this benchmark, the expectation is for an estimation of fractional and decimal heights on line graphs.

*Clarification 2:* Decimal values are limited to hundredths. Denominators are limited to 1, 2, 3 and 4. Fractions can be greater than one.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.5.DP.1.AP.1:](https://www.cpalms.org/PreviewAccessPoint/Preview/18145) | 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, halves and quarters. |  |  |  |
| Essential  Understandings | * 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 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 four equal parts of a whole as fourths or quarters * Recognize that mixed numbers represent an amount of wholes and additional parts of a whole |  |  |  |
| Resources: |  |  |  |  |

[MA.5.DP.1.2:](https://www.cpalms.org//PreviewStandard/Preview/15415) Interpret numerical data, with whole-number values, represented with tables or line plots by determining the mean, mode, median or range.

**Clarifications:**  
*Clarification 1:* Instruction includes interpreting the mean in real-world problems as a leveling out, a balance point or an equal share.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.5.DP.1.AP.2:](https://www.cpalms.org/PreviewAccessPoint/Preview/18146) | Interpret numerical data, with whole-number values, represented with tables or line plots by determining the mean, mode or range. Line plot scales to include only whole numbers, halves and quarters. |  |  |  |
| Essential  Understandings | * Understand how data in a table is organized * Understand reading a horizontal number line that is labeled with whole numbers, halves, and quarters * 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 * Perform grade level Access Point appropriate subtraction of whole numbers * Find the sum (up to 99) of multiple addends * Divide two-digit numbers by one digit with no rem |  |  |  |
| Resources: |  |  |  |  |

[MA.5.FR.1.1:](https://www.cpalms.org//PreviewStandard/Preview/15390) Given a mathematical or real-world problem, represent the division of two whole numbers as a fraction.

**Clarifications:**  
*Clarification 1:* Instruction includes making a connection between fractions and division by understanding that fractions can also represent division of a numerator by a denominator.

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

*Clarification 3:* Fractions can include fractions greater than one.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.5.FR.1.AP.1:](https://www.cpalms.org/PreviewAccessPoint/Preview/18117) | Explore the connection between fractions and division in a real-world problem. |  |  |  |
| Essential  Understandings | * Understand the concept of equal groups. Distinguish between the number of groups, the number in each group, and the total number * Represent division situations by organizing objects in equal groups and use the representations to find the number of groups or the number in each group * Understand the denominator is the size of the equal parts of the whole and the numerator is the number of equal parts being described * Partition two-dimensional shapes into equal-sized parts |  |  |  |
| Resources: |  |  |  |  |

[MA.5.FR.2.1:](https://www.cpalms.org//PreviewStandard/Preview/15391) Add and subtract fractions with unlike denominators, including mixed numbers and fractions greater than 1, with procedural reliability.

**Clarifications:**  
*Clarification 1:* Instruction includes the use of estimation, manipulatives, drawings or the properties of operations.

*Clarification 2:* Instruction builds on the understanding from previous grades of factors up to 12 and their multiples.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.5.FR.2.AP.1a:](https://www.cpalms.org/PreviewAccessPoint/Preview/18118) | Explore adding and subtracting mixed numbers and fractions greater than 1 with like denominators. |  |  |  |
| Essential Understandings | * Represent addition and subtraction situations involving “adding to” and “taking from” with objects * 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 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.5.FR.2.AP.1b:](https://www.cpalms.org/PreviewAccessPoint/Preview/18119) | Explore adding and subtracting fractions less than one with unlike denominators where one denominator is a multiple of the other (e.g., ½ + 3/4, 2/3 - 1/6,). |  |  |  |
| Essential  Understandings | * Represent addition situations involving “adding to” and subtraction situations involving “taking from” with objects * 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 * Add and subtract fractions less than one with like denominators |  |  |  |
| Resources: |  |  |  |  |

[MA.5.FR.2.2:](https://www.cpalms.org//PreviewStandard/Preview/15392) Extend previous understanding of multiplication to multiply a fraction by a fraction, including mixed numbers and fractions greater than 1, with procedural reliability.

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

*Clarification 2:* Denominators limited to whole numbers up to 20.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.5.FR.2.AP.2:](https://www.cpalms.org/PreviewAccessPoint/Preview/18120) | Explore multiplying a unit fraction by a unit fraction. |  |  |  |
| Essential  Understandings | * Multiply a whole number by a unit fraction (e.g., x 2) * Understand that when multiplying a whole number by a fraction, that the product represents a part of a whole |  |  |  |
| Resources: |  |  |  |  |

[MA.5.FR.2.3:](https://www.cpalms.org//PreviewStandard/Preview/15393) When multiplying a given number by a fraction less than 1 or a fraction greater than 1, predict and explain the relative size of the product to the given number without calculating.

**Clarifications:**  
*Clarification 1:* Instruction focuses on the connection to decimals, estimation and assessing the reasonableness of an answer.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.5.FR.2.AP.3:](https://www.cpalms.org/PreviewAccessPoint/Preview/18121) | Explore the impact on the size of the product when multiplying a given number by a fraction less than 1 or a whole number. |  |  |  |
| Essential  Understandings | * Understand the concept of equal groups. Distinguish between the number of groups and the number in each group * Recognize whether the number of groups (i.e., the first factor) is more than one whole group, exactly one whole group, or less than one whole group |  |  |  |
| Resources: |  |  |  |  |

[MA.5.FR.2.4:](https://www.cpalms.org//PreviewStandard/Preview/15394) Extend previous understanding of division to explore the division of a unit fraction by a whole number and a whole number by a unit fraction.

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

*Clarification 2:* Refer to [Situations Involving Operations with Numbers (Appendix A)](https://cpalmsmediaprod.blob.core.windows.net/uploads/docs/standards/best/ma/appendixa.pdf)

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.5.FR.2.AP.4:](https://www.cpalms.org/PreviewAccessPoint/Preview/18122) | Explore the division of a one-digit whole number by a unit fraction. Denominators are limited to 2, 3 or 4. |  |  |  |
| Essential  Understandings | * Represent division situations using objects to find the total number of groups of a given quantity * Recognize that there are 2 halves in one whole, 3 thirds in one whole, and 4 fourths in one whole |  |  |  |
| Resources: |  |  |  |  |

[MA.5.GR.1.1:](https://www.cpalms.org//PreviewStandard/Preview/15406) Classify triangles or quadrilaterals into different categories based on shared defining attributes. Explain why a triangle or quadrilateral would or would not belong to a category.

**Clarifications:**  
*Clarification 1:* Triangles include scalene, isosceles, equilateral, acute, obtuse and right; quadrilaterals include parallelograms, rhombi, rectangles, squares and trapezoids.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.5.GR.1.AP.1a:](https://www.cpalms.org/PreviewAccessPoint/Preview/18136) | Sort triangles into different categories based on the size of their angles. Triangles include acute, obtuse, and right. |  |  |  |
| Essential Understanding | * Understand that angles are attributes of two-dimensional figures * Using a tool with a square angle, identify angles as acute, right, or obtuse |  |  |  |
| Resources: |  |  |  |  |
| [MA.5.GR.1.AP.1b:](https://www.cpalms.org/PreviewAccessPoint/Preview/18137) | Sort quadrilaterals into different categories based on shared defining attributes. Explore why a quadrilateral would or would not belong to a category. Quadrilaterals include parallelograms, rhombi, rectangles, squares and trapezoids. |  |  |  |
| Essential  Understandings | * Identify specified defining attributes (i.e., parallel sides, equal sides, right angles, acute angles, obtuse angles) in isolated quadrilaterals |  |  |  |
| Resources: |  |  |  |  |

[MA.5.GR.1.2:](https://www.cpalms.org//PreviewStandard/Preview/15407) Identify and classify three-dimensional figures into categories based on their defining attributes. Figures are limited to right pyramids, right prisms, right circular cylinders, right circular cones and spheres.

**Clarifications:**  
*Clarification 1:* Defining attributes include the number and shape of faces, number and shape of bases, whether or not there is an apex, curved or straight edges and curved or flat faces.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.5.GR.1.AP.2:](https://www.cpalms.org/PreviewAccessPoint/Preview/18138) | Identify and sort three-dimensional figures into categories based on their defining attributes. Figures are limited to right rectangular pyramids, right rectangular prisms, right circular cylinders, right circular cones and spheres. |  |  |  |
| Essential  Understandings | * Identify specified defining attributes (i.e., faces, bases, edges, curved surface, vertices, point) in isolated three-dimensional figures * Understand the defining attributes of “right rectangular pyramids,” “right rectangular prisms,” “right circular cylinders,” “right circular cones,” and “spheres” |  |  |  |
| Resources: |  |  |  |  |

[MA.5.GR.2.1:](https://www.cpalms.org//PreviewStandard/Preview/15408) Find the perimeter and area of a rectangle with fractional or decimal side lengths using visual models and formulas.

**Clarifications:**  
*Clarification 1:* Instruction includes finding the area of a rectangle with fractional side lengths by tiling it with squares having unit fraction side lengths and showing that the area is the same as would be found by multiplying the side lengths.

*Clarification 2:* Responses include the appropriate units in word form.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.5.GR.2.AP.1:](https://www.cpalms.org/PreviewAccessPoint/Preview/18139) | Find the perimeter and area of a rectangle with decimal side lengths using a visual model and calculator. |  |  |  |
| Essential  Understandings | * Distinguish between the concepts of area and perimeter * Find the perimeter of a rectangle with whole-number side lengths by adding the lengths of the sides * Find the area of a rectangle with whole-number side lengths by multiplying the side lengths * Understand how to use a calculator to perform basic mathematical operations with whole numbers |  |  |  |
| Resources: |  |  |  |  |

[MA.5.GR.3.1:](https://www.cpalms.org//PreviewStandard/Preview/15409) Explore volume as an attribute of three-dimensional figures by packing them with unit cubes without gaps. Find the volume of a right rectangular prism with whole-number side lengths by counting unit cubes.

**Clarifications:**  
*Clarification 1:* Instruction emphasizes the conceptual understanding that volume is an attribute that can be measured for a three-dimensional figure. The measurement unit for volume is the volume of a unit cube, which is a cube with edge length of 1 unit.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.5.GR.3.AP.1:](https://www.cpalms.org/PreviewAccessPoint/Preview/18140) | Explore volume as an attribute of three-dimensional figures that can be measured by packing them with unit cubes without gaps. |  |  |  |
| Essential  Understandings | * Understand area as an attribute of a two-dimensional figure that can be measured by covering the figure with unit squares without gaps or overlaps * Recognize the difference between a two- and three-dimensional figure |  |  |  |
| Resources: |  |  |  |  |

[MA.5.GR.3.2:](https://www.cpalms.org//PreviewStandard/Preview/15410) Find the volume of a right rectangular prism with whole-number side lengths using a visual model and a formula.

**Clarifications:**  
*Clarification 1:* Instruction includes finding the volume of right rectangular prisms by packing the figure with unit cubes, using a visual model or applying a multiplication formula.

*Clarification 2:* Right rectangular prisms cannot exceed two-digit edge lengths and responses include the appropriate units in word form.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.5.GR.3.AP.2:](https://www.cpalms.org/PreviewAccessPoint/Preview/18141) | Find the volume of a right rectangular prism with whole-number side lengths by counting unit cubes. Explore that the volume is the same as what would be found by multiplying the edge lengths. |  |  |  |
| Essential  Understandings | * Understand the concept of volume * Identify the base and understand the concept of multiplication using arrays to find the area of the base * Identify the height as the number of layers |  |  |  |
| Resources: |  |  |  |  |

[MA.5.GR.3.3:](https://www.cpalms.org//PreviewStandard/Preview/15411) Solve real-world problems involving the volume of right rectangular prisms, including problems with an unknown edge length, with whole-number edge lengths using a visual model or a formula. Write an equation with a variable for the unknown to represent the problem.

**Clarifications:**  
*Clarification 1:* Instruction progresses from right rectangular prisms to composite figures composed of right rectangular prisms.

*Clarification 2:* When finding the volume of composite figures composed of right rectangular prisms, recognize volume as additive by adding the volume of non-overlapping parts.

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

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.5.GR.3.AP.3:](https://www.cpalms.org/PreviewAccessPoint/Preview/18142) | Solve real-world problems involving the volume of right rectangular prisms with given whole-number edge lengths using a visual model or formula. |  |  |  |
| Essential  Understandings | * Understand the concept of volume * Find the volume of a right rectangular prism with whole-number edge lengths by counting unit cubes * Multiply three single digit numbers |  |  |  |
| Resources: |  |  |  |  |

[MA.5.GR.4.1:](https://www.cpalms.org//PreviewStandard/Preview/15412) Identify the origin and axes in the coordinate system. Plot and label ordered pairs in the first quadrant of the coordinate plane.

**Clarifications:**  
*Clarification 1:* Instruction includes the connection between two-column tables and coordinates on a coordinate plane.

*Clarification 2:* Instruction focuses on the connection of the number line to the x- and y-axis.

*Clarification 3:* Coordinate planes include axes scaled by whole numbers. Ordered pairs contain only whole numbers.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.5.GR.4.AP.1:](https://www.cpalms.org/PreviewAccessPoint/Preview/18143) | Explore the first quadrant of the coordinate plane including the origin, axes and points located by using ordered pairs. |  |  |  |
| Essential  Understandings | * Recognize points and lines * Locate numbers on a number line |  |  |  |
| Resources: |  |  |  |  |

[MA.5.GR.4.2:](https://www.cpalms.org//PreviewStandard/Preview/15413) Represent mathematical and real-world problems by plotting points in the first quadrant of the coordinate plane and interpret coordinate values of points in the context of the situation.

**Clarifications:**  
*Clarification 1:* Coordinate planes include axes scaled by whole numbers. Ordered pairs contain only whole numbers.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.5.GR.4.AP.2:](https://www.cpalms.org/PreviewAccessPoint/Preview/18144) | Plot and label ordered pairs in the first quadrant of the coordinate plane. |  |  |  |
| Essential  Understandings | * Understand the origin, axes and points located by using ordered pairs * Locate numbers on a number line |  |  |  |
| Resources: |  |  |  |  |

[MA.5.M.1.1:](https://www.cpalms.org//PreviewStandard/Preview/15404) Solve multi-step real-world problems that involve converting measurement units to equivalent measurements within a single system of measurement.

**Clarifications:**  
*Clarification 1:* Within the benchmark, the expectation is not to memorize the conversions.

*Clarification 2:* Conversions include length, time, volume and capacity represented as whole numbers, fractions and decimals.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.5.M.1.AP.1a:](https://www.cpalms.org/PreviewAccessPoint/Preview/18133) | Using a conversion sheet, convert within a single system of measurement using the units: miles, yards, feet, inches; pounds, ounces; gallons, quarts, pints, cups; and hours, minutes. Only whole number measurements may be used. |  |  |  |
| Essential Understandings | * Understand the relationship between the size of units of measurements within the same system of units (e.g., miles are longer than inches; ounces are lighter than pounds; gallons hold more than a pint; minutes are shorter than hours) * Understand that a larger unit of measurement can be converted to a smaller unit of measurement within a single system of measurement and as a result of the conversion there will be a greater number of the smaller unit (e.g., when converting feet to inches there will be a greater number of inches since inches is a smaller unit than feet; 2 feet is equal to 24 inches) * Understand that a smaller unit of measurement can be converted to a larger unit of measurement within a single system of measurement and as a result of the conversion there will be a smaller number of the larger unit (e.g., when converting inches to feet there will be a smaller number of feet since feet is a larger unit than inches; 24 inches is equal to 2 feet) |  |  |  |
| Resources: |  |  |  |  |
| [MA.5.M.1.AP.1b:](https://www.cpalms.org/PreviewAccessPoint/Preview/18134) | Using a conversion sheet, solve one- and two-step real-world problems that involve converting measurement units (i.e., miles, yards, feet, inches; pounds, ounces; gallons, quarts, pints, cups; and hours, minutes) to equivalent measurements within a single system of measurement. Only whole number measurements may be used. |  |  |  |
| Essential  Understandings | * 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) * Understand that a larger unit of measurement can be converted to a smaller unit of measurement within a single system of measurement and as a result of the conversion there will be a greater number of the smaller unit (e.g., when converting feet to inches there will be a greater number of inches since inches is a smaller unit than feet; 2 feet is equal to 24 inches) * Represent situations involving any combination 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.5.M.2.1:](https://www.cpalms.org//PreviewStandard/Preview/15405) Solve multi-step real-world problems involving money using decimal notation.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.5.M.2.AP.1:](https://www.cpalms.org/PreviewAccessPoint/Preview/18135) | Solve one- and two-step addition and subtraction real-world problems involving money using decimal notation with all terms less than $20.00 (e.g., $11.74 + $5.31, $10.99 - $3.26). |  |  |  |
| Essential  Understandings | * 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 multi-digit numbers (with all terms less than 20.00) with decimals to the hundredths |  |  |  |
| Resources: |  |  |  |  |

[MA.5.NSO.1.1:](https://www.cpalms.org//PreviewStandard/Preview/15380) Express how the value of a digit in a multi-digit number with decimals to the thousandths changes if the digit moves one or more places to the left or right.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.5.NSO.1.AP.1:](https://www.cpalms.org/PreviewAccessPoint/Preview/18107) | Explore how the value of a digit in a multi-digit number with decimals to the hundredths changes if the digit moves one place to the left. Multi-digit numbers not to exceed 9.99. |  |  |  |
| Essential  Understandings | * Understand that 10 hundredths is equal to 1 tenth, and 10 tenths is equal to 1 one * Recognize the location of the ones place, the tenths place, and the hundredths place * 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 |  |  |  |
| Resources: | [Element Card](https://www.accesstofls.org/core_curriculum_resources/Math/BEST/Element_Cards/Elementary/fifth/MA.5.NSO.1.1_ADA.docx) |  |  |  |

[MA.5.NSO.1.2:](https://www.cpalms.org//PreviewStandard/Preview/15381) Read and write multi-digit numbers with decimals to the thousandths using standard form, word form and expanded form.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.5.NSO.1.AP.2:](https://www.cpalms.org/PreviewAccessPoint/Preview/18108) | Read and generate multi-digit numbers with decimals to the hundredths using standard form and expanded form. Multi-digit numbers not to exceed 9.99. |  |  |  |
| Essential  Understandings | * Express number names (rote count) up to 100 * Identify a number written in standard form when given the name of the number up to 100 * Understand that decimals are parts of a whole and that the decimal point separates the whole number values from the decimal values * Understand that the digits in the ones, tenths and hundredths places represent an amount of ones, tenths, and hundredths * Understand that expanded form is the value of the ones, plus the value of the tenths, plus the value of the hundredths. Understand that the numbers 0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9 refer to 1, 2, 3, 4, 5, 6, 7, 8, 9 tenth(s) * Understand that the numbers 0.01, 0.02, 0.03, 0.04, 0.05, 0.06, 0.07, 0.08, 0.09 refer to 1, 2, 3, 4, 5, 6, 7, 8, 9 hundredth(s) * Generate numbers 0-100 using standard form |  |  |  |
| Resources: | [Element Card](https://www.accesstofls.org/core_curriculum_resources/Math/BEST/Element_Cards/Elementary/fifth/MA.5.NSO.1.2_ADA.docx) |  |  |  |

[MA.5.NSO.1.3:](https://www.cpalms.org//PreviewStandard/Preview/15382) Compose and decompose multi-digit numbers with decimals to the thousandths in multiple ways using the values of the digits in each place. Demonstrate the compositions or decompositions using objects, drawings and expressions or equations.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.5.NSO.1.AP.3:](https://www.cpalms.org/PreviewAccessPoint/Preview/18109) | Compose and decompose multi-digit numbers with decimals to the hundredths. Demonstrate each composition or decomposition with objects, drawings, expressions or equations. Multi-digit numbers not to exceed 9.99. |  |  |  |
| Essential  Understandings | * Understand that a group of 10 tenths is equal to 1 whole (e.g., 10 tenth rods is equal to 1 whole flat) and a group of 10 hundredths is equal to 1 tenth (e.g., 10 hundredths cubes is equal to 1 tenth rod) * Represent numbers from the ones place to the hundredths place using ones, tenths, and hundredths * Given a number up to 9.99, 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: | [Element Card](https://www.accesstofls.org/core_curriculum_resources/Math/BEST/Element_Cards/Elementary/fifth/MA.5.NSO.1.3_ADA.docx) |  |  |  |

[MA.5.NSO.1.4:](https://www.cpalms.org//PreviewStandard/Preview/15383) Plot, order and compare multi-digit numbers with decimals up to the thousandths.

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

*Clarification 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.5.NSO.1.AP.4:](https://www.cpalms.org/PreviewAccessPoint/Preview/18110) | Plot, order and compare multi-digit numbers with decimals up to the hundredths. Multi-digit numbers not to exceed 9.99. |  |  |  |
| Essential  Understandings | * Understand that a tenth is one-tenth (1/10) of a whole (e.g., if a flat represents 1 whole, then a rod represents a tenth). * Understand that a hundredth is one-hundredth (1/100) of a whole (e.g., if a flat represents 1 whole, then a unit cube represents a hundredth) * Given a number up to 9.99, 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 * Use objects to represent numbers up to 9.99 using ones, tenths, and hundredths * Use matching of same unit objects (flats, rods, unit cubes) to compare starting with the greatest place value * 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 farther left/lower on the number line have a lesser value, and numbers farther right/higher on the number line have a greater value |  |  |  |
| Resources: | [Element Card](https://www.accesstofls.org/core_curriculum_resources/Math/BEST/Element_Cards/Elementary/fifth/MA.5.NSO.1.4_ADA.docx) |  |  |  |

[MA.5.NSO.1.5:](https://www.cpalms.org//PreviewStandard/Preview/15384) Round multi-digit numbers with decimals to the thousandths to the nearest hundredth, tenth or whole number.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.5.NSO.1.AP.5:](https://www.cpalms.org/PreviewAccessPoint/Preview/18111) | Round multi-digit numbers with decimals to the tenths to the nearest whole number (e.g., 1.7 rounds to 2); and numbers with decimals to the hundredths to the nearest tenth (e.g., 2.36 rounds to 2.4). Multi-digit numbers not to exceed 9.99. |  |  |  |
| Essential  Understandings | * Given a number up to 9.99, 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 thousandths place represents the number of thousandths * Understand that numbers on a number line are plotted in sequential order, numbers that are farther left/lower on the number line have a lesser value, and numbers farther right/higher on the number line have a greater value * Plot numbers up to 9.99 on a number line * Identify which whole number or tenth the number being rounded is closest to on a number line * Understand that if the number being rounded is halfway between consecutive whole numbers or tenths then it rounds to the greater whole number or tenth |  |  |  |
| Resources: | [Element Card](https://www.accesstofls.org/core_curriculum_resources/Math/BEST/Element_Cards/Elementary/fifth/MA.5.NSO.1.5_ADA.docx) |  |  |  |

[MA.5.NSO.2.1:](https://www.cpalms.org//PreviewStandard/Preview/15385) Multiply multi-digit whole numbers including using a standard algorithm with procedural fluency.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.5.NSO.2.AP.1:](https://www.cpalms.org/PreviewAccessPoint/Preview/18112) | Explore multiplication of two whole numbers, up to two digits by two digits. |  |  |  |
| Essential  Understandings | * 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 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/fifth/MA.5.NSO.2.1_ADA.docx) |  |  |  |

[MA.5.NSO.2.2:](https://www.cpalms.org//PreviewStandard/Preview/15386) Divide multi-digit whole numbers, up to five digits by two digits, including using a standard algorithm with procedural fluency. Represent remainders as fractions.

**Clarifications:**  
*Clarification 1:* Within this benchmark, the expectation is not to use simplest form for fractions.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.5.NSO.2.AP.2:](https://www.cpalms.org/PreviewAccessPoint/Preview/18113) | Apply a strategy to divide two whole numbers up to two digits by one digit including the possibility of whole number remainders. |  |  |  |
| Essential  Understandings | * 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 expressions (e.g., 62 using objects or drawings 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/fifth/MA.5.NSO.2.2_ADA.docx) |  |  |  |

[MA.5.NSO.2.3:](https://www.cpalms.org//PreviewStandard/Preview/15387) Add and subtract multi-digit numbers with decimals to the thousandths, including using a standard algorithm with procedural fluency.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.5.NSO.2.AP.3:](https://www.cpalms.org/PreviewAccessPoint/Preview/18114) | Apply a strategy to add and subtract multi-digit numbers with decimals to the tenths (e.g., 3.3 + 0.5) and hundredths (e.g., 1.25 - 0.12). Multi-digit numbers not to exceed 9.99. |  |  |  |
| Essential  Understandings | * 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 * Represent decimals up to 9.99 using ones, tenths, and hundredths * Understand that a group of 10 tenths is equal to 1 whole and that 1 whole is equal to a group of 10 tenths * Understand that a group of 10 hundredths is equal to 1 tenth and that 1 tenth is equal to 10 hundredths * Understand that in adding decimals one adds tenths and tenths and hundredths and hundredths and sometimes it is necessary to compose a tenth and/or a whole * Understand that in subtracting decimals, one subtracts tenths from tenths and hundredths from hundredths sometimes it is necessary to decompose a tenth |  |  |  |
| Resources: | [Element Card](https://www.accesstofls.org/core_curriculum_resources/Math/BEST/Element_Cards/Elementary/fifth/MA.5.NSO.2.3_ADA.docx) |  |  |  |

[MA.5.NSO.2.4:](https://www.cpalms.org//PreviewStandard/Preview/15388) Explore the multiplication and division of multi-digit numbers with decimals to the hundredths using estimation, rounding and place value.

**Clarifications:**  
*Clarification 1:* Estimating quotients builds the foundation for division using a standard algorithm.

*Clarification 2:* Instruction includes the use of models based on place value and the properties of operations.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.5.NSO.2.AP.4:](https://www.cpalms.org/PreviewAccessPoint/Preview/18115) | Explore the estimation of products and quotients of two multi-digit numbers with decimals to the tenths (e.g., 8.9 X 2.3 becomes 9 X 2 by rounding both factors to the nearest whole number). Multi-digit numbers not to exceed 9.9. |  |  |  |
| Essential  Understandings | * Round multi-digit numbers with decimals to the tenths in an expression to the nearest whole number to create a simpler problem * Apply a strategy to multiply single digit whole numbers and perform the related division facts * Recognize that rounding multi-digit decimals 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/fifth/MA.5.NSO.2.4_ADA.docx) |  |  |  |

[MA.5.NSO.2.5:](https://www.cpalms.org//PreviewStandard/Preview/15389) Multiply and divide a multi-digit number with decimals to the tenths by one-tenth and one-hundredth with procedural reliability.

**Clarifications:**  
*Clarification 1:* Instruction focuses on the place value of the digit when multiplying or dividing.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MA.5.NSO.2.AP.5:](https://www.cpalms.org/PreviewAccessPoint/Preview/18116) | Explore multiplying and dividing single digit whole numbers by one-tenth and one-hundredth. |  |  |  |
| Essential  Understandings | * Understand one-tenth can be represented by a rod, and one-hundredth can be represented by a unit cube * Represent multiplication situations using objects organized in equal groups and use the representations to find the total * Represent division situations using objects organized in equal groups and use the representations to find the number of groups |  |  |  |
| Resources: | [Element Card](https://www.accesstofls.org/core_curriculum_resources/Math/BEST/Element_Cards/Elementary/fifth/MA.5.NSO.2.5_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:

* 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.