

SUMMER MATH SKILLS PLAN

Florida B.E.S.T. Standards for Math are broken down into four larger categories, with multiple standards for each category. Use this checklist to work on skills associated with each standard on IXL.com. Students can log in using their N# and SLA pin.

For each skill, work until to a SmartScore of at least 80 and record the final score on the checklist below. Each completed category will earn a casual day at the beginning of next school year!

NUMBER SENSE AND OPERATIONS AND PROBABILITY

STANDARD	IXL SKILLS	SCORE
MA.8.NSO.1.1 Extend previous understanding of rational numbers to define irrational numbers within the real number system. Locate an approximate value of a numerical expression involving irrational numbers on a number line.	F.2: Identify rational and irrational numbers	
MA.8.NSO.1.2 Plot, order and compare rational and irrational numbers, represented in various forms.	F.4: Irrational numbers on number lines	
MA.8.NSO.1.3 Extend previous understanding of the Laws of Exponents to include integer exponents. Apply the Laws of Exponents to evaluate numerical expressions and generate equivalent numerical expressions, limited to integer exponents and rational number bases, with procedural fluency.	C.4: Powers with negative bases	
	C.7: Evaluate powers with negative powers	
	C.9: Multiply powers: integer bases	
	C.10: Divide powers: integer bases	
	C.12: Power of a power: integer bases	
MA.8.NSO.1.4 Express numbers in scientific notation to represent and approximate very large or very small quantities. Determine how many times larger or smaller one number is compared to a second number.	C.13: Evaluate expressions using properties of exponents	
	D.1: Convert between standard and scientific notation	
MA.8.NSO.1.5 Add, subtract, multiply and divide numbers expressed in scientific notation with procedural fluency.	D.5: Multiply numbers written in scientific notation	
MA.8.NSO.1.7 Solve multi-step mathematical and real-world problems involving the order of operations with rational numbers including exponents and radicals.	F.5: Checkpoint: Rational and irrational numbers	
MA.8.DP.2.1 Determine the sample space for a repeated experiment.	JJ.6: Compound events: find the number of outcomes	
MA.8.DP.2.2 Find the theoretical probability of an event related to a repeated experiment.	JJ.1: Probability of simple events	
MA.8.DP.2.3 Solve real-world problems involving probabilities related to single or repeated experiments, including making predictions based on theoretical probability.	JJ.5: Make predictions	

ALGEBRAIC REASONING

STANDARD

IXL SKILLS

SCORE

MA.8.AR.1.1 Apply the Laws of Exponents to generate equivalent algebraic expressions, limited to integer exponents and monomial bases.

C.16: Multiply powers: variable bases

C.17: Divide powers: variable bases

C.19: Powers of a power: variable bases

MA.8.AR.2.1 Solve multi-step linear equations in one variable, with rational number coefficients. Include equations with variables on both sides.

M.11: Solve equations involving like terms

M.15: Solve equations with the distributive property

M.19: Solve multi-step equations: complete the solution

M.12: Solve equations with variables on both sides

M.20: Find the number of solutions

MA.8.AR.2.2 Solve two-step linear inequalities in one variable and represent solutions algebraically and graphically.

N.6: Solve two-step inequalities

MA.8.AR.2.3 Given an equation in the form of $x^2 = p$ and $x^3 = q$, where p is a whole number and q is an integer, determine the real solutions.

E.6: Solve equations using square roots

MA.8.AR.4.1 Given a system of two linear equations and a specified set of possible solutions, determine which ordered pairs satisfy the system of linear equations.

GG.1: Is (x,y) a solution to the system of equations?

MA.8.AR.4.3 Given a mathematical or real-world context, solve systems of two linear equations by graphing.

GG.2: Solve a system of equations by graphing

LINEAR RELATIONSHIPS, DATA ANALYSIS, AND FUNCTIONS

STANDARD	IXL SKILLS	SCORE
MA.8.AR.3.2 Given a table, graph or written description of a linear relationship, determine the slope.	Z1: Find the slope from a graph Z2: Find the slope from two points	
MA.8.AR.3.3 Given a table, graph or written description of a linear relationship, write an equation in slope-intercept form.	AA.6: Write a linear equation from a slope and y-intercept AA.7: Write a linear equation from a graph	
MA.8.AR.3.4 Given a mathematical or real-world context, graph a two-variable linear equation from a written description, a table or an equation in slope-intercept form.	AA.6: Graph a line from an equation in slope-intercept form	
MA.8.F.I.1 Given a set of ordered pairs, a table, a graph or mapping diagram, determine whether the relationship is a function. Identify the domain and range of the relation.	BB.1: Identify Functions BB.6: Domain and range of functions	
MA.8.F.I.2 Given a function defined by a graph or an equation, determine whether the function is a linear function. Given an input-output table, determine whether it could represent a linear function.	DD.1: Identify linear and nonlinear functions: graphs and equations	
MA.8.F.I.3 Analyze a real-world written description or graphical representation of a functional relationship between two quantities and identify where the function is increasing, decreasing or constant.	CC.4: Interpret points on the graph of a linear functions BB.4: Find values using function graphs	
MA.8.D.P.I.1 Given a set of real-world bivariate numerical data, construct a scatter plot or a line graph as appropriate for the context.	II.4: Create scatter plots	
MA.8.D.P.I.2 Given a scatter plot within a real-world context, describe patterns of association.	II.5: Identify trends with scatter plots	
MA.8.D.P.I.3 Given a scatter plot with a linear association, informally fit a straight line.	II.8: Identify lines of best fit	

GEOMETRIC REASONING

STANDARD

IXL SKILLS

SCORE

MA.8.GR.1.1 Apply the Pythagorean Theorem to solve mathematical and real-world problems involving unknown side lengths in right triangles.

T.1: Pythagorean theorem: find the length of the hypotenuse

T.2: Pythagorean theorem: find the missing leg length

T.4: Pythagorean theorem: find the perimeter

MA.8.GR.1.2 Apply the Pythagorean Theorem to solve mathematical and real-world problems involving the distance between two points in a coordinate plane.

O.4: Find the distance between two points

MA.8.GR.1.3 Use the Triangle Inequality Theorem to determine if a triangle can be formed from a given set of sides. Use the Pythagorean Theorem to determine if a right triangle can be formed from a given set of sides.

T.6: Converse of Pythagorean theorem: is it a right triangle?

MA.8.GR.1.4 Solve mathematical problems involving the relationships between supplementary, complementary, vertical or adjacent angles.

P.1: Identify complementary, supplementary, vertical, adjacent, and congruent angles

P.2: Find the measures of complementary, supplementary, vertical, and adjacent angles

MA.8.GR.1.5 Solve problems involving the relationships of interior and exterior angles of a triangle.

Q.7: Find the missing angles in triangles

Q.12: Exterior Angle Theorem

MA.8.GR.1.6 Develop and use formulas for the sums of the interior angles of regular polygons by decomposing them into triangles.

Q.13: Interior angles of polygons