Pearson

SuccessMaker®

Florida
State Standards
Alignments for Mathematics, Grades 6-8

Providing rigorous mathematics intervention for learners with unparalleled precision

FL Standard	FL Standard Text	Item Description	Item ID
MAFS.6.EE.1.1	Write and evaluate numerical expressions involving whole-number exponents.	Give the value of a number (1 to 10) raised to a power (1 to 5).	SMMA_LO_01098
		Match expressions with repeated factors to numbers in exponential form to create equations.	SMMA_LO_01100
MAFS.6.EE.1.2a	Write expressions that record operations with numbers and with letters standing for numbers. For example, express the calculation "Subtract y from 5" as 5 – y.	Identify the expression that is a translation of the written phrase.	SMMA_LO_01759
		Identify the written phrase that is a translation of a expression or inequality.	SMMA_LO_01815
		Translate an expression into a written phrase (two-step).	SMMA_LO_01816
		Write expressions that record operations with numbers and variables.	SMMA_LO_02056
MAFS.6.EE.1.2b	Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single entity. For example, describe the expression 2 (8 + 7) as a product of two factors; view (8 + 7) as both a single entity and a sum of two terms.	Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient).	SMMA_LO_02057
MAFS.6.EE.1.2c	Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole-number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations). For example, use the formulas $V = s^3$ and $A = 6 s^2$ to find the volume and surface area of a cube with sides of length s = 1/2.	Given the value for the variable, evaluate an addition expression (sums 4 to 12).	SMMA_LO_01683
		Evaluate an expression with variables using substitution and a value chart (addition, sums to 18).	SMMA_LO_01685
		Evaluate the expression mx + c or mx - c.	SMMA_LO_01739
		Evaluate an expression within a context (multiplication).	SMMA_LO_01740
		Generate a table of values given a one-step rule.	SMMA_LO_01755

"R" denotes a learning object that enables students to achieve readiness for a standard. These learning objects reinforce prerequisite skills needed for understanding and mastery of the content described in the standard.

FL Standard	FL Standard Text	Item Description	Item ID
MAFS.6.EE.1.3	Apply the properties of operations to generate equivalent expressions. For example, apply the distributive property to the expression 3 (2 + x) to produce the equivalent expression 6 + 3x; apply the distributive property to the expression 24x + 18y to produce the equivalent expression 6 (4x + 3y); apply properties of operations to y + y + y to produce the equivalent expression 3y.	Identify an equivalent expression for a x (b + c) with variables.	SMMA_LO_00129
		Apply the properties of operations to generate equivalent expressions.	SMMA_LO_02059
		R: Use the commutative and associative properties of addition to find the missing number.	SMMA_LO_01090
MAFS.6.EE.1.4	Identify when two expressions are equivalent (i.e., when the two expressions name the same number regardless of which value is substituted into them). For example, the expressions y + y + y and 3y are equivalent because they name the same number regardless of which number y stands for.	Choose all expressions that are equivalent to a given expression.	SMMA_LO_02060
MAFS.6.EE.2.5	Understand solving an equation or inequality as a process of answering a question: which values from a specified set, if any, make the equation or inequality true? Use substitution to determine whether a given number in a specified set makes an equation or inequality true.	Use substitution to determine whether a given number in a specified set makes an equation or inequality true.	SMMA_LO_02061
MAFS.6.EE.2.6	Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.	Write an expression to represent a real-world problem, using variables to represent numbers.	SMMA_LO_02062
MAFS.6.EE.2.7	Solve real-world and mathematical problems by writing and solving equations of the form x + p = q and px = q for cases in which p, q and x are all non-negative rational numbers.	Solve for a or b in a x b = c (products 6 x 2 to 9 x 12).	SMMA_LO_00357
		Solve for a or b in a ÷ b = c (combinations 2 ÷ 10 to 5 ÷ 12).	SMMA_LO_00359
		Solve for a or b in a ÷ b = c (combinations 6 ÷ 10 to 9 ÷ 12).	SMMA_LO_00361
		Solve for a or b in a x b = x (products 2 x 10 to 12 x 12).	SMMA_LO_00363
		Solve for a or b in a ÷ b = c (combinations 6 ÷ 20 to 9 ÷ 90, multiples of 10).	SMMA_LO_00365
		Solve for a or b in a x b = x (products 2 x 20 to 12 x 90, multiples of 10).	SMMA_LO_00366
		Solve for a or b in a + b = c (decimals to tenths, no regrouping).	SMMA_LO_00367
		Solve for a or b in a - b = c (decimals to tenths, regrouping).	SMMA_LO_00368
		Solve for a or b in a x b = c (products from 0.2 x 0.6 to 0.9 x 0.9).	SMMA_LO_00369

"R" denotes a learning object that enables students to achieve readiness for a standard. These learning objects reinforce prerequisite skills needed for understanding and mastery of the content described in the standard.

FL Standard	FL Standard Text	Item Description	Item ID
MAFS.6.EE.2.7	Solve real-world and mathematical problems by writing and solving equations of the form x + p = q and px = q for cases in which p, q and x are all non-negative rational numbers.	Solve for a or b in a ÷ b = c (combinations 0.6 × 0.6 to 0.9 × 0.9).	SMMA_LO_00370
		Solve for a, b, or c in a × b/c = d/e (combinations to 12 × 12).	SMMA_LO_00371
		Solve for a or b in a + b = c (decimals to hundredths).	SMMA_LO_00373
		Solve for a or b in a - b = c (decimals to hundredths, regrouping).	SMMA_LO_00374
		Solve for a or b in a x b = c (products from 0.02 x 0.13 to 0.09 x 0.19).	SMMA_LO_00376
		Solve for a or b in a ÷ b = c (up to 4-digit decimals).	SMMA_LO_00378
		Solve for a in a + b = c or a − b = c in steps (whole number sums and differences 2 to 20).	SMMA_LO_00379
		Solve for x in ax = c in steps (products 4 x 4 to 9 x 10).	SMMA_LO_00380
		Complete the steps to solve for a in a ÷ b = c (combinations 4 × 4 to 9 × 10).	SMMA_LO_00381
		Identify related multiplication and division number sentences that can be used to solve a problem.	SMMA_LO_01080
		Solve a one-step equation (subtraction).	SMMA_LO_01688
		Solve a one-step equation (multiplication).	SMMA_LO_01690
		Solve a one-step equation (division).	SMMA_LO_01692
		Solve a one-step equation in context (addition, two-digit whole numbers).	SMMA_LO_01743
		Solve a one-step equation in context (subtraction, two-digit whole numbers).	SMMA_LO_01744
		Solve a one-step equation in context (division, two-digit whole numbers).	SMMA_LO_01745
		Solve a one-step equation in context (division, two-digit whole numbers).	SMMA_LO_01747
		Solve one-step equations (multiplication, fractions).	SMMA_LO_01795
		Solve one-step equations (subtraction fractions).	SMMA_LO_01796
		Solve a one-step equation (multiplication, decimals).	SMMA_LO_01797
		Solve for a, b, or c in a × b/c = d/e (combinations to 12 × 12).	SMMA_LO_01798
		Solve a one-step equation (fractions, multiplication and division).	SMMA_LO_01847
		Solve a one-step equations (fractions, addition and subtraction).	SMMA_LO_01868
		R: Identify the one-step equation that is a translation of the written phrase within a context.	SMMA_LO_01813

"R" denotes a learning object that enables students to achieve readiness for a standard. These learning objects reinforce prerequisite skills needed for understanding and mastery of the content described in the standard.

FL Standard	FL Standard Text	Item Description	Item ID
MAFS.6.EE.2.8	Write an inequality of the form x > c or x < c to represent a constraint or condition in a real-world or mathematical problem. Recognize that inequalities of the form x > c or x < c have infinitely many solutions; represent solutions of such inequalities on number line diagrams.	Write an inequality of the form x > c or x < c to represent a constraint in a real-world problem.	SMMA_LO_02064
		Write an inequality of the form x > c or x < c to represent a constraint in a real-world problem. Then represent the solution on a number line.	SMMA_LO_02065
MAFS.6.EE.3.9	Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation. For example, in a problem involving motion at constant speed, list and graph ordered pairs of distances and times, and write the equation d = 65t to represent the relationship between distance and time.	Identify an expression to describe the pattern generated by a table.	SMMA_LO_01741
		Complete a table given a two-step rule (single-digit whole numbers).	SMMA_LO_01750
		Complete a table given a two-step rule (whole numbers).	SMMA_LO_01751
		Generate a table of values given a two-step rule.	SMMA_LO_01756
		R: Complete an input/output table given a two-step rule; then plot the ordered pairs on coordinate grid.	SMMA_LO_01758
		R: Make a table and a graph when given a rule in the form y = ax or y = x + a.	SMMA_LO_02139
MAFS.6.G.1.1	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.	R: Multiply mixed numbers to determine the area of a rectangle or triangle; simplify if necessary.	SMMA_LO_00508
MAFS.6.G.1.2	Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths, and show that the volume is the same as would be found by multiplying the edge lengths of the prism. Apply the formulas V = l w h and V = b h to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems.	R: Identify geometric solids (prisms, pyramids, cones, or spheres).	SMMA_LO_00667
MAFS.6.G.1.4	Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems.	Identify the set of faces for a geometric solid.	SMMA_LO_00664
		Identify the net for a geometric solid.	SMMA_LO_00675
		Identify the net that forms a three-dimensional solid.	SMMA_LO_01772
		R: Identify faces, edges, and vertices of solids.	SMMA_LO_00632

"R" denotes a learning object that enables students to achieve readiness for a standard. These learning objects reinforce prerequisite skills needed for understanding and mastery of the content described in the standard.

FL Standard	FL Standard Text	Item Description	Item ID
MAFS.6.G.1.4	Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems.	R: Count the vertices, edges, or faces of a prism or pyramid.	SMMA_LO_00643
		R: Complete sentences about bases, faces, edges, and vertices of geometric solids.	SMMA_LO_00652
		R: Classify and sort three-dimensional solids based on attributes using formal geometric language.	SMMA_LO_02138
MAFS.6.NS.1.1	Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem. For example, create a story context for (2/3) ÷ (3/4) and use a visual fraction model to show the quotient; use the relationship between multiplication and division to explain that (2/3) ÷ (3/4) = 8/9 because 3/4 of 8/9 is 2/3. (In general, (a/b) ÷ (c/d) = ad/bc.) How much chocolate will each person get if 3 people share 1/2 lb of chocolate equally? How many 3/4-cup servings are in 2/3 of a cup of yogurt? How wide is a rectangular strip of land with length 3/4 mi and area 1/2 square mi?	Divide fractions; simplify if necessary.	SMMA_LO_00487
		Divide a fraction by a mixed number; simplify if necessary.	SMMA_LO_00491
		Divide a whole number by a fraction.	SMMA_LO_00492
		Divide a mixed number by a whole number; simplify if necessary.	SMMA_LO_00502
		Divide fractions; simplify.	SMMA_LO_00512
		Divide a fraction by a fraction; simplify if necessary.	SMMA_LO_01788
		Divide a mixed number by a fraction; simplify if necessary.	SMMA_LO_01789
		Divide a mixed number by a mixed number; simplify if necessary.	SMMA_LO_01790
MAFS.6.NS.2.2	Fluently divide multi-digit numbers using the standard algorithm.	Divide using the long division algorithm (three-digit number, two-digit divisor, remainder).	SMMA_LO_00304
		Extend an iterative pattern.	SMMA_LO_01754
		R: Estimate the quotient in a long division problem (three-digit dividend, two-digit divisor, remainder).	SMMA_LO_00301
MAFS.6.NS.2.3	Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.	Align the decimal numbers for a vertical addition problem; then solve (to thousandths).	SMMA_LO_00226
		Align the decimal numbers for a vertical subtraction problem; then solve (to thousandths).	SMMA_LO_00228
		Align the decimal numbers in a vertical subtraction problem; then solve (decimals to thousandths).	SMMA_LO_00233
		Multiply decimals (to thousandths x hundredths).	SMMA_LO_00234
		Subtract decimals with regrouping (to ten-thousandths).	SMMA_LO_00243
		Multiply decimals (to ten-thousandths x ten-thousandths).	SMMA_LO_00244
		Move the decimal point in the divisor and dividend in a long division problem.	SMMA_LO_00247
		Divide a decimal by a whole number.	SMMA_LO_00248

"R" denotes a learning object that enables students to achieve readiness for a standard. These learning objects reinforce prerequisite skills needed for understanding and mastery of the content described in the standard.

FL Standard	FL Standard Text	Item Description	Item ID
MAFS.6.NS.2.3	Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.	Move the decimal point in the divisor and dividend in a long division problem; then find the quotient.	SMMA_LO_00249
		Find a decimal number that is either greater than or less than two decimal numbers.	SMMA_LO_01118
		Add the decimal numbers provided on a data table.	SMMA_LO_01785
		Subtract the decimal numbers provided on a data table.	SMMA_LO_01786
MAFS.6.NS.2.4	Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers 1–100 with a common factor as a multiple of a sum of two whole numbers with no common factor. For example, express 36 + 8 as 4 (9 + 2).	Given the prime factorization of two numbers, find the common multiple.	SMMA_LO_01108
		Find the greatest common factor for two to three numbers.	SMMA_LO_01110
		Find the least common multiple of two or three numbers.	SMMA_LO_01112
		R: Using a factor tree, find the prime factors of a number (2 to 32).	SMMA_LO_01087
		R: Identify a common factor of two numbers (4 to 81).	SMMA_LO_01088
		R: Identify the common multiples for two to three numbers (2 to 20).	SMMA_LO_01096
MAFS.6.NS.3.5	Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.	Read the temperature on a thermometer to nearest degree (-10 to 10 degrees).	SMMA_LO_00804
		Read and interpret data in a table to determine the time it would take for skin to freeze.	SMMA_LO_01314
		Read and interpret data in a table to determine the time it would take for skin to freeze.	SMMA_LO_01315
		Use positive and negative numbers together to represent quantities having opposite directions or values.	SMMA_LO_02066
		R: Evaluate -(a + b), where 9 < a < 19, 1 < b < 9.	SMMA_LO_00127
		R: Read a thermometer to the nearest 10 degrees (Fahrenheit).	SMMA_LO_00768
MAFS.6.NS.3.6a	Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself, e.g., –(–3) = 3, and that 0 is its own opposite.	Evaluate the expression -(-a), where a has values 1 to 99.	SMMA_LO_01518
MAFS.6.NS.3.6b	Understand signs of numbers in ordered pairs as indicating locations in quadrants of the coordinate plane; recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes.	Given two points, describe how the points are related: reflected across the x-axis, reflected across the y-axis, or reflected across both axes.	SMMA_LO_02108

"R" denotes a learning object that enables students to achieve readiness for a standard. These learning objects reinforce prerequisite skills needed for understanding and mastery of the content described in the standard.

FL Standard	FL Standard Text	Item Description	Item ID
MAFS.6.NS.3.6c	Find and position integers and other rational numbers on a horizontal or vertical number line diagram; find and position pairs of integers and other rational numbers on a coordinate plane.	Locate the missing integer on a number line (-3 to -12).	SMMA_LO_00101
MAFS.6.NS.3.7a	Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram. For example, interpret –3 > –7 as a statement that –3 is located to the right of –7 on a number line oriented from left to right.	Complete statements of order for rational numbers in real-world contexts.	SMMA_LO_02110
		R: Compare hundredths to multiples of ¼.	SMMA_LO_00209
		R: Determine the least or greatest integer (-10 to 10).	SMMA_LO_01102
MAFS.6.NS.3.7b	Write, interpret, and explain statements of order for rational numbers in real-world contexts. For example, write –3°C > –7°C to express the fact that –3°C is warmer than –7°C.	Compare rational numbers in real-world contexts.	SMMA_LO_02109
		Complete statements of order for rational numbers in real-world contexts.	SMMA_LO_02110
MAFS.6.NS.3.7c	Understand the absolute value of a rational number as its distance from 0 on the number line; interpret absolute value as magnitude for a positive or negative quantity in a real-world situation. For example, for an account balance of –30 dollars, write |–30| = 30 to describe the size of the debt in dollars.	Identify absolute value as a distance from zero on a number line.	SMMA_LO_01823
		Evaluate the absolute value of a number.	SMMA_LO_01824
MAFS.6.NS.3.7d	Distinguish comparisons of absolute value from statements about order. For example, recognize that an account balance less than –30 dollars represents a debt greater than 30 dollars.	Compare the absolute values of positive and negative quantities in a real-world situation.	SMMA_LO_02111
MAFS.6.NS.3.8	Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate.	Graph a set of ordered pairs from a table on a coordinate plane.	SMMA_LO_01809
		Graph a set of ordered pairs from a table on a coordinate plane.	SMMA_LO_01810
		Graph points on a coordinate plane based on a real-world context.	SMMA_LO_02112
		Find distances between points with the same first coordinate or the same second coordinate by using coordinates and absolute value.	SMMA_LO_02113
MAFS.6.RP.1.1	Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. For example, "The ratio of wings to beaks in the bird house at the zoo was 2:1, because for every 2 wings there was 1 beak." "For every vote candidate A received, candidate C received nearly three votes."	Identify the ratio.	SMMA_LO_01712
		Write a ratio in three different forms.	SMMA_LO_01825

"R" denotes a learning object that enables students to achieve readiness for a standard. These learning objects reinforce prerequisite skills needed for understanding and mastery of the content described in the standard.

FL Standard	FL Standard Text	Item Description	Item ID
MAFS.6.RP.1.2	Understand the concept of a unit rate a/b associated with a ratio a:b with b ≠ 0, and use rate language in the context of a ratio relationship. For example, "This recipe has a ratio of 3 cups of flour to 4 cups of sugar, so there is 3/4 cup of flour for each cup of sugar." "We paid $75 for 15 hamburgers, which is a rate of $5 per hamburger."	Find the unit price of an item (products 2 × 6 to 25 × 32).	SMMA_LO_00830
		Identify two unit rates for a given word problem.	SMMA_LO_02114
MAFS.6.RP.1.3a	Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios.	Find missing values in a table that represents a proportional relationship, and plot the pairs of values on the coordinate plane.	SMMA_LO_02115
		Complete a comparison statement based on the ratios in two tables.	SMMA_LO_02116
MAFS.6.RP.1.3b	Solve unit rate problems including those involving unit pricing and constant speed. For example, if it took 7 hours to mow 4 lawns, then at that rate, how many lawns could be mowed in 35 hours? At what rate were lawns being mowed?	Solve time and distance problems (whole numbers).	SMMA_LO_00842
		Solve a proportion problem in context.	SMMA_LO_01284
		Given the rate and time, find the distance.	SMMA_LO_01575
		Find the number of hours worked given the hourly rate and total earned.	SMMA_LO_01625
		Find the amount of an ingredient needed to make two, three, or four times a recipe.	SMMA_LO_01627
		Find the total money earned, given the number of hours worked and the hourly rate.	SMMA_LO_01630
		Solve a problem in context using proportions.	SMMA_LO_01635
MAFS.6.RP.1.3c	Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent.	Find a percent of a money amount ($0.80 to $10.80).	SMMA_LO_00270
		Find a percent of a number (the percent is greater than or equal to 100).	SMMA_LO_00275
		Find the percent given the whole and the part.	SMMA_LO_00276
		Find the whole given the percent and the part.	SMMA_LO_00277
		Determine the percent (100 total items).	SMMA_LO_01713
		Express a fraction as a percent (denominator is 100).	SMMA_LO_01714
		R: Identify equivalent representations of numbers.	SMMA_LO_01114
MAFS.6.RP.1.3d	Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities.	Convert measurement units either by making a table or by multiplying by a unit rate.	SMMA_LO_02117

"R" denotes a learning object that enables students to achieve readiness for a standard. These learning objects reinforce prerequisite skills needed for understanding and mastery of the content described in the standard.

FL Standard	FL Standard Text	Item Description	Item ID
MAFS.6.SP.2.4	Display numerical data in plots on a number line, including dot plots, histograms, and box plots.	Find the five values (upper and lower extremes, median, and upper and lower quartiles) from a set of data that are needed to create a box-and-whiskers plot.	SMMA_LO_01199
		Identify the box-and-whiskers plot that matches a given set of data.	SMMA_LO_01201
		R: Identify data sets that match the data represented in a given box-and-whiskers plot.	SMMA_LO_01202
MAFS.6.SP.2.5c	Summarize numerical data sets in relation to their context, such as by: Giving quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered.	Find the average of 3 numbers.	SMMA_LO_00151
		Determine a student's grade point average based on five grades.	SMMA_LO_00179
		Determine the mean of a data set of three to five customary weights or metric masses.	SMMA_LO_00836
		Find the range of a set of data.	SMMA_LO_01166
		Identify the median of a data set with an odd number of items.	SMMA_LO_01168
		Identify the median of a data set with an even number of items and the two middle values are not equal.	SMMA_LO_01170
		Determine the range of a set of data represented in a line graph.	SMMA_LO_01176
		Determine the range, mean, median, and mode (one-digit numbers).	SMMA_LO_01210
		Determine the mode of a data set.	SMMA_LO_01719
		Determine the median of a data set.	SMMA_LO_01726
		Determine the mean of a data set.	SMMA_LO_01727
		Determine the range of a set of data.	SMMA_LO_01766
		Determine the median of a set of data.	SMMA_LO_01768
		R: Identify the median of a data set with an even number of items and the two middle values are equal.	SMMA_LO_01169
		R: Solve a problem in context by finding the average (mean) of three to seven numbers.	SMMA_LO_01619
MAFS.7.EE.1.1	Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.	Apply properties of operations to add two linear expressions.	SMMA_LO_02149
MAFS.7.EE.1.2	Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related.	Identify the equivalent expression for a fraction, whole number, or a mixed numbers being divided by a fraction, a whole number, or a mixed number.	SMMA_LO_00511
		Rewrite an expression from context by factoring and combining like terms.	SMMA_LO_02150

"R" denotes a learning object that enables students to achieve readiness for a standard. These learning objects reinforce prerequisite skills needed for understanding and mastery of the content described in the standard.

FL Standard	FL Standard Text	Item Description	Item ID
MAFS.7.EE.2.3	Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies. For example: If a woman making $25 an hour gets a 10% raise, she will make an additional 1/10 of her salary an hour, or $2.50, for a new salary of $27.50. If you want to place a towel bar 9 3/4 inches long in the center of a door that is 27 1/2 inches wide, you will need to place the bar about 9 inches from each edge; this estimate can be used as a check on the exact computation.	Solve for a, b, c, or d in a/b × c/d = e/f (combinations to 12 × 12).	SMMA_LO_00372
		Solve for a, b, or c in a/b ÷ c = d/e (combinations to 12 × 12).	SMMA_LO_00375
		Solve for a, b, c, or d in a/b ÷ c/d = e/f.	SMMA_LO_00377
		R: Find an equivalent mixed number for a decimal (tenths to ten thousandths).	SMMA_LO_00255
		R: Determine the decimal and percent that is represented by a model (base-ten blocks, hundredths).	SMMA_LO_00256
MAFS.7.EE.2.4a	Solve word problems leading to equations of the form px + q = r and p(x + q) = r, where p, q, and r are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. For example, the perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?	Solve for a or c in a/b + c/b = d/b (sums 2/3 to 11/12).	SMMA_LO_00356
		Solve for a or c in (a/b – c/b = d/b (minuends 2/3 to 11/12).	SMMA_LO_00360
		Solve for a or c in a/b – c/b = d/b (improper fractions, minuends 4/3 to 35/12).	SMMA_LO_00362
		Solve for a or c in a/b + c/b = d/b (improper fractions, sums 4/3 to 35/12).	SMMA_LO_00364
		Complete the steps to solve for x in ax ÷ b = c in steps.	SMMA_LO_00382
		Complete the steps to solve for x in ax + b = c.	SMMA_LO_00383
		Solve for x in ax + b = c.	SMMA_LO_00384
		Identify the equation that translates the written phrase (ax + b = c).	SMMA_LO_00385
		Identify the equation that translates the written phrase (ax + b = c).	SMMA_LO_00386
		Solve for a in a + b = c (a is from -20 to -1).	SMMA_LO_00388
		Solve for a in a - b = c (differences from -19 to 11).	SMMA_LO_00389
		Solve for x in ax = b (products from -(4 x 4) to -(9 x 9)).	SMMA_LO_00390
		Solve for a in a/b = c (products from -(4 x 4) to -(9 x 9)).	SMMA_LO_00391
		Complete the steps to solve for x in ax + b = c (x is from -9 to -1).	SMMA_LO_00392
		Complete the steps to solve for x in ax - b = c (x is from -9 to 2).	SMMA_LO_00393
		Complete the steps to solve for x in ax - b = c (x is from -9 to 9).	SMMA_LO_00394

"R" denotes a learning object that enables students to achieve readiness for a standard. These learning objects reinforce prerequisite skills needed for understanding and mastery of the content described in the standard.

FL Standard	FL Standard Text	Item Description	Item ID
MAFS.7.EE.2.4a	Solve word problems leading to equations of the form px + q = r and p(x + q) = r, where p, q, and r are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. For example, the perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?	Solve for x in –x = a (numbers from –99 to 99).	SMMA_LO_00395
		Complete the steps to solve for x in a - x = b.	SMMA_LO_00396
		Determine whether a given value for x is a solution for ax + b = c (x is from –9 to 9).	SMMA_LO_00397
		Solve for a two-step equation in context.	SMMA_LO_01638
		Solve a one-step equation (multiplication and division, integers).	SMMA_LO_01800
		Solve a one-step equation (addition and subtraction, one-digit integers).	SMMA_LO_01801
		Solve a two-step equation (integers).	SMMA_LO_01846
		Solve a one-step equation (fractions, addition and subtraction).	SMMA_LO_01848
		Solve a one-step equation (decimals, multiplication and division).	SMMA_LO_01849
		Solve a two-step equation (fractions, multiplication).	SMMA_LO_01850
		Solve a two-step equation (decimals).	SMMA_LO_01851
		R: Identify the two-step equation that is a translation of the written phrase within a context.	SMMA_LO_01814
		R: Identify the equation translated from a written phrase.	SMMA_LO_01852
MAFS.7.EE.2.4b	Solve word problems leading to inequalities of the form px + q > r or px + q < r, where p, q, and r are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem. For example: As a salesperson, you are paid $50 per week plus $3 per sale. This week you want your pay to be at least $100. Write an inequality for the number of sales you need to make, and describe the solutions.	Write an inequality of the form px + q > r or px + q < r to represent a constraint in a real-world problem.	SMMA_LO_02083
		Solve an inequality of the form px + q > r or px + q < r; then graph the solution on a number line.	SMMA_LO_02084
		R: Identify the inequality translated from a written phrase.	SMMA_LO_01853
		R: Identify the written phrase translated from an inequality.	SMMA_LO_01869
		R: Identify the written phrase translated from an inequality.	SMMA_LO_01870
MAFS.7.G.1.1	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.	Identify the scale factor in similar shapes to find the missing corresponding sides.	SMMA_LO_00513
		Determine distances from scale drawings (inches to miles, cm to km).	SMMA_LO_00815
		Interpret scale drawings (metric and customary units of length).	SMMA_LO_00846
MAFS.7.G.1.3	Describe the two-dimensional figures that result from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids.	Identify the cross section of a three-dimensional figure.	SMMA_LO_00668
MAFS.7.G.2.4	Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle.	Find the circumference, given the length of the diameter or the radius (pi = 3.14).	SMMA_LO_00828
		Measure the diameter of a circle, and then determine the circumference.	SMMA_LO_01779
		Measure the radius of a circle, and then determine the circumference.	SMMA_LO_01780

"R" denotes a learning object that enables students to achieve readiness for a standard. These learning objects reinforce prerequisite skills needed for understanding and mastery of the content described in the standard.

FL Standard	FL Standard Text	Item Description	Item ID
MAFS.7.G.2.4	Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle.	Measure the diameter of a circle, and then determine the area.	SMMA_LO_01781
		Measure the radius of a circle, and then determine the area.	SMMA_LO_01783
		Determine the most accurate representation of the circumference of a circle.	SMMA_LO_01784
		Given the radius, find the circumference of a circle within context.	SMMA_LO_01855
		Given the diameter, find the circumference of a circle within context.	SMMA_LO_01856
		R: Identify parts of a circle (center, radius, and diameter).	SMMA_LO_00633
		R: Identify a part of a circle (center, radius, chord, or diameter).	SMMA_LO_00653
MAFS.7.G.2.5	Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.	Establish that vertical angles are congruent.	SMMA_LO_00670
		Find the measure of the missing angle in a diagram.	SMMA_LO_00674
		Solve a problem involving equal angle measures.	SMMA_LO_00677
MAFS.7.G.2.6	Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.	Find the area of a triangle (2 to 72 square inches).	SMMA_LO_00176
		Use a formula to find the area of a parallelogram.	SMMA_LO_00824
		Find the area of a triangle using a formula.	SMMA_LO_00827
		Find the volume of a rectangular or triangular prism.	SMMA_LO_00838
		Choose the best estimate for the volume of a rectangular prism.	SMMA_LO_00848
		Solve for a variable in the formula for volume of a rectangular prism (whole numbers and mixed numbers).	SMMA_LO_01817
		Calculate the volume of a rectangular prism; then convert the cubic feet or cubic meters into gallons or liters.	SMMA_LO_01819
MAFS.7.NS.1.1a	Describe situations in which opposite quantities combine to make 0. For example, a hydrogen atom has 0 charge because its two constituents are oppositely charged.	Divide integers (combinations 6 x 10 to -9 x 12, dividend or divisor is negative).	SMMA_LO_00316
		Divide integers (combinations 4 x 6 to 12 x 12).	SMMA_LO_00317
		Divide integers (combinations 6 x 13 to 9 x 19, all signs).	SMMA_LO_00319
		Identify fractions that are equivalent to a given negative fraction.	SMMA_LO_02087
MAFS.7.NS.1.1b	Understand p + q as the number located a distance |q| from p, in the positive or negative direction depending on whether q is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts.	Find the missing one-digit addend in a number sentence (positive or negative integers, sums are 0).	SMMA_LO_00102
		Add two negative integers (sums -20 to 0).	SMMA_LO_00107
		Add a positive and a negative integer (one-digit addends, sums -9 to 9).	SMMA_LO_00108
		Add two integers using addition facts (addends -10 to 10, sums -20 to 20).	SMMA_LO_00109
		Evaluate -(-a + b), where 1 < a, b < 9.	SMMA_LO_00128

"R" denotes a learning object that enables students to achieve readiness for a standard. These learning objects reinforce prerequisite skills needed for understanding and mastery of the content described in the standard.

FL Standard	FL Standard Text	Item Description	Item ID
MAFS.7.NS.1.1b	Understand p + q as the number located a distance |q| from p, in the positive or negative direction depending on whether q is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts.	Find a missing number in an arithmetic sequence (-200 to 200, intervals 3 to 8).	SMMA_LO_01115
		Represent addition of integers on a number line.	SMMA_LO_02085
		R: Determine if the sum is positive or negative (one- and two-digit addends).	SMMA_LO_00106
MAFS.7.NS.1.1c	Understand subtraction of rational numbers as adding the additive inverse, p – q = p + (–q). Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts.	Locate an integer on the number line (differences -5 to 1).	SMMA_LO_01505
		Subtract integers (minuends 0 to 10, subtrahends 1 to 10, differences negative).	SMMA_LO_01506
		Subtract integers (minuends 0 to 19, subtrahends 1 to 20, negative differences).	SMMA_LO_01507
		Subtract integers (minuends 0 to 19, subtrahends 1 to 20, negative differences).	SMMA_LO_01508
		Subtract integers (minuends 0 to 20, subtrahends 1 to 40).	SMMA_LO_01510
		Subtract integers using a number line.	SMMA_LO_01511
		Subtract integers (minuends -20 to -10, subtrahends 0 to 10).	SMMA_LO_01513
		Identify a - b as equivalent to a + (-b), where a and b are 1 to 20.	SMMA_LO_01514
		Identify -a - b as equivalent to -a + (-b) (minuends -20 to -1).	SMMA_LO_01515
		Subtract integers (minuends -20 to 20, subtrahends 0 to -20).	SMMA_LO_01516
		Identify a - (-b) as equivalent to a + b (minuends 1 to 10).	SMMA_LO_01517
		Subtract an integer from 0 (subtrahends -20 to 20).	SMMA_LO_01519
		Subtract integers (minuends 0 to 20, subtrahends -10 to -1).	SMMA_LO_01520
		Identify -a - (-b) as equivalent to -a + b (minuends and subtrahends -9 to 9).	SMMA_LO_01521
		Subtract integers (minuends -10 to 0, subtrahends -10 to -1).	SMMA_LO_01522
		Subtract integers (minuends -10 to 10, subtrahends -10 to 10).	SMMA_LO_01525
		Subtract integers (minuends -20 to 20, subtrahends -20 to 20).	SMMA_LO_01526
		Identify -(a - b) as equivalent to -a + b with variables.	SMMA_LO_01529
		Identify -(-a - b) as equivalent to a + b with variables.	SMMA_LO_01530
		Evaluate the expression -(a - b), where a and b have values from 1 to 9.	SMMA_LO_01531
		Evaluate the expression -(-a - b), where a and b have values from 1 to 9.	SMMA_LO_01532

"R" denotes a learning object that enables students to achieve readiness for a standard. These learning objects reinforce prerequisite skills needed for understanding and mastery of the content described in the standard.

FL Standard	FL Standard Text	Item Description	Item ID
MAFS.7.NS.1.1c	Understand subtraction of rational numbers as adding the additive inverse, p – q = p + (–q). Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts.	Describe situations that can be represented by opposite quantities.	SMMA_LO_02086
		Represent subtraction of integers on a number line.	SMMA_LO_02152
		Represent addition and subtraction of rational numbers (fractions) on a number line.	SMMA_LO_02153
		Represent addition and subtraction of rational numbers (decimals) on a number line.	SMMA_LO_02154
MAFS.7.NS.1.1d	Apply properties of operations as strategies to add and subtract rational numbers.	Identify an equivalent expression of commutativity for addition of integers.	SMMA_LO_00114
		Find the sum of four integers when two are additive inverses (a, b, c, and d have absolute values 1 to 20).	SMMA_LO_00119
		Compare two expressions using the additive inverse property.	SMMA_LO_00120
		R: Identify an equivalent expression with integers (four one-digit addends).	SMMA_LO_00117
MAFS.7.NS.1.2a	Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the distributive property, leading to products such as (–1)(–1) = 1 and the rules for multiplying signed numbers. Interpret products of rational numbers by describing real-world contexts.	Identify an equivalent variable expression (-(a + b) = -a + (-b)).	SMMA_LO_00124
		Identify a x (b - c) as equivalent to (a x b) - (a x c).	SMMA_LO_00130
		Multiply a negative integer by a positive integer (products -144 to -4).	SMMA_LO_00914
		Multiply two negative integers (products 4 to 144).	SMMA_LO_00915
		Determine the sign of the products of two integers (one and two-digit integers).	SMMA_LO_00916
		Multiply a negative integer by a positive integer (products -(20 × 2) to -(90 × 9)).	SMMA_LO_00917
		Determine the sign of the product of four factors.	SMMA_LO_00919
MAFS.7.NS.1.2b	Understand that integers can be divided, provided that the divisor is not zero, and every quotient of integers (with non-zero divisor) is a rational number. If p and q are integers, then –(p/q) = (–p)/q = p/(–q). Interpret quotients of rational numbers by describing real-world contexts.	Interpret quotients of rational numbers by describing real-world contexts.	SMMA_LO_02088
		Interpret the meaning of a point on the graph of a proportional relationship in terms of the situation; use this information to answer questions about the situation.	SMMA_LO_02089
MAFS.7.NS.1.2c	Apply properties of operations as strategies to multiply and divide rational numbers.	Identify -(a + b) as equivalent to -a - b, where a and b are 1 to 9.	SMMA_LO_00118
		Identify -(a - b) as equivalent to -a + b (a and b from 1 to 9).	SMMA_LO_01523
		Identify -(-a - b) as equivalent to a + b (a and b from 1 to 9).	SMMA_LO_01524
		Identify a x (b - c) as equivalent to (a x b) - (a x c) with variables.	SMMA_LO_01533
		Identify a x (b - c) as equivalent to (a x b) - (a x c).	SMMA_LO_01534

"R" denotes a learning object that enables students to achieve readiness for a standard. These learning objects reinforce prerequisite skills needed for understanding and mastery of the content described in the standard.

FL Standard	FL Standard Text	Item Description	Item ID
MAFS.7.NS.1.2d	Convert a rational number to a decimal using long division; know that the decimal form of a rational number terminates in 0s or eventually repeats.	Divide to convert from a fraction to a decimal equivalent.	SMMA_LO_00258
		Express a mixed number as a decimal.	SMMA_LO_00260
		R: Identify the division problem that can be used to rewrite a fraction as a decimal.	SMMA_LO_00257
MAFS.7.NS.1.3	Solve real-world and mathematical problems involving the four operations with rational numbers.	Find the missing two-digit addend in a number sentence (sums are 0).	SMMA_LO_00103
		Find the missing two-digit addend in a number sentence (sums are 0).	SMMA_LO_00104
		Find the missing negative addend in a number sentence (sums 1 to 8).	SMMA_LO_00105
		Find the missing addend in a number sentence (missing addends -10 to 10, sums -20 to 20).	SMMA_LO_00110
		Add three integers (sum -10 to 10).	SMMA_LO_00111
		Add integers in an associative expression ((a + b) + c, three addends -10 to 10).	SMMA_LO_00113
		Identify -(a + b) as equivalent to -a + (-b), where a and b are 1 to 9.	SMMA_LO_00115
		Identify -(a + b) as equivalent to -a - b, where a and b are 1 to 9.	SMMA_LO_00116
		Add two integers (-20 to 20).	SMMA_LO_00121
		Find the missing addend in a number sentence (sums -20 to 20).	SMMA_LO_00122
		Find the missing addend in a number sentence (three addends, -10 to 10).	SMMA_LO_00123
		Find the missing dividend or divisor (combinations 2 x 13 to 5 x 19).	SMMA_LO_00309
		Finding the missing dividend or divisor (combinations 6 x 13 to 9 x 19).	SMMA_LO_00310
		Find the missing dividend or divisor in a number sentence (combinations 7 x 13 to 9 x 19, all signs).	SMMA_LO_00320
		Solve for a, b, or c in a/b ÷ c = d/e (combinations to 12 × 12).	SMMA_LO_00375
		Solve for a, b, c, or d in a/b ÷ c/d = e/f.	SMMA_LO_00377
		Estimate the missing factor in a number sentence (round to the nearest ten, products 2,010 to 81,090).	SMMA_LO_00913
		Find the missing positive or negative factor in a number sentence.	SMMA_LO_00918
		Multiply three integers (one-digit factors with absolute values 2 to 10).	SMMA_LO_00920
		Find a missing number in a geometric sequence (first number 1 to 5, factors 2 to 5).	SMMA_LO_01117
		Find the missing subtrahend in a number sentence (minuends 0 to 10, subtrahends 2 to 11, negative differences).	SMMA_LO_01509
		Find the missing subtrahend in a number sentence (minuends -9 to 0, differences -9 to 0).	SMMA_LO_01512

"R" denotes a learning object that enables students to achieve readiness for a standard. These learning objects reinforce prerequisite skills needed for understanding and mastery of the content described in the standard.

FL Standard	FL Standard Text	Item Description	Item ID
MAFS.7.NS.1.3	Solve real-world and mathematical problems involving the four operations with rational numbers.	Evaluate a numerical expression (a) + (b) - (c), where a, b, and c have values from -9 to 9.	SMMA_LO_01527
		Compare sums and difference of positive and negative integers (-5 to 5).	SMMA_LO_01528
		Solve a two-step addition problem to find a person's age 5 to 20 years from now.	SMMA_LO_01631
		Find the final temperature given the initial temperature and the temperature increase.	SMMA_LO_01632
		Find three consecutive integers when given their sum.	SMMA_LO_01639
		Extend an arithmetic sequence for three more terms.	SMMA_LO_01803
		Evaluate an algebraic expression with exponents (integers -10 to 10).	SMMA_LO_01818
		Evaluate an algebraic expression (integers -10 to 10).	SMMA_LO_01842
		Evaluate an algebraic expression with three variables (-5.9 to 5.9).	SMMA_LO_01843
		Solve a one-step equation (two-digit integers, addition and subtraction).	SMMA_LO_01844
		Solve a one-step equation (integers, multiplication and division).	SMMA_LO_01845
MAFS.7.RP.1.1	Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units. For example, if a person walks 1/2 mile in each 1/4 hour, compute the unit rate as the complex fraction 1/2/1/4 miles per hour, equivalently 2 miles per hour.	Identify the correct proportion for the context, and then solve.	SMMA_LO_01826
MAFS.7.RP.1.2a	Decide whether two quantities are in a proportional relationship, e.g., by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin.	Form a proportion that can be used to solve for the height of an object.	SMMA_LO_00660
		Determine the fraction needed to complete the proportion.	SMMA_LO_01827
MAFS.7.RP.1.2b	Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.	Identify the unit rate given a table, a graph, an equation, a diagram, or a word problem.	SMMA_LO_02001
		Identify the constant of proportionality given a table, a graph, an equation, a diagram, or a word problem.	SMMA_LO_02002
MAFS.7.RP.1.2c	Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.	Identify an equation that can be used to solve a two-step problem in context.	SMMA_LO_01297
		Given the number of kilowatt-hours used and a price, find the total cost of power.	SMMA_LO_01336
		Convert light years to kilometers and kilometers to light years.	SMMA_LO_01339
MAFS.7.RP.1.2d	Explain what a point (x, y) on the graph of a proportional relationship means in terms of the situation, with special attention to the points (0, 0) and (1, r) where r is the unit rate.	Count objects by pairing each object with one number 1 to 10; determine how many objects there are.	SMMA_LO_02092

"R" denotes a learning object that enables students to achieve readiness for a standard. These learning objects reinforce prerequisite skills needed for understanding and mastery of the content described in the standard.

FL Standard	FL Standard Text	Item Description	Item ID
MAFS.7.RP.1.3	Use proportional relationships to solve multistep ratio and percent problems. Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error.	Find the total cost, given an amount and the sales tax percentage.	SMMA_LO_00178
		Find the percent of increase.	SMMA_LO_00278
		Identify a correct expression to solve a problem about sales tax.	SMMA_LO_00845
		Find the number of grams that represents a percentage of the total weight (whole numbers).	SMMA_LO_01636
		Find total earnings for two to four weeks given the weekly salary, commission percentage, and total sales (whole number percents).	SMMA_LO_01637
		Solve for a variable in the formula for simple interest (whole numbers and decimals).	SMMA_LO_01805
MAFS.7.SP.1.2	Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions. For example, estimate the mean word length in a book by randomly sampling words from the book; predict the winner of a school election based on randomly sampled survey data. Gauge how far off the estimate or prediction might be.	Make predictions based on a sample.	SMMA_LO_01223
MAFS.7.SP.2.4	Use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations. For example, decide whether the words in a chapter of a seventh-grade science book are generally longer than the words in a chapter of a fourth-grade science book.	Find and compare the average variation of two sets of data.	SMMA_LO_01221
MAFS.7.SP.3.5	Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event, a probability around 1/2 indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event.	Determine whether a chronological event is certain or impossible.	SMMA_LO_01137
		Given information about a current situation, classify a future event as being certain, possible, or impossible.	SMMA_LO_01139
		Given a sentence describing an observed event, label a future occurrence as certain, possible, or impossible.	SMMA_LO_01143
		Within the context of selecting without replacement from a cup containing three balls, each of a different color, label a given event prior to each selection as certain, possible, or impossible.	SMMA_LO_01147
		Create a set of colored balls whose contents are specified by whether it is certain, possible, or impossible to select a particular color.	SMMA_LO_01153

"R" denotes a learning object that enables students to achieve readiness for a standard. These learning objects reinforce prerequisite skills needed for understanding and mastery of the content described in the standard.

FL Standard	FL Standard Text	Item Description	Item ID
MAFS.7.SP.3.5	Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event, a probability around 1/2 indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event.	Given a graphical representation of an urn containing balls of three colors, determine qualitatively which event is more probable to occur (5 to 8 times as many balls of one color as of the other color).	SMMA_LO_01157
		Given a graphical representation of an urn containing balls of two colors, determine qualitatively which color is more probable to be randomly selected (2 to 4 times as many balls of one color as of the other color).	SMMA_LO_01159
		Using a graphical representation of an urn and a set of balls of two colors, modify a random experiment so that the qualitative probability of getting one color is greater than that of getting the other color.	SMMA_LO_01161
		Given a graphical representation of an urn containing balls of three colors, determine qualitatively which event is more probable to occur.	SMMA_LO_01163
		Given the graphical representation of a bowl containing marbles of two colors, represent on a qualitative ordinal scale the probability of an event (6 to 11 marbles in the bowl).	SMMA_LO_01165
		Given a graphical representation of a bowl containing marbles of two colors, represent on a qualitative ordinal scale the probability of an event and its complement.	SMMA_LO_01171
		Given a graphical representation of two urns containing different compositions of balls of two colors, select the urn in which an event is qualitatively determined to have a high probability.	SMMA_LO_01173
		Express an event as a ratio of the number of favorable outcomes to the total number of outcomes (bowl containing marbles of two colors).	SMMA_LO_01179
		Determine the probability of an event.	SMMA_LO_01197
		Given a random experiment represented graphically by a spinner, prepare an equivalent random experiment using a representation based on an urn and colored balls.	SMMA_LO_01200
		Using a graphical representation of a bowl containing marbles of four colors, begin to apply the addition rule for computing the probabilities of inclusive classes using light and dark colored marbles.	SMMA_LO_01203
		Given a graphical representation of a spinner partitioned into sectors of different sizes, each containing one of several possible pictures, label events as certain or impossible or pairs of events as more, less, or equally likely.	SMMA_LO_01212

"R" denotes a learning object that enables students to achieve readiness for a standard. These learning objects reinforce prerequisite skills needed for understanding and mastery of the content described in the standard.

FL Standard	FL Standard Text	Item Description	Item ID
MAFS.7.SP.3.5	Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event, a probability around 1/2 indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event.	Given a graphical representation of two spinners, select the spinner for which a given event has the highest probability of occurring.	SMMA_LO_01216
		Given a coordinate grid to represent outcomes of tossing a pair of number cubes, compute theoretical probability of an event defined by the sum of a pair of outcomes.	SMMA_LO_01220
		Given information about a situation in which items are selected from a container without replacement, label the probabilities of given outcomes in a first and second selection.	SMMA_LO_01226
		Write a fraction to express the probability of an event.	SMMA_LO_01667
MAFS.7.SP.3.6	Approximate the probability of a chance event by collecting data on the chance process that produces it and observing its long-run relative frequency, and predict the approximate relative frequency given the probability. For example, when rolling a number cube 600 times, predict that a 3 or 6 would be rolled roughly 200 times, but probably not exactly 200 times.	Determine the event that is most or least likely; then conduct a simulation in which the results are recorded so that theoretical and experimental probability can be compared.	SMMA_LO_01738
MAFS.7.SP.3.7a	Develop a uniform probability model by assigning equal probability to all outcomes, and use the model to determine probabilities of events. For example, if a student is selected at random from a class, find the probability that Jane will be selected and the probability that a girl will be selected.	In the context of randomly selecting a card that has one of two pictures on it, compute the probability of each picture being selected from a set of cards (total of 4 to 7 cards).	SMMA_LO_01211
		In the context of randomly selecting a card that has a certain name on it, compute the probability of each name being selected from a set of cards.	SMMA_LO_01215
MAFS.7.SP.3.8	Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation.	R: Given a graphical representation of two spinners, count all the possible outcomes for spinning each spinner once.	SMMA_LO_01665
		R: Determine the number of arrangements that can be made from two groups with two items.	SMMA_LO_01717
		R: Determine the arrangements that can be made with a group of two and a group of three items.	SMMA_LO_01718
MAFS.7.SP.3.8a	Understand that, just as with simple events, the probability of a compound event is the fraction of outcomes in the sample space for which the compound event occurs.	Identify the probability of two independent outcomes, and then determine the probability of the combination of the two outcomes occurring simultaneously.	SMMA_LO_01224
		R: Given a graphical representation of a spinner, count the number of possible outcomes and complete a list of all the outcomes.	SMMA_LO_01209

"R" denotes a learning object that enables students to achieve readiness for a standard. These learning objects reinforce prerequisite skills needed for understanding and mastery of the content described in the standard.

FL Standard	FL Standard Text	Item Description	Item ID
MAFS.7.SP.3.8b	Represent sample spaces for compound events using methods such as organized lists, tables and tree diagrams. For an event described in everyday language (e.g., "rolling double sixes"), identify the outcomes in the sample space which compose the event.	Given a coordinate grid to represent outcomes of tossing a pair of number cubes, identify the point that represents a given pair of outcomes.	SMMA_LO_01218
		Given a coordinate grid to represent outcomes of tossing a pair of number cubes, identify all points that represent the sum given for a pair of outcomes.	SMMA_LO_01219
MAFS.8.EE.1.1	Know and apply the properties of integer exponents to generate equivalent numerical expressions. For example, $3^2 \times 3\text{-}5 = 3\text{-}3 = 1/3^3 = 1/27$	Multiply or divide two numbers with exponents (same base, exponents less than 18).	SMMA_LO_01104
		Find the missing exponent in a multiplication or division number sentence.	SMMA_LO_01111
MAFS.8.EE.1.2	Use square root and cube root symbols to represent solutions to equations of the form $x^2 = p$ and $x^3 = p$, where p is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that $\sqrt{2}$ is irrational.	Find the square root of a number using a calculator (numbers to 4000).	SMMA_LO_01120
MAFS.8.EE.1.3	Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small quantities, and to express how many times as much one is than the other. For example, estimate the population of the United States as 3 × 108 and the population of the world as 7 × 109, and determine that the world population is more than 20 times larger.	Write very small numbers in scientific notation.	SMMA_LO_02070
		Write very large numbers in scientific notation.	SMMA_LO_02071
		Compare numbers written in scientific notation.	SMMA_LO_02072
MAFS.8.EE.1.4	Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by technology.	Express a number in scientific notation (exponents 1 to 6).	SMMA_LO_01113
		Given the scientific notation, determine the standard notation of a number (the power of 10 has an exponent of 1 to 6).	SMMA_LO_01121
		Find the missing exponent for a number written in scientific notation (the exponent is 1 to 6).	SMMA_LO_01122
MAFS.8.EE.2.5	Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. For example, compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed.	Graph proportional relationships and interpret the unit rate as the slope of the graph.	SMMA_LO_02073
		Compare a proportional relationship represented as a graph to a proportional relationship represented as a table.	SMMA_LO_02074

"R" denotes a learning object that enables students to achieve readiness for a standard. These learning objects reinforce prerequisite skills needed for understanding and mastery of the content described in the standard.

FL Standard	FL Standard Text	Item Description	Item ID
MAFS.8.EE.2.6	Use similar triangles to explain why the slope m is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation y = mx for a line through the origin and the equation y = mx + b for a line intercepting the vertical axis at b.	Use similar triangles to explain why the slope m is the same between any two distinct points on a nonvertical line in the coordinate plane.	SMMA_LO_02075
		Derive the equation y = mx for a line through the origin, and y = mx + b for a line intercepting the vertical axis at b.	SMMA_LO_02076
MAFS.8.EE.3.7a	Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form x = a, a = a, or a = b results (where a and b are different numbers).	Transform a given multi-step equation into a simpler form.	SMMA_LO_02079
MAFS.8.EE.3.7b	Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms.	Generate and solve an equation with variables on both sides of the equal sign in a real-world context.	SMMA_LO_02145
MAFS.8.EE.3.8a	Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously.	Identify the solution to a system of linear equations by locating the point of intersection on its graph.	SMMA_LO_02080
MAFS.8.EE.3.8b	Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection. For example, 3x + 2y = 5 and 3x + 2y = 6 have no solution because 3x + 2y cannot simultaneously be 5 and 6.	If a system of linear equations has 0 or infinitely many solutions, solve it by inspection. If it has 1 solution, solve it either algebraically or by graphing.	SMMA_LO_02133
MAFS.8.EE.3.8c	Solve real-world and mathematical problems leading to two linear equations in two variables. For example, given coordinates for two pairs of points, determine whether the line through the first pair of points intersects the line through the second pair.	Model a real-world problem with a system of linear equations. Then solve it by locating the intersection point of the graphs of the two equations.	SMMA_LO_02134
MAFS.8.F.1.1	Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output.	Given a list of ordered pairs of a relation, identify two ordered pairs that show the relation is not a function.	SMMA_LO_01811
		Given a graph of a relation, identify two ordered pairs on the graph that show the relation is not a function.	SMMA_LO_01812
		Given a set of graphs of relations, identify which graphs represent functions.	SMMA_LO_01835

"R" denotes a learning object that enables students to achieve readiness for a standard. These learning objects reinforce prerequisite skills needed for understanding and mastery of the content described in the standard.

FL Standard	FL Standard Text	Item Description	Item ID
MAFS.8.F.1.1	Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output.	R: Identify the addition or subtraction rule of the function.	SMMA_LO_01682
		R: Identify the multiplication or division rule of the function.	SMMA_LO_01684
		R: Identify the one-step rule in the relation or function (addition and subtraction).	SMMA_LO_01722
		R: Identify the one-step rule in the relation or function (multiplication and division).	SMMA_LO_01723
		R: Generate a table of values given a rule.	SMMA_LO_01724
		R: Identify an expression to describe the pattern generated by a table.	SMMA_LO_01742
		R: Identify a two-step expression to describe the pattern generated by a table (input = 100).	SMMA_LO_01752
		R: Identify a two-step expression to describe the pattern generated by a table (input = 1000).	SMMA_LO_01753
		R: Complete an input/output table given a one-step rule; then plot the ordered pairs on a coordinate grid.	SMMA_LO_01757
		R: Complete a table of values and graph the equation of a quadratic function.	SMMA_LO_01836
		R: Complete a table of values and graph the equation of a linear function.	SMMA_LO_01837
MAFS.8.F.1.2	Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). For example, given a linear function represented by a table of values and a linear function represented by an algebraic expression, determine which function has the greater rate of change.	Identify the rate of change and the y-intercept of two linear functions, one represented graphically, and one represented either algebraically or in a table.	SMMA_LO_02101
		Identify the rate of change and the y-intercept of two linear functions, one represented in a verbal description, and one represented either graphically or algebraically.	SMMA_LO_02102
		Identify the rate of change and the y-intercept of two linear functions, one represented in a table, and one represented either algebraically or in a verbal description.	SMMA_LO_02103
MAFS.8.F.1.3	Interpret the equation y = mx + b as defining a linear function, whose graph is a straight line; give examples of functions that are not linear. For example, the function A = s² giving the area of a square as a function of its side length is not linear because its graph contains the points (1,1), (2,4) and (3,9), which are not on a straight line.	Identify if an equation is a linear or exponential function.	SMMA_LO_01828
		Identify if an equation is a linear or quadratic function.	SMMA_LO_01829
		Identify whether graphs are linear or quadratic.	SMMA_LO_01831
		Identify whether graphs are linear or nonlinear.	SMMA_LO_01832
		Identify if an equation is a linear or nonlinear function.	SMMA_LO_01833
		Determine if a table values represents a linear or nonlinear function.	SMMA_LO_01834
		Determine if a table values represents a linear or exponential function.	SMMA_LO_01881
		Determine if a table values represents a linear or quadratic function.	SMMA_LO_01882
		Identify the function that is represented by a table of values (linear and nonlinear).	SMMA_LO_01883

"R" denotes a learning object that enables students to achieve readiness for a standard. These learning objects reinforce prerequisite skills needed for understanding and mastery of the content described in the standard.

FL Standard	FL Standard Text	Item Description	Item ID
MAFS.8.F.2.4	Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two (x, y) values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.	Complete an input/output table and identify the algebraic equation that describes the one-step rule.	SMMA_LO_01806
		Complete an input/output table and identify the algebraic equation that describes the two-step rule.	SMMA_LO_01807
MAFS.8.F.2.5	Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally.	Identify whether graphs are linear or exponential.	SMMA_LO_01830
MAFS.8.G.1.1	Verify experimentally the properties of rotations, reflections, and translations.	R: Identify a figure as a slide, reflection (flip), or turn of another figure.	SMMA_LO_00599
		R: Identify congruent angles.	SMMA_LO_00637
		R: Identify a set of geometric figures that show a reflection (flip).	SMMA_LO_00648
		R: Identify a reflection, a rotation, and a translation of a geometric figure.	SMMA_LO_00665
		R: Identify a transformation as a slide, flip, or a turn.	SMMA_LO_01776
MAFS.8.G.1.1a	Verify experimentally the properties of rotations, reflections, and translations: Lines are taken to lines, and line segments to line segments of the same length.	Rotate a figure by 90, 180, or 270 degrees clockwise or counterclockwise on a coordinate plane.	SMMA_LO_02104
		Reflect a figure on a coordinate plane over the x-axis, the y-axis, or the line y = x.	SMMA_LO_02105
MAFS.8.G.1.1b	Verify experimentally the properties of rotations, reflections, and translations: Angles are taken to angles of the same measure.	Translate a figure on a coordinate plane.	SMMA_LO_02120
		Rotate a figure on a coordinate plane; verify properties of the rotation.	SMMA_LO_02121
MAFS.8.G.1.1c	Verify experimentally the properties of rotations, reflections, and translations: Parallel lines are taken to parallel lines.	Reflect a figure on a coordinate plane over the x-axis, the y-axis, or the line y = x; verify properties of the rotation.	SMMA_LO_02122
		Translate a figure on a coordinate plane; verify properties of the rotation.	SMMA_LO_02123
MAFS.8.G.1.2	Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations; given two congruent figures, describe a sequence that exhibits the congruence between them.	Given two congruent figures, transform one figure so that it lines up with the other. Then, identify the sequence of transformations used.	SMMA_LO_02124
		R: Identify the figure that is the same size and shape as a given figure.	SMMA_LO_00600
		R: Identify congruent figures on a geoboard.	SMMA_LO_00606

"R" denotes a learning object that enables students to achieve readiness for a standard. These learning objects reinforce prerequisite skills needed for understanding and mastery of the content described in the standard.

FL Standard	FL Standard Text	Item Description	Item ID
MAFS.8.G.1.3	Describe the effect of dilations, translations, rotations, and reflections on two-dimensional figures using coordinates.	Reflect a figure, find the coordinates of the reflected figure, and describe the effect of the reflection on the coordinates.	SMMA_LO_02125
		Determine the algebraic expression used to find the coordinates of the image of a figure under a dilation with the origin as the center of dilation.	SMMA_LO_02142
		R: Determine the missing coordinate of a vertex of a triangle in a transformation.	SMMA_LO_01736
MAFS.8.G.1.4	Understand that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two-dimensional figures, describe a sequence that exhibits the similarity between them.	Identify the polygon that is not similar to the others.	SMMA_LO_00645
		Identify the example that is a counterexample to a statement.	SMMA_LO_00649
		Identify similar triangles or rectangles on a geoboard.	SMMA_LO_00847
		R: Identify similar polygons.	SMMA_LO_00610
MAFS.8.G.1.5	Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles. For example, arrange three copies of the same triangle so that the sum of the three angles appears to form a line, and give an argument in terms of transversals why this is so.	Establish that alternate interior angles are congruent for parallel lines.	SMMA_LO_00672
		Arrange statements to write a proof of a fact about either the angle sum or the exterior angle of a triangle.	SMMA_LO_02126
		In a figure in which parallel lines are cut by a transversal, identify the transformations that would line one angle up with another angle. Then, describe the relationship between the two angles.	SMMA_LO_02129
		Determine whether or not a diagram gives enough information to determine whether or not two triangles are similar. If so, identify the triangles as similar or not similar.	SMMA_LO_02130
		R: Count the points of intersection of two or more lines (0 to 5 intersection points).	SMMA_LO_00635
MAFS.8.G.2.6	Explain a proof of the Pythagorean Theorem and its converse.	Explain a proof of the Pythagorean Theorem.	SMMA_LO_02131
		Explain a proof of the converse of the Pythagorean Theorem.	SMMA_LO_02132
MAFS.8.G.2.7	Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.	Find the measurement of the hypotenuse using the Pythagorean theorem. (2D)	SMMA_LO_01854
MAFS.8.G.2.8	Apply the Pythagorean Theorem to find the distance between two points in a coordinate system.	Given two points on a coordinate grid, draw a right triangle whose hypotenuse connects the two points. Then use the Pythagorean Theorem to find the distance between the two points.	SMMA_LO_02100
MAFS.8.G.3.9	Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems.	Use a formula to find the volume of a cylinder.	SMMA_LO_00839
		Use a formula to find the volume of a cone or a sphere.	SMMA_LO_00844

"R" denotes a learning object that enables students to achieve readiness for a standard. These learning objects reinforce prerequisite skills needed for understanding and mastery of the content described in the standard.

FL Standard	FL Standard Text	Item Description	Item ID
MAFS.8.NS.1.2	Use rational approximations of irrational numbers to compare the size of irrational numbers, locate them approximately on a number line diagram, and estimate the value of expressions (e.g., π^2). For example, by truncating the decimal expansion of √2, show that √2 is between 1 and 2, then between 1.4 and 1.5, and explain how to continue on to get better approximations.	Drag rational and irrational values to their correct positions on a number line.	SMMA_LO_02141
MAFS.8.SP.1.1	Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.	Identify positive, negative, or no association for sets of actual data.	SMMA_LO_01222
MAFS.8.SP.1.3	Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept. For example, in a linear model for a biology experiment, interpret a slope of 1.5 cm/hr as meaning that an additional hour of sunlight each day is associated with an additional 1.5 cm in mature plant height.	R: Choose an approximation based on a trend line for bivariate data.	SMMA_LO_02143

"R" denotes a learning object that enables students to achieve readiness for a standard. These learning objects reinforce prerequisite skills needed for understanding and mastery of the content described in the standard.