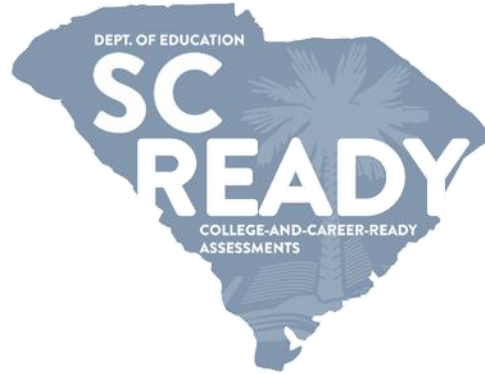




# **Mathematics**

## **Grade 7**

### **Performance Level Descriptors**

**Summer 2026**

**Columbia, SC**

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## Performance Levels and Performance Level Descriptors

For the South Carolina College- and Career-Ready Assessments (SC READY), educators have developed four performance levels to describe student mastery and command of the knowledge and skills outlined in the 2025 South Carolina College- and Career-Ready Standards (SC CCR). Most students have at least some knowledge of the information described in the content standards; however, performance levels succinctly describe the extent to which students have demonstrated mastery of the knowledge and skills expressed in the college- and career-ready standards. Performance levels give meaning and context to scale scores by describing the knowledge and skills students must demonstrate to achieve each level.

The four performance levels on SC READY are Does Not Meet Expectations, Approaches Expectations, Meets Expectations, and Exceeds Expectations.

The general meaning of each of the four levels is provided below:

- The student **does not meet** the expectations of the grade-level content standards.
- The student **approaches** expectations of the grade-level content standards.
- The student **meets** the expectations of the grade-level content standards.
- The student **exceeds** the expectations of the grade-level content standards.

More-detailed descriptions of the specific concepts and skills are provided for each indicator in the **Performance Level Descriptors (PLDs)**. PLDs are descriptions of the knowledge and skills expected at each of the four performance levels and were developed by committees of South Carolina educators in 2024. The PLDs are based on the approved 2025 state-adopted mathematics content standards.

**PLDs show a progression of knowledge and skills** that students are expected to have mastered across the performance levels. It is important to understand that a student should demonstrate mastery of the knowledge and skills within the student's performance level as well as all content and skills in any performance levels that precede the student's own, if any. For example, a student who Meets Expectations should also possess the knowledge and skills described at the Approaches Expectations and Does Not Meet Expectations performance levels.

### Standard Expectations: Policies and Ranges

|               | Does Not Meet Expectations                                                                             | Approaches Expectations                                                                               | Meets Expectations                                                                     | Exceeds Expectations                                                                     |
|---------------|--------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| <b>Policy</b> | The student <b>Does Not Meet Expectations</b> as defined by the grade-level content standards.         | The student <b>Approaches Expectations</b> as defined by the grade-level content standards.           | The student <b>Meets Expectations</b> as defined by the grade-level content standards. | The student <b>Exceeds Expectations</b> as defined by the grade-level content standards. |
| <b>Range</b>  | The student <b>needs substantial academic support</b> to be on track for college and career readiness. | The student <b>needs additional academic support</b> to be on track for college and career readiness. | The student <b>is prepared</b> to be on track for college and career readiness.        | The student <b>is well prepared</b> to be on track for college and career readiness.     |

## Data, Probability, and Statistical Reasoning (DPSR)

### 7.DPSR.1

Analyze data sets to identify their statistical elements.

| Indicator                                                                                                                                                                                                            | Does Not Meet Expectations                                                                                                                                                | Approaches Expectations                                                                                                                     | Meets Expectations                                                                                                                                                                                | Exceeds Expectations                                                                                                                                                                                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>7.DPSR.1.1:</b> Create stem-and-leaf plots to represent numerical data sets in mathematical and real-world situations.                                                                                            | Separate the stem and the leaf for a list of data.                                                                                                                        | Identify the stem-and-leaf plot representing numerical data sets in mathematical situations.                                                | Create stem-and-leaf plots to represent numerical data sets in mathematical and real-world situations.                                                                                            | Analyze the created stem-and-leaf plots to explain the mathematical or real-world situation.                                                                                                              |
| <b>7.DPSR.1.2:</b> Use the shape of the graph to select the measure of center (mean, median, or mode) that best describes the data set.                                                                              | Identify the shape of the graph.                                                                                                                                          | Recognize that bimodal data is best described by the mode.                                                                                  | Use the shape of the graph to select the measure of center (mean, median, or mode) that best describes the data set.                                                                              | Explain why some data sets can be approximately equally represented by more than one measure of center and justify the explanation using the shape and underlying data.                                   |
| <b>7.DPSR.1.3:</b> Calculate and interpret the measures of center ( <i>mean, median, mode</i> ) and spread ( <i>mean absolute deviation, interquartile range, range</i> ) in mathematical and real-world situations. | Identify the measures of center ( <i>mean, median, mode</i> ) and spread ( <i>interquartile range, range</i> ) in mathematical situations from an organized list of data. | Calculate the measures of center ( <i>mean, median, mode</i> ) and spread ( <i>interquartile range, range</i> ) in mathematical situations. | Calculate and interpret the measures of center ( <i>mean, median, mode</i> ) and spread ( <i>mean absolute deviation, interquartile range, range</i> ) in mathematical and real-world situations. | Justify why some data sets are better represented by mean/mean absolute deviation, others by median and interquartile range, and others by mode and range understanding the impact of shape and outliers. |
| <b>7.DPSR.1.4:</b> Create histograms to represent data sets and interpret histograms to answer questions or draw conclusions about data sets.                                                                        | Identify the labels appropriate for the histogram to represent a data set.                                                                                                | Identify the histogram representing data sets.                                                                                              | Create histograms to represent data sets and interpret histograms to answer questions or draw conclusions about data sets.                                                                        | Explain errors in creating histograms to represent data sets.                                                                                                                                             |

## 7.DPSR.2

Calculate and interpret probability.

| Indicator                                                                                                                 | Does Not Meet Expectations                                                                               | Approaches Expectations                                                                  | Meets Expectations                                                                                     | Exceeds Expectations                                                                                                                        |
|---------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| <b>7.DPSR.2.1:</b> Identify the sample space for a simple event.                                                          | Recognize there is a difference between sample space and sample size.                                    | Create a list of all possible outcomes for a simple event.                               | Identify the sample space for a simple event.                                                          | Describe the relationship between sample space and finding probabilities of simple events.                                                  |
| <b>7.DPSR.2.2:</b> Calculate and interpret the theoretical probability of a simple random event.                          | Recognize that theoretical probability is how likely an event is to occur.                               | Calculate the theoretical probability of a simple random event.                          | Calculate and interpret the theoretical probability of a simple random event.                          | Explain the error in calculating or interpreting the theoretical probability of a simple random event.                                      |
| <b>7.DPSR.2.3:</b> Calculate and interpret the experimental probability of a random event related to a simple experiment. | Recognize that experimental probability is how frequently an event actually occurred.                    | Calculate the experimental probability of a random event related to a simple experiment. | Calculate and interpret the experimental probability of a random event related to a simple experiment. | Explain the error in calculating or interpreting the experimental probability of a random event related to a simple experiment.             |
| <b>7.DPSR.2.4:</b> Compare and contrast the experimental and theoretical probabilities for a simple experiment.           | Recognize that experimental and theoretical probabilities represent different values for a simple event. | Identify if a probability for a simple experiment is experimental or theoretical.        | Compare and contrast the experimental and theoretical probabilities for a simple experiment.           | Explain why the experimental and theoretical probabilities may be different and explain how the probabilities could become closer together. |

## Measurement, Geometry, and Spatial Reasoning (MGSR)

### 7.MGSR.1

Determine the measurements of geometric figures.

| Indicator                                                                                                                                                  | Does Not Meet Expectations                                                                                                | Approaches Expectations                                                                                                                                                 | Meets Expectations                                                                                                                      | Exceeds Expectations                                                                                                                                                                                     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>7.MGSR.1.1:</b> Identify the parts of a circle. Limit the parts to <i>center</i> , <i>radius</i> , <i>diameter</i> , and <i>chord</i> .                 | Recognize the terms <i>center</i> , <i>radius</i> , <i>diameter</i> , and <i>chord</i> as words to describe a circle.     | Identify two of the four parts of a circle. Limit the parts to <i>center</i> , <i>radius</i> , <i>diameter</i> , and <i>chord</i> .                                     | Identify the parts of a circle. Limit the parts to <i>center</i> , <i>radius</i> , <i>diameter</i> , and <i>chord</i> .                 | Identify the parts of a circle ( <i>center</i> , <i>radius</i> , <i>diameter</i> , and <i>chord</i> ) in a real-world context and explain the part in terms of the context or use it to solve a problem. |
| <b>7.MGSR.1.2:</b> Describe the relationship between the <i>radius</i> , <i>diameter</i> , and <i>circumference</i> of a circle.                           | Identify and explain the circumference of a circle.                                                                       | Recognize that the ratio between the diameter and circumference of a circle is a little more than three diameters to one circumference.                                 | Describe the relationship between the <i>radius</i> , <i>diameter</i> , and <i>circumference</i> of a circle.                           | Use the relationship between the <i>radius</i> , <i>diameter</i> , and <i>circumference</i> of a circle to explain and/or solve real-world problems.                                                     |
| <b>7.MGSR.1.3:</b> Solve mathematical and real-world situations involving circumference or area of circles.                                                | Identify whether the circumference or area of a circle needs to be found to solve mathematical and real-world situations. | Solve mathematical problems involving circumference or area of circles when provided a labeled graphic with the radius provided.                                        | Solve mathematical and real-world situations involving circumference or area of circles.                                                | Explain how estimating using approximations of pi will result in a wide range of answers but assist in narrowing down options.                                                                           |
| <b>7.MGSR.1.4:</b> Determine if three given side lengths can form a triangle using the <i>Triangle Inequality Theorem</i> .                                | Recognize that the <i>Triangle Inequality Theorem</i> relates to side lengths of triangles.                               | Draw triangles using sets of side lengths that do and do not create triangles. Use this to form the basis of understanding for the <i>Triangle Inequality Theorem</i> . | Determine if three given side lengths can form a triangle using the <i>Triangle Inequality Theorem</i> .                                | Create situations that satisfy and do not satisfy the <i>Triangle Inequality Theorem</i> and justify each selection.                                                                                     |
| <b>7.MGSR.1.5:</b> In mathematical and real-world situations, find the volume of right prisms and right pyramids having triangular or quadrilateral bases. | In mathematical problems, find the volume of right prisms having quadrilateral bases.                                     | In mathematical problems, find the volume of right prisms having triangular or quadrilateral bases.                                                                     | In mathematical and real-world situations, find the volume of right prisms and right pyramids having triangular or quadrilateral bases. | Explain the error in finding volume of a right prism or right pyramid particularly when the base is a trapezoid.                                                                                         |

| Indicator                                                                                                                                                        | Does Not Meet Expectations                                                                  | Approaches Expectations                                                                                   | Meets Expectations                                                                                                                            | Exceeds Expectations                                                                                                       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| <b>7.MGSR.1.6:</b> In mathematical and real-world situations, find the surface area of right prisms and right pyramids having triangular or quadrilateral bases. | In mathematical problems, find the surface area of right prisms having quadrilateral bases. | In mathematical problems, find the surface area of right prisms having triangular or quadrilateral bases. | In mathematical and real-world situations, find the surface area of right prisms and right pyramids having triangular or quadrilateral bases. | Explain the error in finding the surface area of right prisms and right pyramids having triangular or quadrilateral bases. |

## 7.MGSR.2

Determine angle relationships.

| Indicator                                                                                                                                                                                                                                            | Does Not Meet Expectations                                                                                                                                                         | Approaches Expectations                                                                                                                                                             | Meets Expectations                                                                                                                                                                                                                | Exceeds Expectations                                                                                                                                                                                                                                      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>7.MGSR.2.1:</b> Determine the measure of the third angle given the measure of the other two angles of a triangle using the <i>Triangle Sum Theorem</i> .                                                                                          | Recognize that the <i>Triangle Sum Theorem</i> relates to the sum of the angles of a triangle.                                                                                     | Recognize that the sum of the angles inside a triangle should be 180 degrees.                                                                                                       | Determine the measure of the third angle given the measure of the other two angles of a triangle using the <i>Triangle Sum Theorem</i> .                                                                                          | Solve problems involving algebraic expressions using the <i>Triangle Sum Theorem</i> .                                                                                                                                                                    |
| <b>7.MGSR.2.2:</b> Solve mathematical and real-world situations involving dimensions and areas of geometric figures including scale drawings and scale factors.                                                                                      | Identify the scale given two fully labeled geometric figures.                                                                                                                      | Identify a missing dimension of a geometric figure in a mathematical problem.                                                                                                       | Solve mathematical and real-world situations involving dimensions and areas of geometric figures including scale drawings and scale factors.                                                                                      | Explain the error in solving mathematical and real-world situations involving dimensions and areas of geometric figures including scale drawings and scale factors.                                                                                       |
| <b>7.MGSR.2.3:</b> Identify the relationships and measures among angles formed by two intersecting lines, given the measure of one angle. Limit to supplementary, complementary, vertical, and adjacent relationships.                               | Recognize supplementary, complementary, vertical, and adjacent as words to describe relationships between angles formed by two intersecting lines.                                 | Identify supplementary and complementary angles formed by two intersecting lines.                                                                                                   | Identify the relationships and measures among angles formed by two intersecting lines, given the measure of one angle. Limit to supplementary, complementary, vertical, and adjacent relationships.                               | Solve mathematical and real-world situations by finding the measures of angles formed by intersecting lines and use answers to justify a decision.                                                                                                        |
| <b>7.MGSR.2.4:</b> Write and solve equations to solve mathematical and real-world situations involving the relationships among angles formed by two intersecting lines. Limit to supplementary, complementary, vertical, and adjacent relationships. | Recognize equations can be used to find the value of related angles formed by two intersecting lines. Limit to supplementary, complementary, vertical, and adjacent relationships. | Identify an appropriate equation that could be used to relate two angles formed by intersecting lines. Limit to supplementary, complementary, vertical, and adjacent relationships. | Write and solve equations to solve mathematical and real-world situations involving the relationships among angles formed by two intersecting lines. Limit to supplementary, complementary, vertical, and adjacent relationships. | Explain the error in writing or solving equations to solve mathematical and real-world situations involving the relationships among angles formed by two intersecting lines. Limit to supplementary, complementary, vertical, and adjacent relationships. |

**7.MGSR.3**

Graph on the coordinate plane.

| Indicator                                                                                                                                   | Does Not Meet Expectations                                                     | Approaches Expectations                                                                                                      | Meets Expectations                                                                                                       | Exceeds Expectations                                                                                                                           |
|---------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>7.MGSR.3.1:</b> Find distances between ordered pairs on the coordinate plane, limited to the same x-coordinate or the same y-coordinate. | Recognize that two points have the same x-coordinate or the same y-coordinate. | Identify a point that is a given distance from a specified point, limited to the same x-coordinate or the same y-coordinate. | Find distances between ordered pairs on the coordinate plane, limited to the same x-coordinate or the same y-coordinate. | Solve real-world problems involving distance between points on a coordinate plane, limited to the same x-coordinate or the same y-coordinates. |

## Numerical Reasoning (NR)

### 7.NR.1

Translate among multiple representations of rational numbers.

| Indicator                                                                                                                                                                                        | Does Not Meet Expectations                                                        | Approaches Expectations                                                                                                                                                       | Meets Expectations                                                                                                                                                              | Exceeds Expectations                                                                                                                                                                                    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>7.NR.1.1:</b> Convert rational numbers into equivalent forms among fractions (including mixed numbers), decimals, and percentages. Exclude the conversion of repeating decimals to fractions. | Recognize an equivalent form of a rational number among decimals and percentages. | Identify equivalent forms of rational numbers among fractions (including mixed numbers), decimals and percentages. Exclude the conversion of repeating decimals to fractions. | Convert rational numbers into equivalent forms among fractions (including mixed numbers), decimals, and percentages. Exclude the conversion of repeating decimals to fractions. | Explain the error in converting rational numbers into equivalent forms among fractions (including mixed numbers), decimals, and percentages. Exclude the conversion of repeating decimals to fractions. |

**7.NR.2**

Utilize rational numbers in mathematical and real-world situations.

| Indicator                                                                                                                                                                                                                                                                                                                                        | Does Not Meet Expectations                                                            | Approaches Expectations                                                                                                                                                                                                                                               | Meets Expectations                                                                                                                                                                                                                                                                                                              | Exceeds Expectations                                                                      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| <b>7.NR.2.1:</b> Compare two rational numbers and write statements using <i>is equal to</i> ( $=$ ), <i>is not equal to</i> ( $\neq$ ), <i>is less than</i> ( $<$ ), <i>is greater than</i> ( $>$ ), <i>is greater than or equal to</i> ( $\geq$ ), and/or <i>is less than or equal to</i> ( $\leq$ ) in mathematical and real-world situations. | Identify the smaller number between two rational numbers, including negative numbers. | Compare two rational numbers and write statements using words and symbols for <i>is equal to</i> ( $=$ ), <i>is not equal to</i> ( $\neq$ ), <i>is less than</i> ( $<$ ), and/or <i>is greater than</i> ( $>$ ) in mathematical problems, including negative numbers. | Compare two rational numbers and write statements using <i>is equal to</i> ( $=$ ), <i>is not equal to</i> ( $\neq$ ), <i>is less than</i> ( $<$ ), <i>is greater than</i> ( $>$ ), <i>is greater than or equal to</i> ( $\geq$ ), and/or <i>is less than or equal to</i> ( $\leq$ ) in mathematical and real-world situations. | Justify the comparison of two rational numbers in mathematical and real-world situations. |

## Patterns, Algebra, and Functional Reasoning (PAFR)

### 7.PAFR.1

Use tables, graphs, verbal descriptions, or equations to represent a function.

| Indicator                                                                                                                                     | Does Not Meet Expectations                                                           | Approaches Expectations                                                                               | Meets Expectations                                                                                                         | Exceeds Expectations                                                                                                                              |
|-----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>7.PAFR.1.1:</b> Apply proportional reasoning to solve problems in mathematical and real-world situations involving ratios and percentages. | Identify a proportional relationship.                                                | Identify the proportional reasoning statement needed to solve mathematical problems involving ratios. | Apply proportional reasoning to solve problems in mathematical and real-world situations involving ratios and percentages. | Explain an error in applying proportional reasoning to solve problems in mathematical and real-world situations involving ratios and percentages. |
| <b>7.PAFR.1.2:</b> Create a model with functions that address a proportional relationship in real-world situations.                           | Recognize a model can address a proportional relationship in a real-world situation. | Identify the model with functions that address a proportional relationship provided a table.          | Create a model with functions that address a proportional relationship in real-world situations.                           | Create a model and justify how it represents a proportional relationship.                                                                         |
| <b>7.PAFR.1.3:</b> Identify the constant of proportionality within proportional relationships.                                                | Recognize a proportional relationship has a constant of proportionality.             | Recognize that constant of proportionality and unit rate are the same.                                | Identify the constant of proportionality within proportional relationships.                                                | Explain situations where a constant of proportionality does not exist—i.e., non-proportional situations.                                          |

## 7.PAFR.2

Write, simplify, and evaluate algebraic expressions; write and solve algebraic equations and inequalities.

| Indicator                                                                                                                                                      | Does Not Meet Expectations                                                                                        | Approaches Expectations                                                                                                     | Meets Expectations                                                                                                                          | Exceeds Expectations                                                                                                                                                                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>7.PAFR.2.1:</b> Write and solve multi-step equations and inequalities in one variable involving rational numbers in mathematical and real-world situations. | Solve multi-step equations or inequalities in one variable involving rational numbers in mathematical situations. | Write and solve multi-step equations or inequalities in one variable involving rational numbers in mathematical situations. | Write and solve multi-step equations and inequalities in one variable involving rational numbers in mathematical and real-world situations. | Interpret the solution and parts of multi-step equations and inequalities in terms of the real-world context modeled.                                                                     |
| <b>7.PAFR.2.2:</b> Write and evaluate expressions in one variable that model mathematical and real-world situations.                                           | Evaluate expressions in one variable that model mathematical situations.                                          | Write and evaluate expressions in one variable that model mathematical situations.                                          | Write and evaluate expressions in one variable that model mathematical and real-world situations.                                           | Explain the error in writing or evaluating expressions in one variable that model mathematical and real-world situations.                                                                 |
| <b>7.PAFR.2.3:</b> Compute unit rates, including those involving complex fractions with like or different units.                                               | Recognize the first step in computing a unit rate.                                                                | Identify the steps in computing a unit rate.                                                                                | Compute unit rates, including those involving complex fractions with like or different units.                                               | Compute unit rates, including those involving complex fractions with like or different units to solve mathematical and real-world situations using the solution to explain the situation. |
| <b>7.PAFR.2.4:</b> Use dimensional analysis to convert units between metric and customary systems.                                                             | Identify the units that start the dimensional analysis and will end the conversion.                               | Identify the conversion factor(s) needed to convert units between metric and customary systems.                             | Use dimensional analysis to convert units between metric and customary systems.                                                             | Explain the error in a conversion using dimensional analysis to convert units between metric and customary systems.                                                                       |

## 7.PAFR.3

Apply mathematical patterns, properties, and algorithms to the set of rational numbers to find sums, differences, products, and quotients and to write equivalent expressions.

| Indicator                                                                                                                                                                                                                                                                                                      | Does Not Meet Expectations                                                                                                                                                                                                        | Approaches Expectations                                                                                                                                                                                                          | Meets Expectations                                                                                                                                                                                                                                                                          | Exceeds Expectations                                                                                                                                                                                                                                                         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>7.PAFR.3.1:</b> Simplify numerical expressions that include integer exponents using the laws of exponents: the <i>Product of Powers</i> , <i>Quotient of Powers</i> , <i>Power of a Power</i> , <i>Power of a Product</i> , <i>Power of a Quotient</i> , <i>Zero Power</i> , and <i>Negative Exponent</i> . | Recognize the laws of exponents: the <i>Product of Powers</i> , <i>Quotient of Powers</i> , <i>Power of a Power</i> , <i>Power of a Product</i> , <i>Power of a Quotient</i> , <i>Zero Power</i> , and <i>Negative Exponent</i> . | Identify the laws of exponents: the <i>Product of Powers</i> , <i>Quotient of Powers</i> , <i>Power of a Power</i> , <i>Power of a Product</i> , <i>Power of a Quotient</i> , <i>Zero Power</i> , and <i>Negative Exponent</i> . | Simplify numerical expressions that include integer exponents using the laws of exponents: the <i>Product of Powers</i> , <i>Quotient of Powers</i> , <i>Power of a Power</i> , <i>Power of a Product</i> , <i>Power of a Quotient</i> , <i>Zero Power</i> , and <i>Negative Exponent</i> . | Justify the laws of exponents when simplifying numerical expressions using: the <i>Product of Powers</i> , <i>Quotient of Powers</i> , <i>Power of a Power</i> , <i>Power of a Product</i> , <i>Power of a Quotient</i> , <i>Zero Power</i> , and <i>Negative Exponent</i> . |
| <b>7.PAFR.3.2:</b> Identify linear expressions that are equivalent.                                                                                                                                                                                                                                            | Recognize two like terms can be combined to form one equivalent term.                                                                                                                                                             | Identify linear expressions that are equivalent only using the distributive property.                                                                                                                                            | Identify linear expressions that are equivalent.                                                                                                                                                                                                                                            | Explain how linear expressions are equivalent.                                                                                                                                                                                                                               |
| <b>7.PAFR.3.3:</b> Recognize that algebraic expressions may have a variety of equivalent forms and determine an appropriate form for a given real-world situation.                                                                                                                                             | Identify an equivalent form of an algebraic expression.                                                                                                                                                                           | Identify an appropriate algebraic expression for a given real-world situation.                                                                                                                                                   | Recognize that algebraic expressions may have a variety of equivalent forms and determine an appropriate form for a given real-world situation.                                                                                                                                             | Explain why an equivalent form of an algebraic expression is appropriate for a given real-world situation.                                                                                                                                                                   |
| <b>7.PAFR.3.4:</b> Factor linear expressions with integer coefficients using the greatest common factor (GCF).                                                                                                                                                                                                 | Recognize that the two terms of a linear expression with integer coefficients have at least one common factor.                                                                                                                    | Identify the greatest common factor (GCF) of two terms that come from a linear expression.                                                                                                                                       | Factor linear expressions with integer coefficients using the greatest common factor (GCF).                                                                                                                                                                                                 | Factor linear expression with integer coefficients to justify the connection between the linear expression and a mathematical or real-world situation.                                                                                                                       |
| <b>7.PAFR.3.5:</b> Apply all operations with rational numbers to solve problems in mathematical and real-world situations.                                                                                                                                                                                     | Recognize the operation(s) needed to solve mathematical problems with rational numbers.                                                                                                                                           | Identify the first operation needed to solve problems with rational numbers in mathematical and real-world situations.                                                                                                           | Apply all operations with rational numbers to solve problems in mathematical and real-world situations.                                                                                                                                                                                     | Explain the error in applying all operations with rational numbers to solve problems in mathematical and real-world situations.                                                                                                                                              |