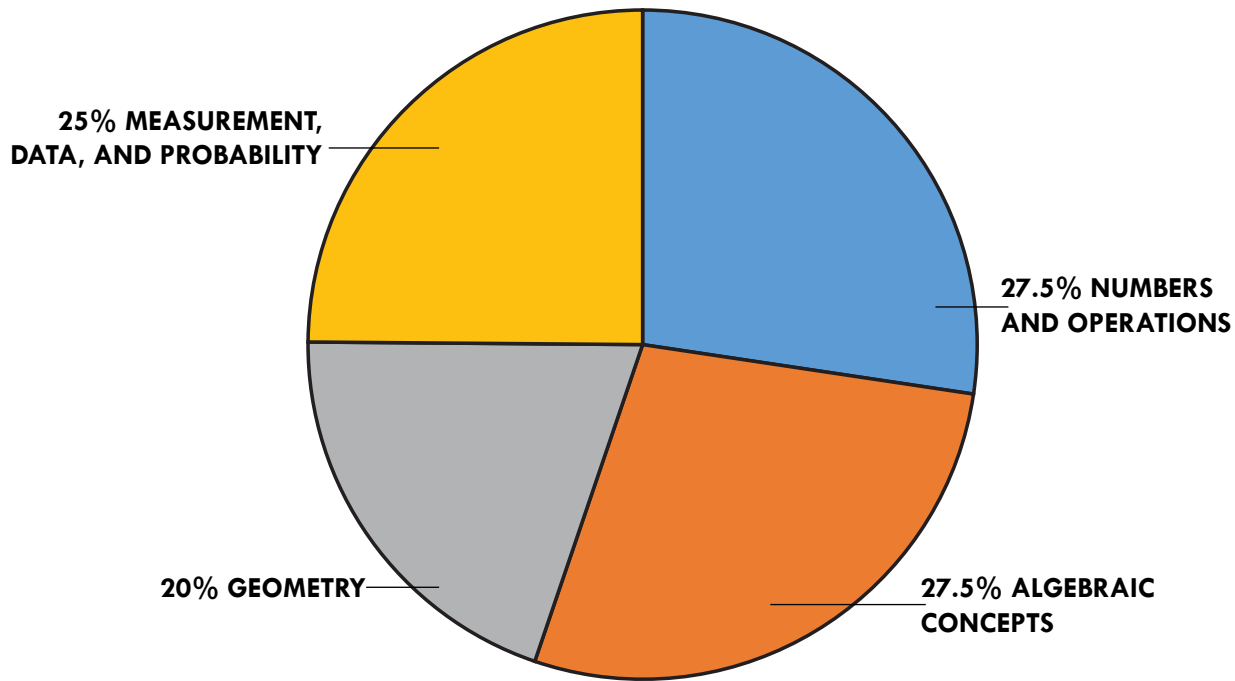




TABE 13&14 Mathematics Blueprint Overview

LEVEL M



GEOMETRY (20%)				
STANDARD	STANDARD DESCRIPTION	AE-CCR LEVEL	EMPHASIS LEVEL	
4.G.1	Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.	C	Med	
5.G.1	Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (e.g., x-axis and x-coordinate, y-axis and y-coordinate).	C	High	
5.G.2	Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.	C	Med	
5.G.3	Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category.	C	Med	
6.G.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.	C	Low	
6.G.3	Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. Apply these techniques in the context of solving real-world and mathematical problems.	C	Med	

MEASUREMENT, DATA, AND PROBABILITY (25%)

STANDARD	STANDARD DESCRIPTION	AE-CCR LEVEL	EMPHASIS LEVEL
4.MD.2	Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.	C	Med
4.MD.3	Apply the area and perimeter formulas for rectangles in real world and mathematical problems.	C	Med
4.MD.5	Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement: (4.MD.5a, 4.MD.5b)	C	Med
4.MD.6	Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.	C	Med
4.MD.7	Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.	C	Low
5.MD.1	Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems.	C	Low
5.MD.2	Make a line plot to display a data set of measurements in fractions of a unit ($\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$). Use operations on fractions for this grade to solve problems involving information presented in line plots.	C	Med
5.MD.3	Recognize volume as an attribute of solid figures and understand concepts of volume measurement. (5.MD.3a, 5.MD.3b)	C	Med
5.MD.5	Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume. (5.MD.5a, 5.MD.5b, 5.MD.5c)	C	Low
6.SP.1	Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers.	C	Low
6.SP.2	Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape.	C	Low
6.SP.3	Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number.	C	Low
6.SP.4	Display numerical data in plots on a number line, including dot plots, histograms, and box plots.	C	Med

ALGEBRAIC CONCEPTS (27.5%)

STANDARD	STANDARD DESCRIPTION	AE-CCR LEVEL	EMPHASIS LEVEL
4.OA.1	Interpret a multiplication equation as a comparison, e.g., interpret $35 = 5 \times 7$ as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.	C	Med
4.OA.2	Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.	C	High
4.OA.3	Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.	C	Low
4.OA.5	Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself.	C	Med
5.OA.1	Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.	C	Low
5.OA.2	Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them.	C	Med
6.EE.1	Write and evaluate numerical expressions involving whole-number exponents.	C	Low
6.EE.2	Write, read, and evaluate expressions in which letters stand for numbers. (6.EE.2a, 6.EE.2b, 6.EE.2c)	C	Low
6.EE.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).	C	Low
6.EE.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.	C	Med
6.EE.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.	C	Med
6.EE.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 nonnegative rational numbers.	C	Low
6.EE.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.	C	Low
6.EE.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.	C	Med

NUMBERS AND OPERATIONS (27.5%)

STANDARD	STANDARD DESCRIPTION	AE-CCR LEVEL	EMPHASIS LEVEL
4.NBT.1	Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right.	C	Low
4.NBT.2	Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using $>$, $=$, and $<$ symbols to record the results of comparisons.	C	Low
4.NBT.3	Use place value understanding to round multi-digit whole numbers to any place.	C	Low
4.NBT.4	Fluently add and subtract multi-digit whole numbers using the standard algorithm.	C	Low
4.NBT.6	Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	C	Low
5.NBT.2	Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.	C	Med
5.NBT.5	Fluently multiply multi-digit whole numbers using the standard algorithm.	C	Low
5.NBT.6	Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	C	Low
5.NBT.7	Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.	C	Med
6.NS.2	Fluently divide multi-digit numbers using the standard algorithm.	C	Low
6.NS.3	Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.	C	Low
6.NS.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.	C	Low
4.NF.1	Explain why a fraction a/b is equivalent to a fraction $(n \times a)/(n \times b)$ by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.	C	Low
4.NF.6	Use decimal notation for fractions with denominators 10 or 100.	C	Low

NUMBERS AND OPERATIONS (27.5%)

STANDARD	STANDARD DESCRIPTION	AE-CCR LEVEL	EMPHASIS LEVEL
5.NF.3	Interpret a fraction as division of the numerator by the denominator ($a/b = a \div b$). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem.	C	Low
5.NF.4	Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.	C	Low
5.NF.6	Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.	C	Low
5.NF.7	Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions. (5.NF.7a, 5.NF.7b)	C	Low
6.RP.1	Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities.	C	Low
6.RP.2	Understand the concept of a unit rate a/b associated with a ratio $a:b$ with $b \neq 0$, and use rate language in the context of a ratio relationship.	C	Low

TABLE 13&14 MATHEMATICS BLUEPRINT OVERVIEW **LEVEL M**