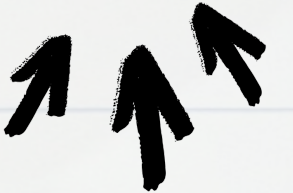


7TH GRADE MATH LEARNING PROGRESSIONS

How are these progressions organized?
By Strand - colors as designated below.

[Click here for the B1G-M
\(B.E.S.T. Instructional Guide for Mathematics\)
document available on Turnkey.](#)



**Number Sense
and Operations**

**Algebraic
Reasoning**

**Geometric
Reasoning**

These categories are directly outlined in the following
documents from the Florida Department of Education:

[Test Item Specifications](#)
[Test Design Summary and Blueprint](#)

(click links above to view these documents)

**Data Analysis &
Probability**

Number Sense and Operations

MA.7.NSO.1.1 Know and apply the Laws of Exponents to evaluate numerical expressions and generate equivalent numerical expressions, limited to whole-number exponents and rational number bases.

MARZANO TAXONOMY LEVEL: Primary Taxonomy Level: Comprehension Level (Integrating); Secondary Taxonomy Level: Retrieval Level (Executing)

LEARNING PROGRESSION:

ENRICHMENT: Identified Taxonomy Level: Analysis

- I CAN analyze numerical expressions with exponents to identify errors in the application of the Laws of Exponents and explain the correct reasoning needed to generate equivalent expressions.

STANDARD DECONSTRUCTED: Identified Taxonomy Level: Comprehension and Retrieval

- I CAN know and apply the Laws of Exponents to evaluate numerical expressions and generate equivalent numerical expressions, limited to whole-number exponents and rational number bases.

FOUNDATIONAL SKILLS: Identified Taxonomy Level: Retrieval

- I CAN recall that an exponent represents repeated multiplication.
- I CAN recognize the base and exponent in an exponential expression.
- I CAN identify rational numbers in fraction and decimal form.
- I CAN recall the Product of Powers Law (when multiplying like bases, add exponents).
- I CAN recall the Quotient of Powers Law (when dividing like bases, subtract exponents).
- I CAN recall the Power of a Power Law (when raising a power to a power, multiply exponents).
- I CAN recall the Power of a Product Law (distribute the exponent to each factor).
- I CAN recall the Zero Exponent Law (any non-zero base to the zero power equals 1).
- I CAN execute multiplication and division with rational numbers.
- I CAN execute the procedure to evaluate expressions with exponents.

Number Sense and Operations

MA.7.NSO.1.2 Rewrite rational numbers in different but equivalent forms including fractions, mixed numbers, repeating decimals and percentages to solve mathematical and real-world problems.

MARZANO TAXONOMY LEVEL: Primary Taxonomy Level: Knowledge Utilization Level (Problem Solving)

LEARNING PROGRESSION:

ENRICHMENT: Identified Taxonomy Level: Knowledge Utilization

- I CAN determine which form of a rational number (fraction, mixed number, repeating decimal, or percentage) is most efficient or appropriate for solving a specific mathematical or real-world problem and justify my choice.

STANDARD DECONSTRUCTED: Identified Taxonomy Level: Knowledge Utilization

- I CAN rewrite rational numbers in different but equivalent forms including fractions, mixed numbers, repeating decimals and percentages to solve mathematical and real-world problems.

FOUNDATIONAL SKILLS: Identified Taxonomy Level: Retrieval

- I CAN recognize rational numbers in various forms.
- I CAN recall that equivalent forms represent the same value.
- I CAN execute the procedure to convert a fraction to a decimal.
- I CAN execute the procedure to convert a decimal to a fraction.
- I CAN execute the procedure to convert an improper fraction to a mixed number.
- I CAN execute the procedure to convert a mixed number to an improper fraction.
- I CAN execute the procedure to convert a fraction or decimal to a percentage.
- I CAN execute the procedure to convert a percentage to a fraction or decimal.
- I CAN recognize repeating decimals and use bar notation.

Number Sense and Operations

MA.7.NSO.2.1 Solve mathematical problems using multi-step order of operations with rational numbers including grouping symbols, whole-number exponents and absolute value.

MARZANO TAXONOMY LEVEL: Primary Taxonomy Level: Knowledge Utilization Level (Problem Solving)

LEARNING PROGRESSION:

ENRICHMENT: Identified Taxonomy Level: Knowledge Utilization

- I CAN investigate how changing the placement of grouping symbols in an expression with rational numbers, exponents, and absolute value affects the final value, and construct an argument explaining the mathematical reasoning.

STANDARD DECONSTRUCTED: Identified Taxonomy Level: Knowledge Utilization

- I CAN solve mathematical problems using multi-step order of operations with rational numbers including grouping symbols, whole-number exponents and absolute value.

FOUNDATIONAL SKILLS: Identified Taxonomy Level: Retrieval

- I CAN recall the order of operations (PEMDAS/GEMDAS).
- I CAN recognize grouping symbols including parentheses, brackets, and braces.
- I CAN identify rational numbers in fraction and decimal form.
- I CAN execute operations with rational numbers (addition, subtraction, multiplication, division).
- I CAN execute the procedure to evaluate expressions with whole-number exponents.
- I CAN execute the procedure to find absolute value.
- I CAN recognize when to apply each step of the order of operations.
- I CAN simplify expressions within grouping symbols first.

Number Sense and Operations

MA.7.NSO.2.2 Add, subtract, multiply and divide rational numbers with procedural fluency.

MARZANO TAXONOMY LEVEL: Primary Taxonomy Level: Retrieval Level (Executing)

LEARNING PROGRESSION:

ENRICHMENT: Identified Taxonomy Level: Comprehension

- I CAN explain why the procedures for adding, subtracting, multiplying, and dividing rational numbers work, and describe the mathematical reasoning behind each operation.

STANDARD DECONSTRUCTED: Identified Taxonomy Level: Retrieval

- I CAN add, subtract, multiply and divide rational numbers with procedural fluency.

FOUNDATIONAL SKILLS: Identified Taxonomy Level: Retrieval

- I CAN recognize rational numbers in fraction, decimal, and integer form.
- I CAN identify the operation required (addition, subtraction, multiplication, or division).
- I CAN recall the procedure for adding fractions with like denominators.
- I CAN recall the procedure for adding fractions with unlike denominators.
- I CAN recall the procedure for subtracting rational numbers.
- I CAN recall the procedure for multiplying fractions.
- I CAN recall the procedure for dividing fractions (multiply by the reciprocal).
- I CAN execute operations with positive and negative rational numbers.
- I CAN simplify fractions to lowest terms.
- I CAN convert between fractions, decimals, and mixed numbers as needed.

Number Sense and Operations

MA.7.NSO.2.3 Solve real-world problems involving any of the four operations with rational numbers.

MARZANO TAXONOMY LEVEL: Primary Taxonomy Level: Knowledge Utilization Level (Problem Solving)

LEARNING PROGRESSION:

ENRICHMENT: Identified Taxonomy Level: Knowledge Utilization

- I CAN evaluate multiple solution strategies for real-world problems involving rational numbers, determine which approach is most efficient or appropriate for the context, and justify my decision.

STANDARD DECONSTRUCTED: Identified Taxonomy Level: Knowledge Utilization

- I CAN solve real-world problems involving any of the four operations with rational numbers.

FOUNDATIONAL SKILLS: Identified Taxonomy Level: Retrieval

- I CAN recognize rational numbers in real-world contexts.
- I CAN identify which operation(s) are needed to solve a problem.
- I CAN execute addition with rational numbers.
- I CAN execute subtraction with rational numbers.
- I CAN execute multiplication with rational numbers.
- I CAN execute division with rational numbers.
- I CAN identify key information and unknowns in a word problem.
- I CAN translate real-world situations into mathematical expressions or equations.

Algebraic Reasoning

MA.7.AR.1.1 Apply properties of operations to add and subtract linear expressions with rational coefficients.

MARZANO TAXONOMY LEVEL: Primary Taxonomy Level: Retrieval Level (Executing)

LEARNING PROGRESSION:

ENRICHMENT: Identified Taxonomy Level: Comprehension

- I CAN explain how the properties of operations (commutative, associative, and distributive) are used to simplify linear expressions with rational coefficients, and justify why combining like terms produces equivalent expressions.

STANDARD DECONSTRUCTED: Identified Taxonomy Level: Retrieval

- I CAN apply properties of operations to add and subtract linear expressions with rational coefficients.

FOUNDATIONAL SKILLS: Identified Taxonomy Level: Retrieval

- I CAN recognize a linear expression.
- I CAN identify rational coefficients in an expression.
- I CAN recall the commutative property of addition.
- I CAN recall the associative property of addition.
- I CAN recall the distributive property.
- I CAN identify like terms in an expression.
- I CAN execute addition and subtraction with rational numbers.
- I CAN execute the procedure to combine like terms.
- I CAN recognize constants and variables in expressions.

Algebraic Reasoning

MA.7.AR.1.2 Determine whether two linear expressions are equivalent.

MARZANO TAXONOMY LEVEL: Primary Taxonomy Level: Analysis Level (Analyzing Errors)

LEARNING PROGRESSION:

ENRICHMENT: Identified Taxonomy Level: Knowledge Utilization

- I CAN investigate multiple pairs of linear expressions to identify patterns and construct a generalization about the conditions under which two linear expressions are equivalent.

STANDARD DECONSTRUCTED: Identified Taxonomy Level: Analysis

- I CAN determine whether two linear expressions are equivalent.

FOUNDATIONAL SKILLS: Identified Taxonomy Level: Retrieval

- I CAN recall that equivalent expressions have the same value for all values of the variable.
- I CAN recognize linear expressions.
- I CAN identify like terms in an expression.
- I CAN execute the procedure to simplify linear expressions by combining like terms.
- I CAN apply the distributive property to expand expressions.
- I CAN execute addition and subtraction with rational coefficients.
- I CAN substitute a value for a variable and evaluate an expression.
- I CAN compare simplified forms of expressions.

Algebraic Reasoning

MA.7.AR.2.1 Write and solve one-step inequalities in one variable within a mathematical context and represent solutions algebraically or graphically.

MARZANO TAXONOMY LEVEL: Primary Taxonomy Level: Knowledge Utilization Level (Problem Solving)

LEARNING PROGRESSION:

ENRICHMENT: Identified Taxonomy Level: Knowledge Utilization

- I CAN investigate how changing the inequality symbol or the coefficient in a one-step inequality affects the solution set, and construct an argument explaining the mathematical relationships I observe.

STANDARD DECONSTRUCTED: Identified Taxonomy Level: Knowledge Utilization

- I CAN write and solve one-step inequalities in one variable within a mathematical context and represent solutions algebraically or graphically.

FOUNDATIONAL SKILLS: Identified Taxonomy Level: Retrieval

- I CAN recognize inequality symbols ($<$, $>$, $\leq$, $\geq$).
- I CAN recall what each inequality symbol means.
- I CAN identify the variable in an inequality.
- I CAN translate mathematical contexts into inequalities.
- I CAN execute inverse operations to isolate the variable.
- I CAN recall that multiplying or dividing by a negative number reverses the inequality symbol.
- I CAN represent solutions using inequality notation.
- I CAN execute the procedure to graph solutions on a number line.
- I CAN identify whether to use an open or closed circle on a number line graph.

Algebraic Reasoning

MA.7.AR.2.2 Write and solve two-step equations in one variable within a mathematical or real-world context, where all terms are rational numbers.

MARZANO TAXONOMY LEVEL: Primary Taxonomy Level: Knowledge Utilization Level (Problem Solving)

LEARNING PROGRESSION:

ENRICHMENT: Identified Taxonomy Level: Knowledge Utilization

- I CAN evaluate different approaches for solving two-step equations with rational numbers, determine which method is most efficient for a given problem, and justify my choice.

STANDARD DECONSTRUCTED: Identified Taxonomy Level: Knowledge Utilization

- I CAN write and solve two-step equations in one variable within a mathematical or real-world context, where all terms are rational numbers.

FOUNDATIONAL SKILLS: Identified Taxonomy Level: Retrieval

- I CAN recognize an equation as a mathematical statement showing two expressions are equal.
- I CAN identify the variable in an equation.
- I CAN recognize rational numbers in fraction, decimal, and integer form.
- I CAN translate mathematical or real-world contexts into equations.
- I CAN recall that inverse operations undo each other.
- I CAN execute addition and subtraction with rational numbers.
- I CAN execute multiplication and division with rational numbers.
- I CAN apply the order of operations in reverse to isolate the variable.
- I CAN execute the procedure to check solutions by substituting back into the original equation.

Algebraic Reasoning

MA.7.AR.3.1 Apply previous understanding of percentages and ratios to solve multi-step real-world percent problems.

MARZANO TAXONOMY LEVEL: Primary Taxonomy Level: Knowledge Utilization Level (Problem Solving)

LEARNING PROGRESSION:

ENRICHMENT: Identified Taxonomy Level: Knowledge Utilization

- I CAN evaluate multiple real-world scenarios involving multi-step percent problems (such as successive discounts, tax and tip, or compound interest situations) to determine which option provides the best value or outcome, and justify my decision with calculations.

STANDARD DECONSTRUCTED: Identified Taxonomy Level: Knowledge Utilization

- I CAN apply my understanding of percentages and ratios to solve multi-step real-world percent problems.

FOUNDATIONAL SKILLS: Identified Taxonomy Level: Retrieval

- I CAN recall that a percentage is a ratio comparing a number to 100.
- I CAN recognize the relationship between percentages, ratios, fractions, and decimals.
- I CAN identify the part, whole, and percent in a problem.
- I CAN execute calculations to find a percentage of a quantity.
- I CAN execute calculations to find the whole when given a part and percentage.
- I CAN execute calculations to find what percent one number is of another.
- I CAN convert between percentages, decimals, and fractions.
- I CAN identify the multiple steps needed to solve a percent problem.
- I CAN execute operations with rational numbers in the correct sequence.

Algebraic Reasoning

MA.7.AR.3.2 Apply previous understanding of ratios to solve real-world problems involving proportions.

MARZANO TAXONOMY LEVEL: Primary Taxonomy Level: Knowledge Utilization Level (Problem Solving)

LEARNING PROGRESSION:

ENRICHMENT: Identified Taxonomy Level: Knowledge Utilization

- I CAN evaluate multiple real-world proportional situations to determine which strategy (cross multiplication, unit rate, or scaling) is most efficient for solving the problem, and justify my decision based on the context.

STANDARD DECONSTRUCTED: Identified Taxonomy Level: Knowledge Utilization

- I CAN apply my understanding of ratios to solve real-world problems involving proportions.

FOUNDATIONAL SKILLS: Identified Taxonomy Level: Retrieval

- I CAN recall that a proportion is an equation stating that two ratios are equivalent.
- I CAN recognize proportional relationships in real-world contexts.
- I CAN identify the terms in a proportion.
- I CAN recall that cross products are equal in a proportion.
- I CAN execute cross multiplication to solve proportions.
- I CAN execute multiplication and division with rational numbers.
- I CAN set up a proportion from a real-world problem.
- I CAN identify the unknown quantity in a proportional relationship.
- I CAN label answers with appropriate units.

Algebraic Reasoning

MA.7.AR.3.3 Solve mathematical and real-world problems involving the conversion of units across different measurement systems.

MARZANO TAXONOMY LEVEL: Primary Taxonomy Level: Knowledge Utilization Level (Problem Solving)

LEARNING PROGRESSION:

ENRICHMENT: Identified Taxonomy Level: Knowledge Utilization

- I CAN determine which measurement system (customary or metric) is most appropriate for a given real-world situation, convert between systems as needed, and justify my reasoning based on precision, context, and practicality.

STANDARD DECONSTRUCTED: Identified Taxonomy Level: Knowledge Utilization

- I CAN solve mathematical and real-world problems involving the conversion of units across different measurement systems.

FOUNDATIONAL SKILLS: Identified Taxonomy Level: Retrieval

- I CAN recognize the customary measurement system (inches, feet, yards, miles, ounces, pounds, cups, etc.).
- I CAN recognize the metric measurement system (millimeters, centimeters, meters, kilometers, grams, kilograms, liters, etc.).
- I CAN recall common conversion factors within the customary system.
- I CAN recall common conversion factors within the metric system.
- I CAN recall conversion factors between customary and metric systems.
- I CAN identify which units need to be converted in a problem.
- I CAN execute multiplication and division to convert units.
- I CAN set up and use dimensional analysis (unit multipliers) to convert units.
- I CAN label answers with appropriate units.

Algebraic Reasoning

MA.7.AR.4.1 Determine whether two quantities have a proportional relationship by examining a table, graph or written description.

MARZANO TAXONOMY LEVEL: Primary Taxonomy Level: Analysis Level (Analyzing Errors)

LEARNING PROGRESSION:

ENRICHMENT: Identified Taxonomy Level: Knowledge Utilization

- I CAN investigate various representations of relationships (tables, graphs, and written descriptions) to identify why certain relationships are not proportional, and construct an argument explaining the characteristics that distinguish proportional from non-proportional relationships.

STANDARD DECONSTRUCTED: Identified Taxonomy Level: Analysis

- I CAN determine whether two quantities have a proportional relationship by examining a table, graph or written description.

FOUNDATIONAL SKILLS: Identified Taxonomy Level: Retrieval

- I CAN recall that a proportional relationship has a constant ratio between two quantities.
- I CAN recall that a proportional relationship passes through the origin (0, 0) when graphed.
- I CAN recognize tables, graphs, and written descriptions as representations of relationships.
- I CAN execute division to calculate ratios from a table.
- I CAN identify whether ratios are equivalent.
- I CAN recognize a straight line through the origin on a graph.
- I CAN identify key information in a written description.
- I CAN calculate the constant of proportionality (unit rate).

Algebraic Reasoning

MA.7.AR.4.2 Determine the constant of proportionality within a mathematical or real-world context given a table, graph or written description of a proportional relationship.

MARZANO TAXONOMY LEVEL: Primary Taxonomy Level: Comprehension Level (Integrating)

LEARNING PROGRESSION:

ENRICHMENT: Identified Taxonomy Level: Analysis

- I CAN compare constants of proportionality from multiple proportional relationships represented in different forms (table, graph, written description) to determine which represents the greatest or least rate, and explain the real-world meaning of the comparison.

STANDARD DECONSTRUCTED: Identified Taxonomy Level: Comprehension

- I CAN determine the constant of proportionality within a mathematical or real-world context given a table, graph or written description of a proportional relationship.

FOUNDATIONAL SKILLS: Identified Taxonomy Level: Retrieval

- I CAN recall that the constant of proportionality is the constant ratio in a proportional relationship.
- I CAN recall that the constant of proportionality represents the unit rate.
- I CAN recognize a proportional relationship from a table, graph, or written description.
- I CAN execute division to find the ratio of y to x in a table.
- I CAN identify a point on a graph and read its coordinates.
- I CAN execute division to calculate $y \div x$ from graph coordinates.
- I CAN recognize the constant of proportionality as the slope of a line through the origin.
- I CAN identify the relationship between two quantities in a written description.

Algebraic Reasoning

MA.7.AR.4.3 Given a mathematical or real-world context, graph proportional relationships from a table, equation or a written description.

MARZANO TAXONOMY LEVEL: Primary Taxonomy Level: Retrieval Level (Executing)

LEARNING PROGRESSION:

ENRICHMENT: Identified Taxonomy Level: Comprehension

- I CAN explain how the constant of proportionality is represented visually on the graph of a proportional relationship, and interpret what the steepness of the line reveals about the rate of change in the real-world context.

STANDARD DECONSTRUCTED: Identified Taxonomy Level: Retrieval

- I CAN given a mathematical or real-world context, graph proportional relationships from a table, equation or a written description.

FOUNDATIONAL SKILLS: Identified Taxonomy Level: Retrieval

- I CAN recall that proportional relationships graph as straight lines through the origin.
- I CAN recognize proportional relationships in tables, equations, and written descriptions.
- I CAN identify ordered pairs from a table.
- I CAN identify the constant of proportionality in an equation of the form $y = kx$.
- I CAN generate ordered pairs from an equation.
- I CAN extract numerical information from a written description.
- I CAN label axes on a coordinate plane with appropriate scales and units.
- I CAN execute the procedure to plot points on a coordinate plane.
- I CAN draw a line through plotted points.

Algebraic Reasoning

MA.7.AR.4.4 Given any representation of a proportional relationship, translate the representation to a written description, table or equation.

MARZANO TAXONOMY LEVEL: Primary Taxonomy Level: Comprehension Level (Symbolizing)

LEARNING PROGRESSION:

ENRICHMENT: Identified Taxonomy Level: Analysis

- I CAN analyze multiple representations of the same proportional relationship to identify which representation most effectively communicates the relationship for a specific purpose or audience, and justify my reasoning.

STANDARD DECONSTRUCTED: Identified Taxonomy Level: Comprehension

- I CAN given any representation of a proportional relationship, translate the representation to a written description, table or equation.

FOUNDATIONAL SKILLS: Identified Taxonomy Level: Retrieval

- I CAN recognize proportional relationships in various forms (graph, table, equation, written description).
- I CAN identify the constant of proportionality from any representation.
- I CAN recall the equation form for proportional relationships ($y = kx$).
- I CAN read and interpret ordered pairs from a graph.
- I CAN identify the relationship between x and y values in a table.
- I CAN execute division to find the constant of proportionality.
- I CAN generate ordered pairs to create a table.
- I CAN identify the variables and their units in a proportional relationship.
- I CAN write clear mathematical descriptions using appropriate vocabulary.

Algebraic Reasoning

MA.7.AR.4.5 Solve real-world problems involving proportional relationships.

MARZANO TAXONOMY LEVEL: Primary Taxonomy Level: Knowledge Utilization Level (Problem Solving)

LEARNING PROGRESSION:

ENRICHMENT: Identified Taxonomy Level: Knowledge Utilization

- I CAN evaluate multiple real-world proportional situations to determine which option provides the best value, rate, or outcome based on specific criteria, and justify my decision using proportional reasoning and calculations.

STANDARD DECONSTRUCTED: Identified Taxonomy Level: Knowledge Utilization

- I CAN solve real-world problems involving proportional relationships.

FOUNDATIONAL SKILLS: Identified Taxonomy Level: Retrieval

- I CAN recognize proportional relationships in real-world contexts.
- I CAN identify the two quantities in a proportional relationship.
- I CAN determine the constant of proportionality from given information.
- I CAN recall the equation form for proportional relationships ($y = kx$).
- I CAN execute multiplication and division to solve for unknown values.
- I CAN set up and solve proportions.
- I CAN identify what the problem is asking me to find.
- I CAN interpret solutions in the context of the problem.
- I CAN label answers with appropriate units.

Geometric Reasoning

MA.7.GR.1.1 Apply formulas to find the areas of trapezoids, parallelograms and rhombi.

MARZANO TAXONOMY LEVEL: Primary Taxonomy Level: Retrieval Level (Executing)

LEARNING PROGRESSION:

ENRICHMENT: Identified Taxonomy Level: Comprehension

- I CAN explain how the area formulas for trapezoids, parallelograms, and rhombi are derived from the area formula for rectangles, and describe the mathematical relationships between these shapes.

STANDARD DECONSTRUCTED: Identified Taxonomy Level: Retrieval

- I CAN apply formulas to find the areas of trapezoids, parallelograms and rhombi.

FOUNDATIONAL SKILLS: Identified Taxonomy Level: Retrieval

- I CAN recognize a trapezoid and identify its bases and height.
- I CAN recognize a parallelogram and identify its base and height.
- I CAN recognize a rhombus and identify its diagonals.
- I CAN recall the formula for the area of a trapezoid: $A = \frac{1}{2}(b_1 + b_2)h$.
- I CAN recall the formula for the area of a parallelogram: $A = bh$.
- I CAN recall the formula for the area of a rhombus: $A = \frac{1}{2}d_1d_2$.
- I CAN execute addition, multiplication, and division with rational numbers.
- I CAN identify the appropriate measurements needed for each formula.
- I CAN label answers with appropriate square units.

Geometric Reasoning

MA.7.GR.1.2 Solve mathematical or real-world problems involving the area of polygons or composite figures by decomposing them into triangles or quadrilaterals.

MARZANO TAXONOMY LEVEL: Primary Taxonomy Level: Knowledge Utilization Level (Problem Solving)

LEARNING PROGRESSION:

ENRICHMENT: Identified Taxonomy Level: Knowledge Utilization

- I CAN evaluate multiple decomposition strategies for finding the area of a complex polygon or composite figure, determine which method is most efficient, and justify my choice based on the shape's characteristics.

STANDARD DECONSTRUCTED: Identified Taxonomy Level: Knowledge Utilization

- I CAN solve mathematical or real-world problems involving the area of polygons or composite figures by decomposing them into triangles or quadrilaterals.

FOUNDATIONAL SKILLS: Identified Taxonomy Level: Retrieval

- I CAN recognize polygons and composite figures.
- I CAN identify triangles and quadrilaterals within complex figures.
- I CAN recall area formulas for triangles, rectangles, trapezoids, parallelograms, and rhombi.
- I CAN execute the procedure to decompose a polygon into triangles or quadrilaterals.
- I CAN identify the necessary measurements (base, height, diagonals) for each decomposed shape.
- I CAN apply area formulas to find the area of each individual shape.
- I CAN execute addition to combine areas of decomposed shapes.
- I CAN execute subtraction when finding area by removing shapes from a larger figure.
- I CAN label answers with appropriate square units.

Geometric Reasoning

MA.7.GR.1.3 Explore the proportional relationship between circumferences and diameters of circles. Apply a formula for the circumference of a circle to solve mathematical and real-world problems.

MARZANO TAXONOMY LEVEL: Primary Taxonomy Level: Comprehension Level (Integrating); Secondary Taxonomy Level: Knowledge Utilization Level (Problem Solving)

LEARNING PROGRESSION:

ENRICHMENT: Identified Taxonomy Level: Analysis

- I CAN analyze how changes in the diameter or radius of a circle affect the circumference, generalize the multiplicative relationship, and explain why this proportional relationship remains constant for all circles.

STANDARD DECONSTRUCTED: Identified Taxonomy Level: Comprehension and Knowledge Utilization

- I CAN explore the proportional relationship between circumferences and diameters of circles, and apply a formula for the circumference of a circle to solve mathematical and real-world problems.

FOUNDATIONAL SKILLS: Identified Taxonomy Level: Retrieval

- I CAN recognize a circle and identify its center.
- I CAN identify the diameter of a circle.
- I CAN identify the radius of a circle.
- I CAN recall that the diameter is twice the radius ($d = 2r$).
- I CAN recall that π (pi) represents the constant ratio of circumference to diameter.
- I CAN recall the formula for circumference using diameter: $C = \pi d$.
- I CAN recall the formula for circumference using radius: $C = 2\pi r$.
- I CAN execute multiplication with π (using 3.14 or the π button).
- I CAN label answers with appropriate linear units.

Geometric Reasoning

MA.7.GR.1.4 Explore and apply a formula to find the area of a circle to solve mathematical and real-world problems.

MARZANO TAXONOMY LEVEL: Primary Taxonomy Level: Comprehension Level (Integrating); Secondary Taxonomy Level: Knowledge Utilization Level (Problem Solving)

LEARNING PROGRESSION:

ENRICHMENT: Identified Taxonomy Level: Analysis

- I CAN analyze how changes in the radius of a circle affect the area, compare the rate of change between radius and area, and explain why doubling the radius results in quadrupling the area.

STANDARD DECONSTRUCTED: Identified Taxonomy Level: Comprehension and Knowledge Utilization

- I CAN explore and apply a formula to find the area of a circle to solve mathematical and real-world problems.

FOUNDATIONAL SKILLS: Identified Taxonomy Level: Retrieval

- I CAN recognize a circle and identify its center.
- I CAN identify the radius of a circle.
- I CAN identify the diameter of a circle.
- I CAN recall that the radius is half the diameter ($r = d \div 2$).
- I CAN recall the formula for the area of a circle: $A = \pi r^2$.
- I CAN execute the procedure to square a number.
- I CAN execute multiplication with π (using 3.14 or the π button).
- I CAN apply the formula when given the radius or diameter.
- I CAN label answers with appropriate square units.

Geometric Reasoning

MA.7.GR.1.5 Solve mathematical and real-world problems involving dimensions and areas of geometric figures, including scale drawings and scale factors.

MARZANO TAXONOMY LEVEL: Primary Taxonomy Level: Knowledge Utilization Level (Problem Solving)

LEARNING PROGRESSION:

ENRICHMENT: Identified Taxonomy Level: Knowledge Utilization

- I CAN determine the most appropriate scale factor for creating a scale drawing based on specific constraints (such as paper size, level of detail needed, or practical limitations), and justify my decision with mathematical reasoning.

STANDARD DECONSTRUCTED: Identified Taxonomy Level: Knowledge Utilization

- I CAN solve mathematical and real-world problems involving dimensions and areas of geometric figures, including scale drawings and scale factors.

FOUNDATIONAL SKILLS: Identified Taxonomy Level: Retrieval

- I CAN recognize a scale drawing as a proportional representation of an actual object or space.
- I CAN identify the scale factor in a scale drawing.
- I CAN recall that scale factor is the ratio of corresponding dimensions.
- I CAN execute multiplication to find dimensions using a scale factor.
- I CAN execute division to find actual dimensions from a scale drawing.
- I CAN recall that area changes by the square of the scale factor.
- I CAN apply area formulas for various geometric figures.
- I CAN set up and solve proportions involving scale.
- I CAN identify appropriate units for scaled and actual measurements.

Geometric Reasoning

MA.7.GR.2.1 Given a mathematical or real-world context, find the surface area of a right circular cylinder using the figure's net.

MARZANO TAXONOMY LEVEL: Primary Taxonomy Level: Comprehension Level (Integrating); Secondary Taxonomy Level: Retrieval Level (Executing)

LEARNING PROGRESSION:

ENRICHMENT: Identified Taxonomy Level: Analysis

- I CAN analyze how changes in the radius or height of a cylinder affect the surface area, compare the impact of each dimension, and explain which dimension has a greater effect on the total surface area.

STANDARD DECONSTRUCTED: Identified Taxonomy Level: Comprehension and Retrieval

- I CAN given a mathematical or real-world context, find the surface area of a right circular cylinder using the figure's net.

FOUNDATIONAL SKILLS: Identified Taxonomy Level: Retrieval

- I CAN recognize a right circular cylinder and identify its parts.
- I CAN identify the radius and height of a cylinder.
- I CAN recognize a net as a two-dimensional representation of a three-dimensional figure.
- I CAN identify the shapes that make up a cylinder's net (two circles and one rectangle).
- I CAN recall the formula for the area of a circle: $A = \pi r^2$.
- I CAN recognize that the rectangle's length equals the circumference of the circular base.
- I CAN recall the formula for circumference: $C = 2\pi r$ or $C = \pi d$.
- I CAN execute multiplication to find the area of the rectangular portion.
- I CAN execute addition to combine the areas of all parts of the net.
- I CAN label answers with appropriate square units.

Geometric Reasoning

MA.7.GR.2.2 Solve real-world problems involving surface area of right circular cylinders.

MARZANO TAXONOMY LEVEL: Primary Taxonomy Level: Knowledge Utilization Level (Problem Solving)

LEARNING PROGRESSION:

ENRICHMENT: Identified Taxonomy Level: Knowledge Utilization

- I CAN evaluate multiple cylinder designs with different dimensions to determine which design minimizes or maximizes surface area for a specific real-world purpose (such as packaging efficiency or material cost), and justify my decision with calculations.

STANDARD DECONSTRUCTED: Identified Taxonomy Level: Knowledge Utilization

- I CAN solve real-world problems involving surface area of right circular cylinders.

FOUNDATIONAL SKILLS: Identified Taxonomy Level: Retrieval

- I CAN recognize right circular cylinders in real-world contexts.
- I CAN identify the radius and height of a cylinder from a problem or diagram.
- I CAN recall the formula for the area of a circle: $A = \pi r^2$.
- I CAN recall the formula for circumference: $C = 2\pi r$.
- I CAN recall that surface area includes two circular bases and one rectangular lateral surface.
- I CAN execute the procedure to find the surface area of a cylinder: $SA = 2\pi r^2 + 2\pi rh$.
- I CAN identify when a problem requires finding total surface area versus lateral surface area.
- I CAN execute multiplication and addition with π .
- I CAN interpret solutions in the context of the real-world problem.
- I CAN label answers with appropriate square units.

Geometric Reasoning

MA.7.GR.2.3 Solve mathematical and real-world problems involving volume of right circular cylinders.

MARZANO TAXONOMY LEVEL: Primary Taxonomy Level: Knowledge Utilization Level (Problem Solving)

LEARNING PROGRESSION:

ENRICHMENT: Identified Taxonomy Level: Knowledge Utilization

- I CAN evaluate multiple cylinder designs with different dimensions to determine which design maximizes volume while meeting specific constraints (such as limited height, radius, or surface area), and justify my decision with calculations and reasoning.

STANDARD DECONSTRUCTED: Identified Taxonomy Level: Knowledge Utilization

- I CAN solve mathematical and real-world problems involving volume of right circular cylinders.

FOUNDATIONAL SKILLS: Identified Taxonomy Level: Retrieval

- I CAN recall that volume measures the amount of space inside a three-dimensional figure.
- I CAN recognize right circular cylinders in mathematical and real-world contexts.
- I CAN identify the radius and height of a cylinder.
- I CAN recall the formula for the area of a circle: $A = \pi r^2$.
- I CAN recall the formula for volume of a cylinder: $V = \pi r^2 h$ or $V = Bh$.
- I CAN execute the procedure to square the radius.
- I CAN execute multiplication with π and other values.
- I CAN identify given information and what the problem is asking me to find.
- I CAN interpret solutions in the context of the problem.
- I CAN label answers with appropriate cubic units.

Data Analysis and Probability

MA.7.DP.1.1 Determine an appropriate measure of center or measure of variation to summarize numerical data, represented numerically or graphically, taking into consideration the context and any outliers.

MARZANO TAXONOMY LEVEL: Primary Taxonomy Level: Knowledge Utilization Level (Decision Making)

LEARNING PROGRESSION:

ENRICHMENT: Identified Taxonomy Level: Knowledge Utilization

- I CAN investigate how the presence, removal, or addition of outliers affects different measures of center and variation, and construct an argument about which measure is most resistant to outliers and why this matters in real-world data analysis.

STANDARD DECONSTRUCTED: Identified Taxonomy Level: Knowledge Utilization

- I CAN determine an appropriate measure of center or measure of variation to summarize numerical data, represented numerically or graphically, taking into consideration the context and any outliers.

FOUNDATIONAL SKILLS: Identified Taxonomy Level: Retrieval

- I CAN recall that measures of center include mean, median, and mode.
- I CAN recall that measures of variation include range, interquartile range (IQR), and mean absolute deviation (MAD).
- I CAN identify outliers in a data set.
- I CAN execute procedures to calculate mean, median, mode, range, and IQR.
- I CAN recognize how outliers affect different measures of center.
- I CAN recall that the median is more resistant to outliers than the mean.
- I CAN interpret numerical data and graphical representations.
- I CAN identify the context of a data set.

Data Analysis and Probability

MA.7.DP.1.2 Given two numerical or graphical representations of data, use the measure(s) of center and measure(s) of variability to make comparisons, interpret results and draw conclusions about the two populations.

MARZANO TAXONOMY LEVEL: Primary Taxonomy Level: Analysis Level (Matching)

LEARNING PROGRESSION:

ENRICHMENT: Identified Taxonomy Level: Knowledge Utilization

- I CAN investigate multiple data sets from different populations, analyze patterns in their measures of center and variability, and construct an argument about what these statistical differences reveal about the underlying populations and their real-world implications.

STANDARD DECONSTRUCTED: Identified Taxonomy Level: Analysis

- I CAN given two numerical or graphical representations of data, use the measure(s) of center and measure(s) of variability to make comparisons, interpret results and draw conclusions about the two populations.

FOUNDATIONAL SKILLS: Identified Taxonomy Level: Retrieval

- I CAN recall measures of center (mean, median, mode).
- I CAN recall measures of variability (range, interquartile range, mean absolute deviation).
- I CAN execute procedures to find measures of center from numerical or graphical data.
- I CAN execute procedures to find measures of variability from numerical or graphical data.
- I CAN identify the two populations being compared.
- I CAN recognize similarities and differences between two data sets.
- I CAN interpret what measures of center reveal about typical values in a population.
- I CAN interpret what measures of variability reveal about the spread or consistency of data.

Data Analysis and Probability

MA.7.DP.1.3 Given categorical data from a random sample, use proportional relationships to make predictions about a population.

MARZANO TAXONOMY LEVEL: Primary Taxonomy Level: Analysis Level (Specifying)

LEARNING PROGRESSION:

ENRICHMENT: Identified Taxonomy Level: Knowledge Utilization

- I CAN investigate how different sample sizes affect the accuracy and reliability of predictions about a population, and construct an argument about what constitutes an appropriate sample size for making valid predictions.

STANDARD DECONSTRUCTED: Identified Taxonomy Level: Analysis

- I CAN given categorical data from a random sample, use proportional relationships to make predictions about a population.

FOUNDATIONAL SKILLS: Identified Taxonomy Level: Retrieval

- I CAN recall that a sample is a subset of a population.
- I CAN recognize categorical data (data sorted into categories or groups).
- I CAN recall that a random sample is representative of the population.
- I CAN identify the sample size and population size.
- I CAN execute division to find the proportion or ratio in a sample.
- I CAN set up and solve proportions to scale sample data to population predictions.
- I CAN execute multiplication to calculate predicted quantities in a population.
- I CAN interpret predictions in the context of the population.

Data Analysis and Probability

MA.7.DP.1.4 Use proportional reasoning to construct, display and interpret data in circle graphs.

MARZANO TAXONOMY LEVEL: Primary Taxonomy Level: Comprehension Level (Integrating); Secondary Taxonomy Level: Retrieval Level (Executing)

LEARNING PROGRESSION:

ENRICHMENT: Identified Taxonomy Level: Analysis

- I CAN analyze multiple data sets to determine when a circle graph is the most appropriate display compared to other data representations (such as bar graphs or histograms), and justify my reasoning based on the nature and purpose of the data.

STANDARD DECONSTRUCTED: Identified Taxonomy Level: Comprehension and Retrieval

- I CAN use proportional reasoning to construct, display and interpret data in circle graphs.

FOUNDATIONAL SKILLS: Identified Taxonomy Level: Retrieval

- I CAN recognize a circle graph (pie chart) as a visual representation of data.
- I CAN recall that a circle contains 360 degrees.
- I CAN recall that a circle graph shows parts of a whole.
- I CAN execute division to find the proportion or percentage each category represents.
- I CAN set up and solve proportions to find the degree measure for each sector.
- I CAN execute multiplication to calculate degrees (proportion $\times$ 360°).
- I CAN use a protractor or compass to draw sectors with specific angle measures.
- I CAN label sectors with categories and percentages or values.
- I CAN interpret what each sector represents in the context of the data.

Data Analysis and Probability

MA.7.DP.1.5 Given a real-world numerical or categorical data set, choose and create an appropriate graphical representation.

MARZANO TAXONOMY LEVEL: Primary Taxonomy Level: Knowledge Utilization Level (Decision Making)

LEARNING PROGRESSION:

ENRICHMENT: Identified Taxonomy Level: Knowledge Utilization

- I CAN investigate how different graphical representations of the same data set can emphasize different aspects or lead to different interpretations, and construct an argument about the importance of selecting appropriate displays to accurately communicate data.

STANDARD DECONSTRUCTED: Identified Taxonomy Level: Knowledge Utilization

- I CAN given a real-world numerical or categorical data set, choose and create an appropriate graphical representation.

FOUNDATIONAL SKILLS: Identified Taxonomy Level: Retrieval

- I CAN recognize numerical data versus categorical data.
- I CAN identify different types of graphical representations (bar graph, histogram, line plot, box plot, circle graph, line graph).
- I CAN recall the characteristics and purposes of each type of graph.
- I CAN identify the context and purpose of displaying the data.
- I CAN execute procedures to create bar graphs for categorical data.
- I CAN execute procedures to create histograms for numerical data with intervals.
- I CAN execute procedures to create box plots to show distribution.
- I CAN execute procedures to create circle graphs to show parts of a whole.
- I CAN label axes, titles, and scales appropriately on graphs.

Data Analysis and Probability

MA.7.DP.2.1 Determine the sample space for a simple experiment.

MARZANO TAXONOMY LEVEL: Primary Taxonomy Level: Retrieval Level (Executing)

LEARNING PROGRESSION:

ENRICHMENT: Identified Taxonomy Level: Comprehension

- I CAN explain how the structure of an experiment (such as the number of stages or choices) affects the size of the sample space, and describe systematic methods for ensuring all outcomes are identified.

STANDARD DECONSTRUCTED: Identified Taxonomy Level: Retrieval

- I CAN determine the sample space for a simple experiment.

FOUNDATIONAL SKILLS: Identified Taxonomy Level: Retrieval

- I CAN recall that a sample space is the set of all possible outcomes of an experiment.
- I CAN recognize what constitutes an outcome in an experiment.
- I CAN identify the components of a simple experiment (such as coins, dice, spinners).
- I CAN list all possible outcomes systematically.
- I CAN use organized lists, tables, or tree diagrams to display outcomes.
- I CAN recognize when all outcomes have been identified.
- I CAN count the total number of outcomes in a sample space.

Data Analysis and Probability

MA.7.DP.2.2 Given the probability of a chance event, interpret the likelihood of it occurring. Compare the probabilities of chance events.

MARZANO TAXONOMY LEVEL: Primary Taxonomy Level: Comprehension Level (Integrating); Secondary Taxonomy Level: Analysis Level (Matching)

LEARNING PROGRESSION:

ENRICHMENT: Identified Taxonomy Level: Analysis

- I CAN analyze multiple probability scenarios to generalize rules about how probability values relate to likelihood, and explain why certain events are more or less likely based on their probability values.

STANDARD DECONSTRUCTED: Identified Taxonomy Level: Comprehension and Analysis

- I CAN given the probability of a chance event, interpret the likelihood of it occurring, and compare the probabilities of chance events.

FOUNDATIONAL SKILLS: Identified Taxonomy Level: Retrieval

- I CAN recall that probability is a measure of how likely an event is to occur.
- I CAN recognize that probability values range from 0 to 1 (or 0% to 100%).
- I CAN recall that a probability of 0 means the event is impossible.
- I CAN recall that a probability of 1 means the event is certain.
- I CAN recall that a probability of 0.5 (or $\frac{1}{2}$) means the event is equally likely to occur or not occur.
- I CAN identify probability values expressed as fractions, decimals, or percentages.
- I CAN recognize terms like impossible, unlikely, equally likely, likely, and certain.
- I CAN execute comparison of fractions, decimals, or percentages.

Data Analysis and Probability

MA.7.DP.2.3 Find the theoretical probability of an event related to a simple experiment.

MARZANO TAXONOMY LEVEL: Primary Taxonomy Level: Retrieval Level (Executing)

LEARNING PROGRESSION:

ENRICHMENT: Identified Taxonomy Level: Comprehension

- I CAN explain the difference between theoretical probability and experimental probability, and describe why theoretical probability represents what should happen in the long run while experimental results may vary.

STANDARD DECONSTRUCTED: Identified Taxonomy Level: Retrieval

- I CAN find the theoretical probability of an event related to a simple experiment.

FOUNDATIONAL SKILLS: Identified Taxonomy Level: Retrieval

- I CAN recall that theoretical probability is based on what should happen mathematically.
- I CAN recall the formula for theoretical probability: $P(\text{event}) = \frac{\text{number of favorable outcomes}}{\text{total number of possible outcomes}}$.
- I CAN determine the sample space for a simple experiment.
- I CAN identify favorable outcomes for a specific event.
- I CAN count the number of favorable outcomes.
- I CAN count the total number of possible outcomes.
- I CAN execute division to calculate probability as a fraction.
- I CAN simplify fractions to lowest terms.
- I CAN convert probability to decimal or percentage form when needed.

Data Analysis and Probability

MA.7.DP.2.4 Use a simulation of a simple experiment to find experimental probabilities and compare them to theoretical probabilities.

MARZANO TAXONOMY LEVEL: Primary Taxonomy Level: Analysis Level (Matching)

LEARNING PROGRESSION:

ENRICHMENT: Identified Taxonomy Level: Knowledge Utilization

- I CAN design and conduct a simulation experiment with multiple trials, analyze how the number of trials affects the relationship between experimental and theoretical probabilities, and generate a hypothesis about the law of large numbers.

STANDARD DECONSTRUCTED: Identified Taxonomy Level: Analysis

- I CAN use a simulation of a simple experiment to find experimental probabilities and compare them to theoretical probabilities.

FOUNDATIONAL SKILLS: Identified Taxonomy Level: Retrieval

- I CAN recall that experimental probability is based on actual results from an experiment or simulation.
- I CAN recall the formula for experimental probability: $P(\text{event}) = \frac{\text{number of times event occurred}}{\text{total number of trials}}$.
- I CAN execute a simulation of a simple experiment (flipping coins, rolling dice, using spinners).
- I CAN record outcomes from multiple trials systematically.
- I CAN count the frequency of specific outcomes.
- I CAN execute division to calculate experimental probability.
- I CAN calculate theoretical probability for the same event.
- I CAN recognize similarities and differences between experimental and theoretical probabilities.