

Florida Standards - Eighth Grade Math	MiddleWare Math Word Problems Travel	MiddleWare Math Word Problems Careers	MiddleWare Math Word Problems Sports	MiddleWare Math Word Problems Money	Math Mentor Series Addition & Subtraction	Multiplication & Division	Math Mentor Series Fractions & Decimals	Math Test Generator
NUMBER SENSE, CONCEPTS, AND OPERATIONS								
The student understands the different ways numbers are represented & used in the real world	✓	✓	✓	✓	✓	✓	✓	
<i>associates verbal names, written word names, & standard numerals with integers, fractions, decimals; numbers expressed as percents, numbers with exponents; numbers in scientific notation, radicals; absolute value; and ratios</i>	✓	✓	✓	✓	✓	✓	✓	
<i>understands the relative size of integers, fraction, decimals, and numbers expressed as percents, numbers with exponents; numbers ins scientific notation; radicals, absolute value; and ratios</i>	✓	✓	✓	✓	✓	✓	✓	
<i>understand concrete & symbolic representations of rational numbers & irrational numbers in real-world situations</i>	✓	✓	✓	✓	✓	✓	✓	
<i>understands that numbers can be represented in a variety of equivalent forms, including decimals, fractions, & percents, scientific notation, exponents, radicals & absolute value</i>					✓	✓	✓	
The student understands number systems								
<i>understands & uses exponential & scientific notation</i>								
<i>understands the structure of number systems other than the decimal number system</i>								
The student understands the effects of operations on numbers & the relationships among these operations, selects appropriate operations, & computes for problem solving	✓	✓	✓	✓	✓	✓	✓	
<i>understands & explains the effects of addition & subtraction & multiplication & division whole numbers decimals, & fractions, including mixed numbers, including the inverse relationship of positive & negative numbers</i>	✓	✓	✓	✓	✓	✓	✓	

<i>selects the appropriate operation to solve specific problems involving addition & subtraction & multiplication & division of rational numbers ratios, proportions, percents, including the appropriate application of the algebraic order of operations</i>	✓	✓	✓	✓	✓	✓	✓	
<i>adds & subtracts & multiplies & divides whole numbers, decimals, & fractions including mixed numbers and to solve real-world problems using appropriate methods of computing, such as mental mathematics, paper & pencil, calculator</i>	✓	✓	✓	✓	✓	✓	✓	
<u>The student uses estimation in problem solving and computation</u>								
<i>uses estimation strategies to predict results & to check the reasonableness of results</i>								
<u>The student understands and applies theories related to numbers</u>	✓	✓	✓	✓				
<i>uses concepts about numbers, including primes, factors, & multiples, to build number sequences</i>	✓	✓	✓	✓				
MEASUREMENT								
<u>The student measures quantities in the real world & uses the measures to solve problems</u>								
<i>uses concrete & graphic models to derive formulas for finding perimeter, area, surface area, circumference, & volume of two- & three-dimensional shapes, including rectangular solids & cylinders</i>								
<i>uses concrete & graphic models to derive formulas for finding rates, distance, time, & angle measures</i>								
<i>understands & describes how the change of a figure in such dimensions as length, width, height, or radius affects its other measurements such as perimeter, area, surface area, & volume</i>								
<i>constructs, interprets, & uses scale drawings such as those based on number lines & maps to solve real-world problems</i>								
<u>The student compares, contrast, & converts within systems of measurement (both standard/nonstandard & metric/customary)</u>								
<i>uses direct (measured) & indirect (not measured) to compare a given characteristics in either metric or customary units</i>								
<i>solves problems involving units of measure & converts answers to a larger or smaller unit within either the metric or customary system</i>								

The student estimates measurements in real-world problem situations								
<i>solves real-world problems involving estimates of measurements, including length, time, weight/mass, temperature, money, perimeter, area, & volume in either customary or metric or customary system</i>								
The student selects & uses appropriate units & instruments for measurement to achieve the degree of precision & accuracy required in real-world situations								
<i>selects appropriate units of measurement & determines & applies significant digits in a real-world context.</i>								
<i>select & uses appropriate instruments, technology, & techniques to measure quantities in order to achieve specified degrees of accuracy in</i>								
GEOMETRY AND SPATIAL SENSE								
The student describes, draws, identifies, & analyzes two-and three-dimensional shapes								
<i>understands the basic properties of & relationships pertaining to, regular & irregular geometric shapes in two & three dimensions</i>								
The student visualizes & illustrates ways in which shapes can be combined, subdivided and changed								
<i>understands the geometric concepts of symmetry, reflections, congruency, similarity, perpendicularity, parallelism, & predicts & verifies patterns involving tessellations</i>								
The student uses coordinate geometry to locate objects in both two & three dimensions & to describe objects algebraically								
<i>represents & applies geometric properties & relationships to solve real-world & mathematical problems</i>								
<i>identifies & plots ordered pairs in all four quadrants of a rectangular coordinate system & applies simple properties of lines</i>								
ALGEBRAIC THINKING								
The student describes, analyzes, & generalizes a wide variety of patterns, relations, & functions	✓	✓	✓	✓				
<i>describes a wide variety of patterns & relationships & functions through models, such as manipulative, tables, graphs, expressions, equations, & inequalities</i>	✓	✓	✓	✓				

<i>creates & interprets tables, graphs, equations, & verbal descriptions to explain cause-&_effect relationships</i>								
The student uses expressions, equations, inequalities, graphs, and formulas to represent & interpret situation	✓	✓	✓	✓				
<i>represents & solves real-world problems graphically, with algebraic expressions, equations & inequalities</i>								
<i>uses algebraic problem-solving strategies to solve real-world problems involving linear equation & inequalities</i>	✓	✓	✓	✓				
DATA ANALYSIS AND PROBABILITY								
The student understands & uses the tools of data analysis for managing information								
<i>collects, organizes & displays data in a variety of forms, including tables, line graphs, charts bar graphs, to determine how different ways of presenting data can lead to different interpretations</i>								
<i>understands & applies the concepts of range & central tendency</i>								
<i>analyzes real-world data by applying appropriate formulas for measures of central tendency & organizing data in a quality display, using appropriate technology, including calculators & computers</i>								
The student identifies patterns & makes predictions from an orderly display of data using concepts of probability & statistics								
<i>compares experimental results with mathematical expectations of probabilities</i>								
<i>determines odds for & odds against a give situation</i>								
The student uses statistical methods to make inferences & valid arguments about real-world situations								
<i>formulates hypotheses, designs experiments, collects & interprets data, & evaluates hypotheses by making inferences & drawing conclusions based on statistics & tables, graphs, & charts</i>								
<i>identifies the common uses & misuses of probability & statistical analysis in the everyday world</i>								