

Istation[®] Math

Correlation of Standards

State of South Carolina Mathematics

Grades 6-8



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Istation Math Curriculum Correlated to South Carolina College- and Career-Ready Standards for Mathematics

Grade 6



Standards	Objectives	Istation Application	Istation Teacher Resources	MP Standards
Mathematical Process Standards (MPS)				
As stated in the South Carolina College- and Career-Ready Standards for Mathematics, “The South Carolina College- and Career-Ready (SCCCR) Mathematical Process Standards demonstrate the ways in which students develop conceptual understanding of mathematical content and apply mathematical skills. As a result, the SCCCR Mathematical Process Standards should be integrated within the SCCCR Standards for Mathematics for each grade level and course.” Each Mathematical Process standard is listed as applicable to the right of each Istation Math resource with the corresponding code, MP1-7.				
A mathematically literate student can:				
MPS1	Make sense of problems and persevere in solving them.			
	a. Relate a problem to prior knowledge.			
	b. Recognize there may be multiple entry points to a problem and more than one path to a solution.			
	c. Analyze what is given, what is not given, what is being asked, and what strategies are needed, and make an initial attempt to solve a problem.			
MPS2	d. Evaluate the success of an approach to solve a problem and refine it if necessary.			
	Reason both contextually and abstractly.			
	a. Make sense of quantities and their relationships in mathematical and real-world situations.			
	b. Describe a given situation using multiple mathematical representations.			
MPS3	c. Translate among multiple mathematical representations and compare the meanings each representation conveys about the situation.			
	d. Connect the meaning of mathematical operations to the context of a given situation.			
	Use critical thinking skills to justify mathematical reasoning and critique the reasoning of others.			
	a. Construct and justify a solution to a problem.			
MPS4	b. Compare and discuss the validity of various reasoning strategies.			
	c. Make conjectures and explore their validity.			
	d. Reflect on and provide thoughtful responses to the reasoning of others.			
	Connect mathematical ideas and real-world situations through modeling.			
MPS5	a. Identify relevant quantities and develop a model to describe their relationships.			
	b. Interpret mathematical models in the context of the situation.			
	c. Make assumptions and estimates to simplify complicated situations.			
	d. Evaluate the reasonableness of a model and refine if necessary.			
MPS6	Use a variety of mathematical tools effectively and strategically.			
	a. Select and use appropriate tools when solving a mathematical problem.			
	b. Use technological tools and other external mathematical resources to explore and deepen understanding of concepts.			
MPS7	Communicate mathematically and approach mathematical situations with precision.			
	a. Express numerical answers with the degree of precision appropriate for the context of a situation.			
	b. Represent numbers in an appropriate form according to the context of the situation.			
	c. Use appropriate and precise mathematical language.			
MPS7	d. Use appropriate units, scales, and labels.			
	Identify and utilize structure and patterns.			
	a. Recognize complex mathematical objects as being composed of more than one simple object.			
	b. Recognize mathematical repetition in order to make generalizations.			
c. Look for structures to interpret meaning and develop solution strategies.				
The Number System (NS)				
The student will:				
6.NS.1	Compute and represent quotients of positive fractions using a variety of procedures (e.g., visual models, equations, and real-world situations).		ISIP Math: Dividing Fractions ISIP Math: Dividing Improper Fractions	MPS1 MPS2 MPS3 MPS4 MPS5 MPS6 MPS7

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Standards	Objectives	Istation Application	Istation Teacher Resources	MP Standards
6.NS.3	Fluently add, subtract, multiply and divide multi-digit decimal numbers using a standard algorithmic approach.		ISIP Math: <i>Multiplying Decimal Numbers</i>	MPS1 MPS2 MPS3 MPS4 MPS5 MPS6 MPS7
6.NS.8	Extend knowledge of the coordinate plane to solve real-world and mathematical problems involving rational numbers. a. Plot points in all four quadrants to represent the problem. b. Find the distance between two points when ordered pairs have the same x-coordinates or same y-coordinates. c. Relate finding the distance between two points in a coordinate plane to absolute value using a number line.		ISIP Math: <i>Finding the Side Length of a Polygon Plotted on a Coordinate Plane</i>	MPS1 MPS2 MPS3 MPS4 MPS5 MPS6 MPS7
Ratios and Proportional Relationships (RP)				
The student will:				
6.RP.1	Interpret the concept of a ratio as the relationship between two quantities, including part to part and part to whole.		ISIP Math: <i>Ratio Foundations: Definitions and Representations</i>	MPS1 MPS2 MPS3 MPS4 MPS5 MPS6 MPS7
6.RP.2	Investigate relationships between ratios and rates. a. Translate between multiple representations of ratios (i.e., a/b , $a:b$, a to b , visual models). b. Recognize that a rate is a type of ratio involving two different units. c. Convert from rates to unit rates.		ISIP Math: <i>Multiplication and Division to Solve Ratio and Rate Problems</i> ISIP Math: <i>Solving Proportion Word Problems</i> ISIP Math: <i>Determining the Best Deal by Comparing Unit Rates</i>	MPS1 MPS2 MPS3 MPS4 MPS5 MPS6 MPS7

Istation Math Curriculum Correlated to South Carolina College- and Career-Ready Standards for Mathematics

Grade 6



Standards	Objectives	Istation Application	Istation Teacher Resources	MP Standards
6.RP.3	<p>Apply the concepts of ratios and rates to solve real-world and mathematical problems.</p> <p>a. Create a table consisting of equivalent ratios and plot the results on the coordinate plane.</p> <p>b. Use multiple representations, including tape diagrams, tables, double number lines, and equations, to find missing values of equivalent ratios.</p> <p>c. Use two tables to compare related ratios.</p> <p>d. Apply concepts of unit rate to solve problems, including unit pricing and constant speed.</p> <p>e. Understand that a percentage is a rate per 100 and use this to solve problems involving wholes, parts, and percentages.</p> <p>f. Solve one-step problems involving ratios and unit rates (e.g., dimensional analysis).</p>		<p>ISIP Math: <i>Ratio Foundations: Definitions and Representations</i></p> <p>ISIP Math: <i>Multiplication and Division to Solve Ratio and Rate Problems</i></p> <p>ISIP Math: <i>Solving Proportion Word Problems</i></p> <p>ISIP Math: <i>Using Strip Diagrams to Solve Ratio Problems</i></p> <p>ISIP Math: <i>Finding Missing Values in Ratio Tables</i></p> <p>ISIP Math: <i>Determining the Best Deal by Comparing Unit Rates</i></p>	<p>MPS1</p> <p>MPS2</p> <p>MPS3</p> <p>MPS4</p> <p>MPS5</p> <p>MPS6</p> <p>MPS7</p>
Expressions, Equations, and Inequalities (EEI)				
The student will:				
6.EE1.2	<p>Extend the concepts of numerical expressions to algebraic expressions involving positive rational numbers.</p> <p>a. Translate between algebraic expressions and verbal phrases that include variables.</p> <p>b. Investigate and identify parts of algebraic expressions using mathematical terminology, including term, coefficient, constant, and factor.</p> <p>c. Evaluate real-world and algebraic expressions for specific values using the Order of Operations. Grouping symbols should be limited to parentheses, braces, and brackets. Exponents should be limited to whole-numbers.</p>		<p>ISIP Math: <i>Adding and Subtracting Like Variables</i></p> <p>ISIP Math: <i>Setting Up Equations from Algebraic Word Problems</i></p> <p>ISIP Math: <i>Solving Single-Step Algebraic Equations</i></p>	<p>MPS1</p> <p>MPS2</p> <p>MPS3</p> <p>MPS4</p> <p>MPS5</p> <p>MPS6</p> <p>MPS7</p>
6.EE1.3	<p>Apply mathematical properties (e.g., commutative, associative, distributive) to generate equivalent expressions.</p>		<p>ISIP Math: <i>Adding and Subtracting Like Variables</i></p> <p>ISIP Math: <i>Setting Up Equations from Algebraic Word Problems</i></p> <p>ISIP Math: <i>Solving Single-Step Algebraic Equations</i></p>	<p>MPS1</p> <p>MPS2</p> <p>MPS3</p> <p>MPS4</p> <p>MPS5</p> <p>MPS6</p> <p>MPS7</p>
6.EE1.4	<p>Apply mathematical properties (e.g., commutative, associative, distributive) to justify that two expressions are equivalent.</p>		<p>ISIP Math: <i>Adding and Subtracting Like Variables</i></p> <p>ISIP Math: <i>Setting Up Equations from Algebraic Word Problems</i></p> <p>ISIP Math: <i>Solving Single-Step Algebraic Equations</i></p>	<p>MPS1</p> <p>MPS2</p> <p>MPS3</p> <p>MPS4</p> <p>MPS5</p> <p>MPS6</p> <p>MPS7</p>

Istation Math Curriculum Correlated to South Carolina College- and Career-Ready Standards for Mathematics

Grade 6



Standards	Objectives	Istation Application	Istation Teacher Resources	MP Standards
6.EE1.5	Understand that if any solutions exist, the solution set for an equation or inequality consists of values that make the equation or inequality true.		ISIP Math: <i>Adding and Subtracting Like Variables</i> ISIP Math: <i>Setting Up Equations from Algebraic Word Problems</i> ISIP Math: <i>Solving Single-Step Algebraic Equations</i>	MPS1 MPS2 MPS3 MPS4 MPS5 MPS6 MPS7
6.EE1.6	Write expressions using variables to represent quantities in real-world and mathematical situations. Understand the meaning of the variable in the context of the situation.		ISIP Math: <i>Adding and Subtracting Like Variables</i> ISIP Math: <i>Setting Up Equations from Algebraic Word Problems</i> ISIP Math: <i>Solving Single-Step Algebraic Equations</i>	MPS1 MPS2 MPS3 MPS4 MPS5 MPS6 MPS7
6.EE1.7	Write and solve one-step linear equations in one variable involving nonnegative rational numbers for real-world and mathematical situations.		ISIP Math: <i>Adding and Subtracting Like Variables</i> ISIP Math: <i>Setting Up Equations from Algebraic Word Problems</i> ISIP Math: <i>Solving Single-Step Algebraic Equations</i>	MPS1 MPS2 MPS3 MPS4 MPS5 MPS6 MPS7
Geometry and Measurement (GM)				
The student will:				
6.GM.1	Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.		ISIP Math: <i>Finding Area of Parallelograms by Rearranging into a Rectangle</i> ISIP Math: <i>Calculating Surface Area Using Nets of Three-Dimensional Objects</i>	MPS1 MPS2 MPS3 MPS4 MPS5 MPS6 MPS7
6.GM.2	Use visual models (e.g., model by packing) to discover that the formulas for the volume of a right rectangular prism ($V = lwh$, $V = Bh$) are the same for whole or fractional edge lengths. Apply these formulas to solve real-world and mathematical problems.		ISIP Math: <i>Using Fractional Edges to Find the Volume of a Rectangular Prism</i> ISIP Math: <i>Integrating Fact Practice in Calculating the Volume of a Prism</i>	MPS1 MPS2 MPS3 MPS4 MPS5 MPS6 MPS7
6.GM.3	Apply the concepts of polygons and the coordinate plane to real-world and mathematical situations. a. Given coordinates of the vertices, draw a polygon in the coordinate plane. b. Find the length of an edge if the vertices have the same x-coordinates or same y-coordinates.		ISIP Math: <i>Finding the Side Length of a Polygon Plotted on a Coordinate Plane</i> ISIP Math: <i>Plotting and Calculating the Area of Polygons on a Coordinate Plane</i>	MPS1 MPS2 MPS3 MPS4 MPS5 MPS6 MPS7

Istation Math Curriculum Correlated to South Carolina College- and Career-Ready Standards for Mathematics
Grade 6



Standards	Objectives	Istation Application	Istation Teacher Resources	MP Standards
6.GM.4	Unfold three-dimensional figures into two-dimensional rectangles and triangles (nets) to find the surface area and to solve real-world and mathematical problems.		ISIP Math: <i>Calculating Surface Area Using Nets of Three-Dimensional Objects</i>	MPS1 MPS2 MPS3 MPS4 MPS5 MPS6 MPS7
Data Analysis and Statistics (DS)				
The student will:				
6.DS.1	Differentiate between statistical and non-statistical questions.		ISIP Math: <i>Creating Circle Graphs</i>	MPS1 MPS2 MPS3 MPS4 MPS5 MPS6 MPS7
6.DS.2	Use center (mean, median, mode), spread (range, interquartile range, mean absolute value), and shape (symmetrical, skewed left, skewed right) to describe the distribution of a set of data collected to answer a statistical question.		ISIP Math: <i>Creating Circle Graphs</i> ISIP Math: <i>Demonstrating that a Change in Data Can Alter the Central Tendencies</i> ISIP Math: <i>Integrating Fact Practice and Data Analysis</i>	MPS1 MPS2 MPS3 MPS4 MPS5 MPS6 MPS7
6.DS.3	Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number.		ISIP Math: <i>Demonstrating that a Change in Data Can Alter the Central Tendencies</i>	MPS1 MPS2 MPS3 MPS4 MPS5 MPS6 MPS7
6.DS.5	Describe numerical data sets in relation to their real-world context. a. State the sample size. b. Describe the qualitative aspects of the data (e.g., how it was measured, units of measurement). c. Give measures of center (median, mean). d. Find measures of variability (interquartile range, mean absolute deviation) using a number line. e. Describe the overall pattern (shape) of the distribution. f. Justify the choices for measure of center and measure of variability based on the shape of the distribution. g. Describe the impact that inserting or deleting a data point has on the measures of center (median, mean) for a data set.		ISIP Math: <i>Creating Circle Graphs</i> ISIP Math: <i>Demonstrating that a Change in Data Can Alter the Central Tendencies</i> ISIP Math: <i>Integrating Fact Practice and Data Analysis</i>	MPS1 MPS2 MPS3 MPS4 MPS5 MPS6 MPS7

End of Grade 6

Istation Math Curriculum Correlated to South Carolina College- and Career-Ready Standards for Mathematics Grade 7



Standards	Objectives	Istation Application	Istation Teacher Resources	MP Standards
Mathematical Process Standards (MPS)				
As stated in the South Carolina College- and Career-Ready Standards for Mathematics, “The South Carolina College- and Career-Ready (SCCCR) Mathematical Process Standards demonstrate the ways in which students develop conceptual understanding of mathematical content and apply mathematical skills. As a result, the SCCCR Mathematical Process Standards should be integrated within the SCCCR Standards for Mathematics for each grade level and course.” Each Mathematical Process standard is listed as applicable to the right of each Istation Math resource with the corresponding code, MP1-7.				
A mathematically literate student can:				
MPS1	Make sense of problems and persevere in solving them.			
	a. Relate a problem to prior knowledge.			
	b. Recognize there may be multiple entry points to a problem and more than one path to a solution.			
	c. Analyze what is given, what is not given, what is being asked, and what strategies are needed, and make an initial attempt to solve a problem.			
MPS2	Reason both contextually and abstractly.			
	a. Make sense of quantities and their relationships in mathematical and real-world situations.			
	b. Describe a given situation using multiple mathematical representations.			
	c. Translate among multiple mathematical representations and compare the meanings each representation conveys about the situation.			
MPS3	Use critical thinking skills to justify mathematical reasoning and critique the reasoning of others.			
	a. Construct and justify a solution to a problem.			
	b. Compare and discuss the validity of various reasoning strategies.			
	c. Make conjectures and explore their validity.			
MPS4	Connect mathematical ideas and real-world situations through modeling.			
	a. Identify relevant quantities and develop a model to describe their relationships.			
	b. Interpret mathematical models in the context of the situation.			
	c. Make assumptions and estimates to simplify complicated situations.			
MPS5	Use a variety of mathematical tools effectively and strategically.			
	a. Select and use appropriate tools when solving a mathematical problem.			
	b. Use technological tools and other external mathematical resources to explore and deepen understanding of concepts.			
MPS6	Communicate mathematically and approach mathematical situations with precision.			
	a. Express numerical answers with the degree of precision appropriate for the context of a situation.			
	b. Represent numbers in an appropriate form according to the context of the situation.			
	c. Use appropriate and precise mathematical language.			
MPS7	Identify and utilize structure and patterns.			
	a. Recognize complex mathematical objects as being composed of more than one simple object.			
	b. Recognize mathematical repetition in order to make generalizations.			
	c. Look for structures to interpret meaning and develop solution strategies.			

Istation Math Curriculum Correlated to South Carolina College- and Career-Ready Standards for Mathematics

Grade 7



Standards	Objectives	Istation Application	Istation Teacher Resources	MP Standards
The Number System (NS)				
The student will:				
7.NS.1	<p>Extend prior knowledge of operations with positive rational numbers to add and to subtract all rational numbers and represent the sum or difference on a number line.</p> <p>a. Understand that the additive inverse of a number is its opposite and their sum is equal to zero.</p> <p>b. Understand that the sum of two rational numbers ($p + q$) represents a distance from p on the number line equal to q where the direction is indicated by the sign of q.</p> <p>c. Translate between the subtraction of rational numbers and addition using the additive inverse, $p - q = p + (-q)$.</p> <p>d. Demonstrate that the distance between two rational numbers on the number line is the absolute value of their difference.</p> <p>e. Apply mathematical properties (e.g., commutative, associative, distributive, or the properties of identity and inverse elements) to add and subtract rational numbers.</p>		<p>ISIP Math: <i>Comparing Negative Fractions</i> ISIP Math: <i>Understanding and Comparing Numerical Subsets</i></p>	<p>MPS1 MPS2 MPS3 MPS4 MPS5 MPS6 MPS7</p>
7.NS.2	<p>Extend prior knowledge of operations with positive rational numbers to multiply and to divide all rational numbers.</p> <p>a. Understand that the multiplicative inverse of a number is its reciprocal and their product is equal to one.</p> <p>b. Understand sign rules for multiplying rational numbers.</p> <p>c. Understand sign rules for dividing rational numbers and that a quotient of integers (with a non-zero divisor) is a rational number.</p> <p>d. Apply mathematical properties (e.g., commutative, associative, distributive, or the properties of identity and inverse elements) to multiply and divide rational numbers.</p> <p>e. Understand that some rational numbers can be written as integers and all rational numbers can be written as fractions or decimal numbers that terminate or repeat.</p>		<p>ISIP Math: <i>Comparing Negative Fractions</i> ISIP Math: <i>Understanding and Comparing Numerical Subsets</i></p>	<p>MPS1 MPS2 MPS3 MPS4 MPS5 MPS6 MPS7</p>

Istation Math Curriculum Correlated to South Carolina College- and Career-Ready Standards for Mathematics

Grade 7



Standards	Objectives	Istation Application	Istation Teacher Resources	MP Standards
7.NS.3	Apply the concepts of all four operations with rational numbers to solve real-world and mathematical problems.		ISIP Math: <i>Comparing Negative Fractions</i> ISIP Math: <i>Understanding and Comparing Numerical Subsets</i>	MPS1 MPS2 MPS3 MPS4 MPS5 MPS6 MPS7
Ratios and Proportional Relationships (RP)				
The student will:				
7.RP.1	Compute unit rates, including those involving complex fractions, with like or different units.		ISIP Math: <i>Identifying Proportional and Non-Proportional Relationships</i> ISIP Math: <i>Ratio Problem Type: Proportional Relationships</i>	MPS1 MPS2 MPS3 MPS4 MPS5 MPS6 MPS7
7.RP.2	Identify and model proportional relationships given multiple representations, including tables, graphs, equations, diagrams, verbal descriptions, and real-world situations. a. Determine when two quantities are in a proportional relationship. b. Recognize or compute the constant of proportionality. c. Understand that the constant of proportionality is the unit rate. d. Use equations to model proportional relationships. e. Investigate the graph of a proportional relationship and explain the meaning of specific points (e.g., origin, unit rate) in the context of the situation.		ISIP Math: <i>Identifying Proportional and Non-Proportional Relationships</i> ISIP Math: <i>Ratio Problem Type: Proportional Relationships</i> ISIP Math: <i>Using Unit Rate and Volume of Rectangular Prisms to Solve Problems</i>	MPS1 MPS2 MPS3 MPS4 MPS5 MPS6 MPS7
7.RP.3	Solve real-world and mathematical problems involving ratios and percentages using proportional reasoning (e.g., multi-step dimensional analysis, percent increase/decrease, tax).		ISIP Math: <i>Identifying Proportional and Non-Proportional Relationships</i> ISIP Math: <i>Ratio Problem Type: Proportional Relationships</i> ISIP Math: <i>Percent of Change: Comparing Prices Now and Then</i>	MPS1 MPS2 MPS3 MPS4 MPS5 MPS6 MPS7

Istation Math Curriculum Correlated to South Carolina College- and Career-Ready Standards for Mathematics Grade 7



Standards	Objectives	Istation Application	Istation Teacher Resources	MP Standards
Expressions, Equations, and Inequalities (EEI)				
The student will:				
7.EE1.1	Apply mathematical properties (e.g., commutative, associative, distributive) to simplify and to factor linear algebraic expressions with rational coefficients.		ISIP Math: <i>Setting Up Equations Based on Underlying Sentence Structure in Algebraic Word Problems</i> ISIP Math: <i>Solving One-Variable Multistep Algebraic Equations</i>	MPS1 MPS2 MPS3 MPS4 MPS5 MPS6 MPS7
7.EE1.2	Recognize that algebraic expressions may have a variety of equivalent forms and determine an appropriate form for a given real-world situation.		ISIP Math: <i>Setting Up Equations Based on Underlying Sentence Structure in Algebraic Word Problems</i> ISIP Math: <i>Solving One-Variable Multistep Algebraic Equations</i> ISIP Math: <i>Percent of Change: Comparing Prices Now and Then</i>	MPS1 MPS2 MPS3 MPS4 MPS5 MPS6 MPS7
7.EE1.3	Extend previous understanding of Order of Operations to solve multi-step real-world and mathematical problems involving rational numbers. Include fraction bars as a grouping symbol.		ISIP Math: <i>Setting Up Equations Based on Underlying Sentence Structure in Algebraic Word Problems</i> ISIP Math: <i>Solving One-Variable Multistep Algebraic Equations</i> ISIP Math: <i>Percent of Change: Comparing Prices Now and Then</i>	MPS1 MPS2 MPS3 MPS4 MPS5 MPS6 MPS7
7.EE1.4	Apply the concepts of linear equations and inequalities in one variable to real-world and mathematical situations. a. Write and fluently solve linear equations of the form $px + q = r$ and $p(x + q) = r$, where p , q , and r are rational numbers. b. Write and solve multi-step linear equations that include the use of the distributive property and combining like terms. Exclude equations that contain variables on both sides. c. Write and solve two-step linear inequalities. Graph the solution set on a number line and interpret its meaning. d. Identify and justify the steps for solving multi-step linear equations and two-step linear inequalities.		ISIP Math: <i>Setting Up Equations Based on Underlying Sentence Structure in Algebraic Word Problems</i> ISIP Math: <i>Solving One-Variable Multistep Algebraic Equations</i> ISIP Math: <i>Comparing Negative Fractions</i> ISIP Math: <i>Understanding and Comparing Numerical Subsets</i>	MPS1 MPS2 MPS3 MPS4 MPS5 MPS6 MPS7

Istation Math Curriculum Correlated to South Carolina College- and Career-Ready Standards for Mathematics

Grade 7



Standards	Objectives	Istation Application	Istation Teacher Resources	MP Standards
Geometry and Measurement (GM)				
The student will:				
7.GM.1	Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.		ISIP Math: <i>Creating Similar Figures Using Scale Factors</i> ISIP Math: <i>Identifying Basic Elements of Geometric Figures</i>	MPS1 MPS2 MPS3 MPS4 MPS5 MPS6 MPS7
7.GM.2	Construct triangles and special quadrilaterals using a variety of tools (e.g., freehand, ruler and protractor, technology). a. Construct triangles given all measurements of either angles or sides. b. Decide if the measurements determine a unique triangle, more than one triangle, or no triangle. c. Construct special quadrilaterals (i.e., kite, trapezoid, isosceles trapezoid, rhombus, parallelogram, rectangle) given specific parameters about angles or sides.		ISIP Math: <i>Identifying Basic Elements of Geometric Figures</i>	MPS1 MPS2 MPS3 MPS4 MPS5 MPS6 MPS7
7.GM.3	Describe two-dimensional cross-sections of three-dimensional figures, specifically right rectangular prisms and right rectangular pyramids.		ISIP Math: <i>Identifying Basic Elements of Geometric Figures</i> ISIP Math: <i>Calculating the Surface Area of Cylinders Using Nets</i>	MPS1 MPS2 MPS3 MPS4 MPS5 MPS6 MPS7
7.GM.4	Investigate the concept of circles. a. Demonstrate an understanding of the proportional relationships between diameter, radius, and circumference of a circle. b. Understand that the constant of proportionality between the circumference and diameter is equivalent to π . c. Explore the relationship between circumference and area using a visual model. d. Use the formulas for circumference and area of circles appropriately to solve real-world and mathematical problems.		ISIP Math: <i>Proportions with Circles</i> ISIP Math: <i>Identifying Basic Elements of Geometric Figures</i>	MPS1 MPS2 MPS3 MPS4 MPS5 MPS6 MPS7
7.GM.5	Write equations to solve problems involving the relationships between angles formed by two intersecting lines, including supplementary, complementary, vertical, and adjacent.		ISIP Math: <i>Finding an Unknown Angle in a Quadrilateral</i> ISIP Math: <i>Finding the Sum of the Interior Angles of a Polygon</i> ISIP Math: <i>Fluently Calculating the Missing Angles of Common Polygons</i>	MPS1 MPS2 MPS3 MPS4 MPS5 MPS6 MPS7

Istation Math Curriculum Correlated to South Carolina College- and Career-Ready Standards for Mathematics Grade 7



Standards	Objectives	Istation Application	Istation Teacher Resources	MP Standards
7.GM.6	Apply the concepts of two- and three-dimensional figures to real-world and mathematical situations. a. Understand that the concept of area is applied to two-dimensional figures such as triangles, quadrilaterals, and polygons. b. Understand that the concepts of volume and surface area are applied to three-dimensional figures such as cubes, right rectangular prisms, and right triangular prisms. c. Decompose cubes, right rectangular prisms, and right triangular prisms into rectangles and triangles to derive the formulas for volume and surface area. d. Use the formulas for area, volume, and surface area appropriately.		ISIP Math: <i>Volume of Similar Figures</i> ISIP Math: <i>Exploring the Volume of Cylinders</i> ISIP Math: <i>Using Unit Rate and Volume of Rectangular Prisms to Solve Problems</i> ISIP Math: <i>Calculating the Surface Area of Cylinders Using Nets</i> ISIP Math: <i>Calculating the Volume of a Cylinder</i>	MPS1 MPS2 MPS3 MPS4 MPS5 MPS6 MPS7
Data Analysis, Statistics and Probability (DSP)				
The student will:				
7.DSP.3	Visually compare the centers, spreads, and overlap of two displays of data (i.e., dot plots, histograms, box plots) that are graphed on the same scale and draw inferences about this data.		ISIP Math: <i>Modeling Slope and Rate of Change</i>	MPS1 MPS2 MPS3 MPS4 MPS5 MPS6 MPS7
7.DSP.4	Compare the numerical measures of center (mean, median, mode) and variability (range, interquartile range, mean absolute deviation) from two random samples to draw inferences about the populations.		ISIP Math: <i>Modeling Slope and Rate of Change</i>	MPS1 MPS2 MPS3 MPS4 MPS5 MPS6 MPS7
End of Grade 7				

Istation Math Curriculum Correlated to South Carolina College- and Career-Ready Standards for Mathematics

Grade 8



Standards	Objectives	Istation Application	Istation Teacher Resources	MP Standards
Mathematical Process Standards (MPS)				
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A mathematically literate student can:				
MPS1	Make sense of problems and persevere in solving them.			
	a. Relate a problem to prior knowledge.			
	b. Recognize there may be multiple entry points to a problem and more than one path to a solution.			
	c. Analyze what is given, what is not given, what is being asked, and what strategies are needed, and make an initial attempt to solve a problem.			
	d. Evaluate the success of an approach to solve a problem and refine it if necessary.			
MPS2	Reason both contextually and abstractly.			
	a. Make sense of quantities and their relationships in mathematical and real-world situations.			
	b. Describe a given situation using multiple mathematical representations.			
	c. Translate among multiple mathematical representations and compare the meanings each representation conveys about the situation.			
	d. Connect the meaning of mathematical operations to the context of a given situation.			
MPS3	Use critical thinking skills to justify mathematical reasoning and critique the reasoning of others.			
	a. Construct and justify a solution to a problem.			
	b. Compare and discuss the validity of various reasoning strategies.			
	c. Make conjectures and explore their validity.			
	d. Reflect on and provide thoughtful responses to the reasoning of others.			
MPS4	Connect mathematical ideas and real-world situations through modeling.			
	a. Identify relevant quantities and develop a model to describe their relationships.			
	b. Interpret mathematical models in the context of the situation.			
	c. Make assumptions and estimates to simplify complicated situations.			
	d. Evaluate the reasonableness of a model and refine if necessary.			
MPS5	Use a variety of mathematical tools effectively and strategically.			
	a. Select and use appropriate tools when solving a mathematical problem.			
	b. Use technological tools and other external mathematical resources to explore and deepen understanding of concepts.			
MPS6	Communicate mathematically and approach mathematical situations with precision.			
	a. Express numerical answers with the degree of precision appropriate for the context of a situation.			
	b. Represent numbers in an appropriate form according to the context of the situation.			
	c. Use appropriate and precise mathematical language.			
	d. Use appropriate units, scales, and labels.			
MPS7	Identify and utilize structure and patterns.			
	a. Recognize complex mathematical objects as being composed of more than one simple object.			
	b. Recognize mathematical repetition in order to make generalizations.			
	c. Look for structures to interpret meaning and develop solution strategies.			

Istation Math Curriculum Correlated to South Carolina College- and Career-Ready Standards for Mathematics

Grade 8



Standards	Objectives	Istation Application	Istation Teacher Resources	MP Standards
Functions (F)				
The student will:				
8.F.1	<p>Explore the concept of functions.</p> <p>a. Understand that a function assigns to each input exactly one output.</p> <p>b. Relate inputs (x-values or domain) and outputs (y-values or range) to independent and dependent variables.</p> <p>c. Translate among the multiple representations of a function, including mappings, tables, graphs, equations, and verbal descriptions.</p> <p>d. Determine if a relation is a function using multiple representations, including mappings, tables, graphs, equations, and verbal descriptions.</p> <p>e. Graph a function from a table of values.</p> <p>Understand that the graph and table both represent a set of ordered pairs of that function.</p>		<p>ISIP Math: <i>Translating Between Representations of a Function</i></p>	<p>MPS1 MPS2 MPS3 MPS4 MPS5 MPS6 MPS7</p>
8.F.2	<p>Compare multiple representations of two functions, including mappings, tables, graphs, equations, and verbal descriptions, in order to draw conclusions.</p>		<p>ISIP Math: <i>Translating Between Representations of a Function</i></p>	<p>MPS1 MPS2 MPS3 MPS4 MPS5 MPS6 MPS7</p>
8.F.3	<p>Investigate the differences between linear and nonlinear functions using multiple representations (i.e., tables, graphs, equations, and verbal descriptions).</p> <p>a. Define an equation in slope-intercept form ($y = mx + b$) as being a linear function.</p> <p>b. Recognize that the graph of a linear function has a constant rate of change.</p> <p>c. Provide examples of nonlinear functions.</p>		<p>ISIP Math: <i>Translating Between Representations of a Function</i></p>	<p>MPS1 MPS2 MPS3 MPS4 MPS5 MPS6 MPS7</p>
Expressions, Equations, and Inequalities (EEI)				
The student will:				
8.EE.1	<p>Understand and apply the laws of exponents (i.e., product rule, quotient rule, power to a power, product to a power, quotient to a power, zero power property, negative exponents) to simplify numerical expressions that include integer exponents.</p>		<p>ISIP Math: <i>Simplifying Real Numbers with Integer Exponents</i> ISIP Math: <i>Multiplying and Dividing Real Number Expressions Using Laws of Exponents</i></p>	<p>MPS1 MPS2 MPS3 MPS4 MPS5 MPS6 MPS7</p>

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Standards	Objectives	Istation Application	Istation Teacher Resources	MP Standards
8.EE.4	Apply the concepts of decimal and scientific notation to solve real-world and mathematical problems. a. Multiply and divide numbers expressed in both decimal and scientific notation. b. Select appropriate units of measure when representing answers in scientific notation. c. Translate how different technological devices display numbers in scientific notation.		ISIP Math: <i>Converting Numbers Between Scientific Form and Standard Form</i>	MPS1 MPS2 MPS3 MPS4 MPS5 MPS6 MPS7
8.EE.7	Extend concepts of linear equations and inequalities in one variable to more complex multi-step equations and inequalities in real-world and mathematical situations. a. Solve linear equations and inequalities with rational number coefficients that include the use of the distributive property, combining like terms, and variables on both sides. b. Recognize the three types of solutions to linear equations: one solution ($x = a$), infinitely many solutions ($a = a$), or no solutions ($a = b$). c. Generate linear equations with the three types of solutions. d. Justify why linear equations have a specific type of solution.		ISIP Math: <i>Solving Single-Step Linear Equations Containing Fractions</i>	MPS1 MPS2 MPS3 MPS4 MPS5 MPS6 MPS7
8.EE.8	Investigate and solve real-world and mathematical problems involving systems of linear equations in two variables with integer coefficients and solutions. a. Graph systems of linear equations and estimate their point of intersection. b. Understand and verify that a solution to a system of linear equations is represented on a graph as the point of intersection of the two lines. c. Solve systems of linear equations algebraically, including methods of substitution and elimination, or through inspection. d. Understand that systems of linear equations can have one solution, no solution, or infinitely many solutions.		ISIP Math: <i>Solving Systems of Equations</i>	MPS1 MPS2 MPS3 MPS4 MPS5 MPS6 MPS7
Geometry and Measurement (GM)				
The student will:				
8.GM.1	Investigate the properties of rigid transformations (rotations, reflections, translations) using a variety of tools (e.g., grid paper, reflective devices, graphing paper, technology). a. Verify that lines are mapped to lines, including parallel lines. b. Verify that corresponding angles are congruent. c. Verify that corresponding line segments are congruent.		ISIP Math: <i>Identifying the Coordinates of a Figure Rotated 90 Degrees About the Origin</i>	MPS1 MPS2 MPS3 MPS4 MPS5 MPS6 MPS7

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Standards	Objectives	Istation Application	Istation Teacher Resources	MP Standards
8.GM.2	<p>Apply the properties of rigid transformations (rotations, reflections, translations).</p> <p>a. Rotate geometric figures 90, 180, and 270 degrees, both clockwise and counterclockwise, about the origin.</p> <p>b. Reflect geometric figures with respect to the x-axis and/or y-axis.</p> <p>c. Translate geometric figures vertically and/or horizontally.</p> <p>d. Recognize that two-dimensional figures are only congruent if a series of rigid transformations can be performed to map the pre-image to the image.</p> <p>e. Given two congruent figures, describe the series of rigid transformations that justifies this congruence.</p>		<p>ISIP Math: <i>Identifying the Coordinates of a Figure Rotated 90 Degrees About the Origin</i></p> <p>ISIP Math: <i>Ratio Problem Type: Similar Triangles</i></p>	<p>MPS1</p> <p>MPS2</p> <p>MPS3</p> <p>MPS4</p> <p>MPS5</p> <p>MPS6</p> <p>MPS7</p>
8.GM.3	<p>Investigate the properties of transformations (rotations, reflections, translations, dilations) using a variety of tools (e.g., grid paper, reflective devices, graphing paper, dynamic software).</p> <p>a. Use coordinate geometry to describe the effect of transformations on two-dimensional figures.</p> <p>b. Relate scale drawings to dilations of geometric figures.</p>		<p>ISIP Math: <i>Identifying the Coordinates of a Figure Rotated 90 Degrees About the Origin</i></p> <p>ISIP Math: <i>Dilating Figures on the Coordinate Plane</i></p>	<p>MPS1</p> <p>MPS2</p> <p>MPS3</p> <p>MPS4</p> <p>MPS5</p> <p>MPS6</p> <p>MPS7</p>
8.GM.4	<p>Apply the properties of transformations (rotations, reflections, translations, dilations).</p> <p>a. Dilate geometric figures using scale factors that are positive rational numbers.</p> <p>b. Recognize that two-dimensional figures are only similar if a series of transformations can be performed to map the pre-image to the image.</p> <p>c. Given two similar figures, describe the series of transformations that justifies this similarity.</p> <p>d. Use proportional reasoning to find the missing side lengths of two similar figures.</p>		<p>ISIP Math: <i>Ratio Problem Type: Similar Triangles</i></p> <p>ISIP Math: <i>Finding Missing Heights for Similar Triangles</i></p>	<p>MPS1</p> <p>MPS2</p> <p>MPS3</p> <p>MPS4</p> <p>MPS5</p> <p>MPS6</p> <p>MPS7</p>
8.GM.5	<p>Extend and apply previous knowledge of angles to properties of triangles, similar figures, and parallel lines cut by a transversal.</p> <p>a. Discover that the sum of the three angles in a triangle is 180 degrees.</p> <p>b. Discover and use the relationship between interior and exterior angles of a triangle.</p> <p>c. Identify congruent and supplementary pairs of angles when two parallel lines are cut by a transversal.</p> <p>d. Recognize that two similar figures have congruent corresponding angles.</p>		<p>ISIP Math: <i>Ratio Problem Type: Similar Triangles</i></p> <p>ISIP Math: <i>Finding Missing Heights for Similar Triangles</i></p> <p>ISIP Math: <i>Finding Missing Angles in a Triangle</i></p> <p>ISIP Math: <i>Finding Unknown Exterior Angle Measures in Polygons</i></p> <p>ISIP Math: <i>Angles and Distance: Creating a City</i></p>	<p>MPS1</p> <p>MPS2</p> <p>MPS3</p> <p>MPS4</p> <p>MPS5</p> <p>MPS6</p> <p>MPS7</p>

Istation Math Curriculum Correlated to South Carolina College- and Career-Ready Standards for Mathematics

Grade 8



Standards	Objectives	Istation Application	Istation Teacher Resources	MP Standards
8.GM.6	Use models to demonstrate a proof of the Pythagorean Theorem and its converse.		ISIP Math: <i>Using Area Models to Understand the Pythagorean Theorem</i>	MPS1 MPS2 MPS3 MPS4 MPS5 MPS6 MPS7
8.GM.7	Apply the Pythagorean Theorem to model and solve real-world and mathematical problems in two and three dimensions involving right triangles.		ISIP Math: <i>Finding Missing Heights for Similar Triangles</i> ISIP Math: <i>Using Area Models to Understand the Pythagorean Theorem</i>	MPS1 MPS2 MPS3 MPS4 MPS5 MPS6 MPS7
8.GM.8	Find the distance between any two points in the coordinate plane using the Pythagorean Theorem.		ISIP Math: <i>Using Area Models to Understand the Pythagorean Theorem</i> ISIP Math: <i>Calculating Distances Using the Pythagorean Theorem</i> ISIP Math: <i>Angles and Distance: Creating a City</i>	MPS1 MPS2 MPS3 MPS4 MPS5 MPS6 MPS7
8.GM.9	Solve real-world and mathematical problems involving volumes of cones, cylinders, and spheres and the surface area of cylinders.		ISIP Math: <i>Finding the Volume of a Pyramid</i> ISIP Math: <i>Calculating Surface Area and Volume of Three-Dimensional Objects</i> ISIP Math: <i>Fluency with Calculating the Surface Area of Rectangular Prisms</i>	MPS1 MPS2 MPS3 MPS4 MPS5 MPS6 MPS7
Data Analysis, Statistics, and Probability (DSP)				
The student will:				
8.DSP.3	Apply concepts of an approximate line of best fit in real-world situations. a. Find an approximate equation for the line of best fit using two appropriate data points. b. Interpret the slope and intercept. c. Solve problems using the equation.		ISIP Math: <i>Understanding Slope as a Constant Rate of Change</i> ISIP Math: <i>The Constant of Proportionality and Proportional Relationships</i>	MPS1 MPS2 MPS3 MPS4 MPS5 MPS6 MPS7
End of Grade 8				