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 SLApin. Each skill listed below is a link to the skill on IXL.

USE THE 8TH GRADE IXL TAB FOR THESE LESSONS. 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	8TH GRADE IXL SKILL NUMBER, NAME, SEARCH CODE	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.4:** Irrational numbers on number lines 83E	
MA.8.NSO.1.2 Plot, order and compare rational and irrational numbers, represented in various forms.	**E.2:** Estimate positive square roots XWJ	
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 ZQC	
	C.7: Evaluate powers with negative exponents WGS	
	C.9: Multiply powers: integer bases EQY	
	C.10: Divide powers: integer bases M2C	
	C.12: Power of a power: integer bases AEQ	
	C.13: Evaluate expressions using properties of exponents UTY	
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.	**D.1:** Convert between standard and scientific notation H8A	
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 YZU	
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.	**B.13:** Evaluate numerical expressions involving rational numbers 5E3	

ALGEBRAIC REASONING

STANDARD	8TH GRADE IXL SKILL NUMBER, NAME, SEARCH CODE	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 TR9	
	C.17: Divide powers: variable bases DLA	
	C.19: Powers of a power: variable bases 2CU	
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 Q2B	
	M.14: Solve equations with the distributive property 8RP	
	M.19: Solve multi-step equations: complete the solution PGH	
	M.12: Solve equations with variables on both sides ZYL	
	M.20: Find the number of solutions XDE	
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 N9D	
MA.8.AR.2.3 Given an equation in the form of $x2 = p$ and $x3 = q$, where p is a whole number and q is an integer, determine the real solutions.	**E.6:** Solve equations using square roots NNA	
MA.8.AR.3.1 Determine if a linear relationship is also a proportional relationship.	**X.3:** Identify proportional relationships by graphing RXD	
MA.8.AR.3.2 Given a table, graph or written description of a linear relationship, determine the slope.	**Z.1:** Find the slope from a graph D7M	
MA.8.AR.3.3 Write an equation in slope-intercept form.	**AA.7:** Write a linear equation from a graph WHM	
MA.8.AR.3.4 Graph a two-variable linear equation from a written description, a table or an equation in slope-intercept form.	**AA.4:** Graph a line from an equation in slope-intercept form W5E	
MA.8.AR.3.5 Given a real-world context, determine and interpret the slope and y-intercept of a two-variable linear equation.	**CC.10:** Write linear functions: word problems YK6	
MA.8.AR.4.1 Determine which ordered pairs satisfy the system of linear equations.	**GG.1:** Is (x,y) a solution to the system of equations? N46	
MA.8.AR.4.2 Determine whether there is one solution, no solution or infinitely many solutions.	**GG.4:** Find the number of solutions to a systems of equations by graphing AGZ	
MA.8.AR.4.3 Solve systems of two linear equations by graphing.	**GG.2:** Solve a system of equations by graphing WV5	

LINEAR RELATIONSHIPS, DATA ANALYSIS, AND FUNCTIONS

STANDARD	8TH GRADE IXL SKILL NUMBER, NAME, SEARCH CODE	SCORE
MA.8.F.1.1 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 ELJ **BB.6:** Domain and range of functions JZD	
MA.8.F.1.2 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 XB8	
MA.8.F.1.3 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 PE8 **BB.4:** Find values using function graphs 7N2	
MA.8.DP.1.1 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 AVL	
MA.8.DP.1.2 Given a scatter plot within a real-world context, describe patterns of association.	**II.5:** Identify trends with scatter plots GZE	
MA.8.DP.1.3 Given a scatter plot with a linear association, informally fit a straight line.	**II.8:** Identify lines of best fit BG7	
MA.8.DP.2.1 Determine the sample space for a repeated experiment.	**JJ.6:** Compound events: find the number of outcomes P5R	
MA.8.DP.2.2 Find the theoretical probability of an event related to a repeated experiment.	**JJ.1:** Probability of simple events 5ZY	
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 38C	

GEOMETRIC REASONING

STANDARD	8TH GRADE IXL SKILL NUMBER, NAME, SEARCH CODE	SCORE
MA.8.GR.I.I Apply the Pythagorean Theorem to solve mathematical and real-world problems involving unknown side lengths in right triangles.	**T.I:** Pythagorean theorem: find the length of the hypotenuse TZL	
	T.2: Pythagorean theorem: find the missing leg length Y9C	
	T.4: Pythagorean theorem: find the perimeter VGE	
MA.8.GR.I.2 Apply the Pythagorean Theorem to solve mathematical and real-world problems.	**O.4:** Find the distance between two points Z8P	
MA.8.GR.I.3 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? EQZ	
MA.8.GR.I.4 Solve mathematical problems involving the relationships between supplementary, complementary, vertical or adjacent angles.	**P.I:** Identify complementary, supplementary, vertical, adjacent, and congruent angles HGV	
	P.2: Find the measures of complementary, supplementary, vertical, and adjacent angles R2B	
MA.8.GR.I.5 Solve problems involving the relationships of interior and exterior angles of a triangle.	**Q.7:** Find the missing angles in triangles JFJ	
	Q.12: Exterior Angle Theorem FMP	
MA.8.GR.I.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 JBP	
MA.8.GR.2.I Given a preimage and image generated by a single transformation, identify the transformation that describes the relationship.	**R.I:** Identify reflections, rotations, and translations UYL	
MA.8.GR.2.2 Given a preimage and image generated by a single dilation, identify the scale factor that describes the relationship.	**S.4:** Dilations: find the scale factor 8NK	
MA.8.GR.2.3 Describe and apply the effect of a single transformation on two-dimensional figures using coordinates and the coordinate plane.	**R.3:** Translations: graph the image XUS	
	R.6: Reflections over the x- and y-axes: graph the image 74Z	
	S.2: Dilations: graph the image 9T4	
MA.8.GR.2.4 Solve mathematical and real-world problems involving proportional relationships between similar triangles.	**S.7:** Side lengths and angle measures of similar triangles XED	