GRADE 6

SUMMER MATH SKILLS PLAN

Florida B.E.S.T. Standards for Math are broken down into three 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.

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

STANDARD	IXL SKILLS	SCORE
MA.6.NSO.1.1 Extend previous understanding of numbers to define rational numbers. Plot, order and compare rational numbers.	**U.6:** Compare percents to each other and to fractions	
	G.10: Put a mix of decimals, fractions, and mixed numbers in order	
	O.8: Put integers in order	
	Q.1: Rational numbers on number lines	
	Q.5: Put rational numbers in order	
MA.6.NSO.1.2 Given a mathematical or real-world context, represent quantities that have opposite direction using rational numbers. Compare them on a number line and explain the meaning of zero within its context.	**O.1:** Understanding integers	
	W.10: Compare temperatures above and below zero	
MA.6.NSO.1.3 Given a mathematical or real-world context, interpret the absolute value of a number as the distance from zero on a number line. Find the absolute value of rational numbers.	**O.5:** Understanding absolute value	
	Q.8: Absolute value of rational numbers	
MA.6.NSO.1.4 Solve mathematical and real-world problems involving absolute value, including the comparison of absolute value.	**O.9:** Integer inequalities with absolute values	
MA.6.NSO.2.1 Multiply and divide positive multi-digit numbers with decimals to the thousandths, including using a standard algorithm with procedural fluency.	**I.3:** Multiply decimals	
MA.6.NSO.2.2 Extend previous understanding of multiplication and division to compute products and quotients of positive fractions by positive fractions, including mixed numbers, with procedural fluency.	**L.13:** Multiply mixed numbers	
	M.2: Reciprocals	
	M.10: Divide fractions and mixed numbers	
MA.6.NSO.2.3 Solve multi-step real-world problems involving any of the four operations with positive multi-digit decimals or positive fractions, including mixed numbers.	**X.3:** Unit prices with fractions and decimals	

NUMBER SENSE AND OPERATIONS

STANDARD	IXL SKILLS	SCORE
MA.6.NSO.3.1 Given a mathematical or real-world context, find the greatest common factor and least common multiple of two whole numbers.	**F.3:** Find all the factor pairs of a number	
	F.6: Greatest common factor	
	F.8: Least common multiple	
MA.6.NSO.3.3 Evaluate positive rational numbers and integers with natural number exponents.	**D.2:** Evaluate powers	
	D.5: Powers with decimal bases	
MA.6.NSO.3.4 Express composite whole numbers as a product of prime factors with natural number exponents.	**F.4:** Prime factorization	
MA.6.NSO.3.5 Rewrite positive rational numbers in different but equivalent forms including fractions, terminating decimals and percentages.	**G.7:** Convert between decimals and fractions	
	U.4: Convert between percents, fractions, and decimals	
MA.6.NSO.4.1 Apply and extend previous understandings of operations with whole numbers to add and subtract integers with procedural fluency.	**P.10:** Add three or more integers	
	P.6: Subtract integers	
MA.6.NSO.4.2 Apply and extend previous understandings of operations with whole numbers to multiply and divide integers with procedural fluency.	**P.12:** Multiply integers: find the sign	
	P.16: Add, subtract, multiply, or divide two integers	

ALGEBRAIC REASONING

STANDARD	IXL SKILLS	SCORE
MA.6.AR.1.1 Given a mathematical or real-world context, translate written descriptions into algebraic expressions and translate algebraic expressions into written descriptions.	**Y.2:** Write variable expressions: two operations **Y.3:** Write variable expressions: word problems	
MA.6.AR.1.2 Translate a real-world written description into an algebraic inequality in the form of $x > a$, $x < a$, $x \geq a$ or $x \leq a$. Represent the inequality on a number line.	**BB.4:** Write and graph inequalities: word problems	
MA.6.AR.1.3 Evaluate algebraic expressions using substitution and order of operations.	**E.7:** Evaluate numerical expressions involving whole numbers **Y.5:** Evaluate multi-variable expressions	
MA.6.AR.1.4 Apply the properties of operations to generate equivalent algebraic expressions with integer coefficients.	**Z.5:** Multiply using the distributive property **Z.12:** Identify equivalent expressions	
MA.6.AR.2.1 Given an equation or inequality and a specified set of integer values, determine which values make the equation or inequality true or false.	**AA.2:** Find the constant of proportionality from a table **BB.1:** Solutions to inequalities	
MA.6.AR.2.2 Write and solve one-step equations in one variable within a mathematical or real-world context using addition and subtraction, where all terms and solutions are integers.	**AA.8:** Solve one-step addition and subtraction equations with whole numberst	
MA.6.AR.2.3 Write and solve one-step equations in one variable within a mathematical or real-world context using multiplication and division, where all terms and solutions are integers.	**AA.10:** One-step equations with whole numbers	
MA.6.AR.2.4 Determine the unknown decimal or fraction in an equation involving any of the four operations, relating three numbers, with the unknown in any position.	**AA.12:** Solve one-step multiplication and division equations with decimals and fractions	
MA.6.AR.3.1 Given a real-world context, write and interpret ratios to show the relative sizes of two quantities using appropriate notation: a/b, a to b, or a:b where $b \neq 0$.	**S.1:** Write a ratio	
MA.6.AR.3.2 Given a real-world context, determine a rate for a ratio of quantities with different units. Calculate and interpret the corresponding unit rate.	**S.9:** Unit rates	

ALGEBRAIC REASONING

STANDARD	IXL SKILLS	SCORE
MA.6.AR.3.3 Extend previous understanding of fractions and numerical patterns to generate or complete a two-or three-column table to display equivalent part-to-part ratios and part-to-part-to-whole ratios.	**S.6:** Write an equivalent ratio	
MA.6.AR.3.4 Apply ratio relationships to solve mathematical and real-world problems involving percentages using the relationship between two quantities.	**V.5:** Percents of numbers: word problems	
	V.7: Find what percent one number is of another	
	V.9: Find the total given a part and a percent	
	X.5: Sale prices	
MA.6.AR.3.5 Solve mathematical and real-world problems involving ratios, rates and unit rates, including comparisons, mixtures, ratios of lengths and conversions within the same measurement system.	**S.15:** Ratios and rates: word problems	

GEOMETRIC REASONING, DATA ANALYSIS, AND PROBABILITY

STANDARD	IXL SKILLS	SCORE
MA.6.GR.1.1 Extend previous understanding of the coordinate plane to plot rational number ordered pairs in all four quadrants and on both axes. Identify the x- or y-axis as the line of reflection when two ordered pairs have an opposite x-or y-coordinate.	**R.2:** Objects on a coordinate plane **R.3:** Graph points on a coordinate plane	
MA.6.GR.1.2 Find distances between ordered pairs, limited to the same x-coordinate or the same y-coordinate, represented on the coordinate plane.	**R.7:** Distance between two points	
MA.6.GR.1.3 Solve mathematical and real-world problems by plotting points on a coordinate plane, including finding the perimeter or area of a rectangle.	**R.9:** Area and perimeter of squares and rectangles on the coordinate plane	
MA.6.GR.2.1 Derive a formula for the area of a right triangle using a rectangle. Apply a formula to find the area of a triangle.	**GG.6:** Area of triangles	
MA.6.GR.2.2 Solve mathematical and real-world problems involving the area of quadrilaterals and composite figures by decomposing them into triangles or rectangles.	**GG.10:** Area of quadrilaterals **GG.11:** Area of compound figures **GG.13:** Area between two rectangles	
MA.6.GR.2.3 Solve mathematical and real-world problems involving the volume of right rectangular prisms with positive rational number edge lengths using a visual model and a formula.	**HH.1:** Volume of cubes and rectangular prisms	
MA.6.GR.2.4 Given a mathematical or real-world context, find the surface area of right rectangular prisms and right rectangular pyramids using the figure's net.	**HH.4:** Surface area of cubes and rectangular prisms	
MA.6.DP.1.1 Recognize and formulate a statistical question that would generate numerical data.	**JJ.1:** Identify stastical questions	
MA.6.DP.1.2 Given a numerical data set within a real-world context, find and interpret mean, median, mode and range.	**JJ.3:** Interpret charts and graphs to find mean, median, mode, and range	

GEOMETRIC REASONING, DATA ANALYSIS, AND PROBABILITY

STANDARD	IXL SKILLS	SCORE
MA.6.DP1.3 Given a box plot within a real-world context, determine the minimum, the lower quartile, the median, the upper quartile and the maximum. Use this summary of the data to describe the spread and distribution of the data.	**II.21:** Box plots	
MA.6.DP1.4 Given a histogram or line plot within a real-world context, qualitatively describe and interpret the spread and distribution of the data, including any symmetry, skewness, gaps, clusters, outliers and the range.	**II.1:** Interpret line plots	
MA.6.DP1.5 Create box plots and histograms to represent sets of numerical data within real-world contexts.	**II.13:** Create histograms	
MA.6.DP1.6 Given a real-world scenario, determine and describe how changes in data values impact measures of center and variation.	**JJ.5:** Changes in mean, median, mode, and range	