

Grade 4 Honors Yearlong Mathematics Map

Resources: Approved from Board of Education

Assessments: PARCC Assessments, Performance Series, District Benchmark Assessments

Common Core State Standards – Standards for Mathematical Practice:

- | | |
|---|---|
| 1. Make sense of problems and persevere in solving them. | 2. Reason abstractly and quantitatively. |
| 3. Construct viable arguments and critique the reasoning of others. | 4. Model with mathematics. |
| 5. Use appropriate tools strategically. | 6. Attend to precision. |
| 7. Look for and make use of structure. | 8. Look for and express regularity in repeated reasoning. |

| Domain | Cluster | Common Core Standard | Content | Skills | Academic Vocabulary |
|--------|---|---|----------------|--|---------------------|
| OA | Use the four operations with whole numbers to solve problems. | 4.OA.1 Interpret a multiplication equation as a comparison, e.g., interpret $35 = 5 \times 7$ as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations. | multiplication | 4.OA.1-- Compare multiplication equations | |
| OA | Use the four operations with whole numbers to solve problems. | 4.OA.1 Interpret a multiplication equation as a comparison, e.g., interpret $35 = 5 \times 7$ as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations. | multiplication | 4.OA.1 -- Represent verbal statements as multiplication equations | |
| OA | Use the four operations with whole numbers to solve problems. | 4.OA.2 Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison | multiplication | 4.OA.2-- multiply and divide word problems with a symbol for the unknown | unknown variable |

| Domain | Cluster | Common Core Standard | Content | Skills | Academic Vocabulary |
|--------|---|--|----------------------------------|---|---------------------|
| OA | Use the four operations with whole numbers to solve problems. | 4.OA.3 Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. | solving multi-step word problems | 4.OA.3- Solve multi-step word problems with whole numbers. | remainders |
| OA | Use the four operations with whole numbers to solve problems. | 4.OA.3 Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. | solving multi-step word problems | 4.OA.3- Interpret remainders in multi-step word problems | remainders |
| OA | Use the four operations with whole numbers to solve problems. | 4.OA.3 Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. | solving multi-step word problems | 4.OA.3-- Represent unknown quantity with a letter | remainders |
| OA | Use the four operations with whole numbers to solve problems. | 4.OA.3 Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. | solving multi-step word problems | 4.OA.3- Assess reasonableness of answers using estimation and rounding. | remainders |

| Domain | Cluster | Common Core Standard | Content | Skills | Academic Vocabulary |
|--------|--|---|-----------------------|--|---------------------|
| OA | Generate and analyze patterns. | 4.OA.5 Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. For example, given the rule “Add 3” and the starting number 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and even numbers. Explain informally why the numbers will continue to alternate in this way. | patterns | 4.OA.5- Generate a pattern that follows a rule. | |
| OA | Generate and analyze patterns. | 4.OA.5 Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. For example, given the rule “Add 3” and the starting number 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and even numbers. Explain informally why the numbers will continue to alternate in this way. | patterns | 4.OA.5- Explain characteristics of the pattern | even, odd, |
| OA | Write and interpret numerical expressions. | 5.OA.1 Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols. | Numerical Expressions | 5.OA.1 Write numerical expressions using parentheses, brackets, or braces. | |
| OA | Write and interpret numerical expressions. | 5.OA.1 Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols. | Numerical Expressions | 5.OA.1 Evaluate numerical expressions using parenthesis, brackets, or braces. | Evaluate=solve |
| OA | Write and interpret numerical expressions. | 5.OA.2 Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. For example, express the calculation “add 8 and 7, then multiply by 2” as $2 \times (8 + 7)$. Recognize that $3 \times (18932 + 921)$ is three times as large as $18932 + 921$, without having to calculate the indicated sum or product. | Simple expressions | 5.OA.2 Write simple expressions that record calculations with numbers without evaluating them. | Evaluate=solve |

| Domain | Cluster | Common Core Standard | Content | Skills | Academic Vocabulary |
|--------|--|--|-----------------------|---|---------------------|
| OA | Write and interpret numerical expressions. | 5.OA.2 Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. For example, express the calculation “add 8 and 7, then multiply by 2” as $2 \times (8 + 7)$. Recognize that $3 \times (18932 + 921)$ is three times as large as $18932 + 921$, without having to calculate the indicated sum or product. | Numerical Expressions | 5.OA.2 Interpret numerical expressions without evaluating them. | Evaluate=solve |
| OA | Analyze patterns and relationships. | 5.OA.3 Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane. For example, given the rule “Add 3” and the starting number 0, and given the rule “Add 6” and the starting number 0, generate terms in the resulting sequences, and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so. | Numerical Patterns | 5.OA.3 Generate two numerical patterns using two given rules. | |
| OA | Analyze patterns and relationships. | 5.OA.3 Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane. For example, given the rule “Add 3” and the starting number 0, and given the rule “Add 6” and the starting number 0, generate terms in the resulting sequences, and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so. | Numerical Patterns | 5.OA.3. Describe the relationships between corresponding terms. | |

| Domain | Cluster | Common Core Standard | Content | Skills | Academic Vocabulary |
|--------|-------------------------------------|--|--|--|---------------------|
| OA | Analyze patterns and relationships. | 5.OA.3 Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane. For example, given the rule “Add 3” and the starting number 0, and given the rule “Add 6” and the starting number 0, generate terms in the resulting sequences, and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so. | Ordered Pairs | 5.OA.3. Form ordered pairs consisting of corresponding terms from the two patterns. | |
| OA | Analyze patterns and relationships. | 5.OA.3 Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane. For example, given the rule “Add 3” and the starting number 0, and given the rule “Add 6” and the starting number 0, generate terms in the resulting sequences, and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so. | Ordered Pairs | 5.OA.3 Graph the ordered pairs on a coordinate plane. | Ordered Pairs |
| NBT | Understand the place value system. | 5.NBT.1 Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left. | Place Value | 5.NBT.1 Recognize that in a multi-digit number, a digit in any place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left. | Ordered Pairs |
| NBT | Understand the place value system. | 5.NBT.2 Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10. | Multiplication Place Value Number Patterns | 5.NBT.2 Explain patterns in the number of zeros of the product when multiplying a number by powers of 10. | Powers of 10 |

| Domain | Cluster | Common Core Standard | Content | Skills | Academic Vocabulary |
|--------|------------------------------------|---|---|---|---------------------|
| NBT | Understand the place value system. | 5.NBT.2 Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10. | Multiplication Division Number Patterns | 5.NBT.2. Explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. | Powers of 10 |
| NBT | Understand the place value system. | 5.NBT.2 Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10. | Whole-Number Exponents | 5.NBT.2. Write whole number exponents to denote powers of 10 (Scientific Notation) | Exponents |
| NBT | Understand the place value system. | 5.NBT.3 Read, write, and compare decimals to thousandths. | | | |
| NBT | Understand the place value system. | 5.NBT.3a Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., $347.392 = 3 \times 100 + 4 \times 10 + 7 \times 1 + 3 \times (1/10) + 9 \times (1/100) + 2 \times (1/1000)$. | Decimal Place Value | 5.NBT.3a Read decimals to thousandths using standard form, written form, and expanded form. | |
| NBT | Understand the place value system. | 5.NBT.3a Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., $347.392 = 3 \times 100 + 4 \times 10 + 7 \times 1 + 3 \times (1/10) + 9 \times (1/100) + 2 \times (1/1000)$. | Decimal Place Value | 5.NBT.3a Write decimals to thousandths using standard form, written form, and expanded form. | |
| NBT | Understand the place value system. | 5.NBT.3b Compare two decimals to thousandths based on meanings of the digits in each place, using $>$, $=$, and $<$ symbols to record the results of comparisons. | Decimal Place Value | 5.NBT.3b Compare two decimals to thousandths using $>$, $=$, $<$. | |
| NBT | Understand the place value system. | 5.NBT.4. Use place value understanding to round decimals to any place. | Decimal Place Value | 5.NBT.4. Round decimals to a given place value. | |

| Domain | Cluster | Common Core Standard | Content | Skills | Academic Vocabulary |
|--------|--|--|-----------|--|-----------------------------|
| NF | Extend understanding of fraction equivalence and ordering. | 4.NF.2 Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as $\frac{1}{2}$. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols $>$, $=$, or $<$, and justify the conclusions, e.g., by using a visual fraction model. | fractions | 4.NF.2-- Compare fractions with different numerators and denominators by finding common numerators or common denominators, or by comparing to a benchmark. | Numerators and Denominators |
| NF | Extend understanding of fraction equivalence and ordering. | 4.NF.2 Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as $\frac{1}{2}$. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols $>$, $=$, or $<$, and justify the conclusions, e.g., by using a visual fraction model. | fractions | 4.NF.2- Recognize that comparisons are valid only when the two fractions refer to the same whole. | Numerators and Denominators |
| NF | Extend understanding of fraction equivalence and ordering. | 4.NF.2 Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as $\frac{1}{2}$. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols $>$, $=$, or $<$, and justify the conclusions, e.g., by using a visual fraction model. | fractions | 4.NF.2- Compare fractions with $>$, $<$, and $=$; prove using a visual model | Numerators and Denominators |

| Domain | Cluster | Common Core Standard | Content | Skills | Academic Vocabulary |
|--------|---|---|--|---|---------------------|
| NF | Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers. | 4.NF.3 Understand a fraction a/b with $a > 1$ as a sum of fractions $1/b$. | fractions | 4.NF.3- Recognize a fraction a/b with a numerator greater than 1, is the sum of unit fraction $1/b$ | |
| NF | Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers. | 4.NF.3a Understand addition and subtraction of fractions as joining and separating parts referring to the same whole. | fractions | 4.NF.3a- Identify addition and subtraction of fractions as joining and separating parts referring to the same whole. | |
| NF | Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers. | 4.NF.3b Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions, e.g., by using a visual fraction model. Examples: $3/8 = 1/8 + 1/8 + 1/8$; $3/8 = 1/8 + 2/8$; $2 \frac{1}{8} = 1 + 1 + 1/8 = 8/8 + 8/8 + 1/8$. | additions and subtraction of fractions | 4.NF.3b Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions, e.g., by using a visual fraction model. Examples: $3/8 = 1/8 + 1/8 + 1/8$; $3/8 = 1/8 + 2/8$; $2 \frac{1}{8} = 1 + 1 + 1/8 = 8/8 + 8/8 + 1/8$. | |
| NF | Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers. | 4.NF.3c Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction. | addition and subtraction of fractions | 4.NF.3c Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction. | Mixed Number |

| Domain | Cluster | Common Core Standard | Content | Skills | Academic Vocabulary |
|--------|---|---|---------------------------------------|---|---------------------|
| NF | Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers. | 4.NF.3d Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual fraction models and equations to represent the problem. | addition and subtraction of fractions | 4.NF.3d Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual fraction models and equations to represent the problem. | |
| NF | Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers. | 4.NF.4 Apply and extend previous understandings of multiplication to multiply a fraction by a whole number. | multiplication of fractions | 4.NF.4- Apply and extend of multiplication to multiply a fraction by a whole number. | |
| NF | Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers. | 4.NF.4a Understand a fraction a/b as a multiple of $1/b$. For example, use a visual fraction model to represent $5/4$ as the product $5 \times (1/4)$, recording the conclusion by the equation $5/4 = 5 \times (1/4)$. | multiplication of fractions | 4.NF.4a- Identify a fraction a/b as a multiple of $1/b$. For example, use a visual fraction model to represent $5/4$ as the product $5 \times (1/4)$, recording the conclusion by the equation $5/4 = 5 \times (1/4)$. | |
| NF | Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers. | 4.NF.4b Understand a multiple of a/b as a multiple of $1/b$, and use this understanding to multiply a fraction by a whole number. For example, use a visual fraction model to express $3 \times (2/5)$ as $6 \times (1/5)$, recognizing this product as $6/5$. (In general, $n \times (a/b) = (n \times a)/b$.) | multiplication of fractions | 4.NF.4b-Identify a multiple of a/b as a multiple of $1/b$, and use this understanding to multiply a fraction by a whole number. For example, use a visual fraction model to express $3 \times (2/5)$ as $6 \times (1/5)$, recognizing this product as $6/5$. (In general, $n \times (a/b) = (n \times a)/b$.) | |

| Domain | Cluster | Common Core Standard | Content | Skills | Academic Vocabulary |
|--------|---|---|---------------------------------|--|---------------------|
| NF | Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers. | 4.NF.4c Solve word problems involving multiplication of a fraction by a whole number, e.g., by using visual fraction models and equations to represent the problem. For example, if each person at a party will eat $\frac{3}{8}$ of a pound of roast beef, and there will be 5 people at the party, how many pounds of roast beef will be needed? Between what two whole numbers does your answer lie? | multiplication of fractions | 4.NF.4c- Solve word problems involving multiplication of a fraction by a whole number, e.g., by using visual fraction models and equations to represent the problem. | |
| NF | Understand decimal notation for fractions, and compare decimal fractions. | 4.NF.5 Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100.2 For example, express $\frac{3}{10}$ as $\frac{30}{100}$, and add $\frac{3}{10} + \frac{4}{100} = \frac{34}{100}$. | fractions | 4.NF.5- Convert a fraction with a denominator of ten to a fraction with a denominator of 100. | |
| NF | Understand decimal notation for fractions, and compare decimal fractions. | 4.NF.5 Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100.2 For example, express $\frac{3}{10}$ as $\frac{30}{100}$, and add $\frac{3}{10} + \frac{4}{100} = \frac{34}{100}$. | fractions | 4.NF.5- Add fractions with 10 or 100 in the denominator. | |
| NF | Understand decimal notation for fractions, and compare decimal fractions. | 4.NF.6 Use decimal notation for fractions with denominators 10 or 100. For example, rewrite 0.62 as $\frac{62}{100}$; describe a length as 0.62 meters; locate 0.62 on a number line diagram. | fractions with decimal notation | 4.NF.6- Identify decimal notation for fractions with denominators 10 or 100 | |
| NF | Understand decimal notation for fractions, and compare decimal fractions. | 4.NF.7 Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols $>$, $=$, or $<$, and justify the conclusions, e.g., by using a visual model. | compare decimals | 4.NF.7- Recognize that comparisons are valid only when the two decimals refer to the same whole | tenths, hundredths |

| Domain | Cluster | Common Core Standard | Content | Skills | Academic Vocabulary |
|--------|---|---|----------------------|---|---------------------|
| NF | Understand decimal notation for fractions, and compare decimal fractions. | 4.NF.7 Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols $>$, $=$, or $<$, and justify the conclusions, e.g., by using a visual model. | compare decimals | 4.NF.7 Compare decimals with $>$, $<$, and $=$; prove using a visual model | |
| MD | Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit. | 4.MD.1 Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table. For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36), ... | Measurement and data | 4.MD.1- Recognize relative sizes of length in metric measurement | km, m, cm |
| MD | Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit. | 4.MD.1 Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table. For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36), ... | Measurement and Data | 4.MD.1- Recognize relative sizes of length in standard measurement | in., ft., yds. |

| Domain | Cluster | Common Core Standard | Content | Skills | Academic Vocabulary |
|--------|---|---|----------------------|--|------------------------------|
| MD | Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit. | 4.MD.1 Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table. For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36), ... | Measurement and Data | 4. MD. 1Recognize relative sizes of capacity in standard measurement | cups, pints, quarts, gallons |
| MD | Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit. | 4.MD.1 Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table. For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36), ... | Measurement and data | 4.MD.1 -Recognize relative sizes of weight in metric measurement | kg, g |
| MD | Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit. | 4.MD.1 Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table. For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36), ... | Measurement and data | 4. MD. 1Recognize relative sizes of capacity in metric measurement | l, ml |

| Domain | Cluster | Common Core Standard | Content | Skills | Academic Vocabulary |
|--------|---|---|----------------------|--|---------------------|
| MD | Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit. | 4.MD.1 Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table. For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36), ... | Measurement and data | 4.MD.1 -Recognize relative sizes of weight in standard measurement | lb, oz |
| MD | Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit. | 4.MD.1 Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table. For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36), ... | Measurement and data | 4.MD.1 -Recognize relative sizes of time | hr, min, sec |
| MD | Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit. | 4.MD.1 Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table. For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36), ... | Measurement and data | 4.MD.1- Express measurements in a larger unit in terms of a smaller unit | |

| Domain | Cluster | Common Core Standard | Content | Skills | Academic Vocabulary |
|--------|---|---|--------------------------------|---|---------------------|
| MD | Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit. | 4.MD.1 Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table. For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36), ... | Measurement and data | 4.MD.1- Record measurement equivalence in a two column table | |
| MD | Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit. | 4.MD.2 Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale. | Measurement in problem solving | 4.MD.2- Apply the four operations solving word problems involving distances, including problems involving simple fractions and decimals and problems that require expressing measurements given in a larger unit in terms of a smaller unit | |
| MD | Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit. | 4.MD.2 Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale. | Measurement in problem solving | 4.MD.2- Apply the four operations solving word problems involving intervals of time | |

| Domain | Cluster | Common Core Standard | Content | Skills | Academic Vocabulary |
|--------|---|--|--------------------------------|---|---------------------|
| MD | Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit. | 4.MD.2 Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale. | Measurement in problem solving | 4.MD.2- Apply the four operations solving word problems involving liquid volumes | |
| MD | Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit. | 4.MD.2 Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale. | Measurement in problem solving | 4.MD.2- Apply the four operations solving word problems involving masses of objects | |
| MD | Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit. | 4.MD.2 Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale. | Measurement in problem solving | 4.MD.2- Apply the four operations solving word problems involving money | |

| Domain | Cluster | Common Core Standard | Content | Skills | Academic Vocabulary |
|--------|---|--|--------------------------------|--|---------------------|
| MD | Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit. | 4.MD.2 Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale. | Measurement in problem solving | 4.MD.2- Represent measurement quantities using diagrams | |
| MD | Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit. | 4.MD.3 Apply the area and perimeter formulas for rectangles in real world and mathematical problems. For example, find the width of a rectangular room given the area of the flooring and the length, by viewing the area formula as a multiplication equation with an unknown factor. | Measurement | 4.MD.3-Apply the area and perimeter formulas for rectangles in real world and mathematical problems. | |