

Math 8

State Standard Number	State Standard Area/Description	Unit Name	Course Topic Description
	Number and Number Sense		
8.1	The student will		
8.1.a	simplify numerical expressions involving positive exponents, using rational numbers, order of operations, and properties of operations with real numbers; and	Number Sense Variables and Expressions Properties of Numbers Exponents	Entire Unit Pages 18-19 Pages 7-8
8.1.b	compare and order decimals, fractions, percents, and numbers written in scientific notation.	Scientific Notation	Page 13
8.2	The student will describe orally and in writing the relationships between the subsets of the real number system.	Ratios, Rates and Proportions Square Roots and Irrational Numbers	Page 8 Pages 10-11
	Computation and Estimation		
8.3	The student will		
8.3.a	solve practical problems involving rational numbers, percents, ratios, and proportions; and	Ratios, Rates, and Proportions Similarity and Scale Simple and Compound Interest	Dispersed Throughout Dispersed Throughout Entire unit
8.3.b	determine the percent increase or decrease for a given situation.	Percents and Equations	Page 13
8.4	The student will apply the order of operations to evaluate algebraic expressions for given replacement values of the variables.	Variables and Expressions	Pages 11-13
8.5	The student will		
8.5.a	determine whether a given number is a perfect square; and	Square Roots and Irrational Numbers	Pages 6-9
8.5.b	find the two consecutive whole numbers between which a square root lies.	Square Roots and Irrational Numbers	Pages 6-9

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	Measurement		
8.6	The student will		
8.6.a	verify by measuring and describe the relationships among vertical angles, adjacent angles, supplementary angles, and complementary angles; and	Angles	Pages 1-11
8.6.b	measure angles of less than 360°.		
8.7	The student will		
8.7.a	investigate and solve practical problems involving volume and surface area of prisms, cylinders, cones, and pyramids; and	Surface Area Volume Triangles and Triangular Prisms (No Cones or Pyramids)	Dispersed Throughout Dispersed Throughout Pages 10-12
8.7.b	describe how changing one measured attribute of a figure affects the volume and surface area.		
	Geometry		
8.8	The student will		
8.8.a	apply transformations to plane figures; and	Symmetry and Transformations	Pages 11-14
8.8.b	identify applications of transformations.		
8.9	The student will construct a three-dimensional model, given the top or bottom, side, and front views.		
8.1	The student will		
8.10.a	verify the Pythagorean Theorem; and	Parallelograms Pythagorean Theorem	Pages 10-11 Entire Unit
8.10.b	apply the Pythagorean Theorem.	Pythagorean Theorem	Entire Unit
8.11	The student will solve practical area and perimeter problems involving composite plane figures.	Circles and Pi Parallelograms Triangles and Triangular Prisms	Pages 8-11 Pages 9-10 Pages 7-8
	Probability and Statistics		

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8.12	The student will determine the probability of independent and dependent events with and without replacement.	Probability and Counting Theory	Pages 9-10
8.13	The student will		
8.13.a	make comparisons, predictions, and inferences, using information displayed in graphs; and	Data Analysis Inferential Statistics	Entire Unit Entire Unit
8.13.b	construct and analyze scatterplots.		
	Patterns, Functions, and Algebra		
8.14	The student will make connections between any two representations (tables, graphs, words, and rules) of a given relationship.	Geometric and Arithmetic Sequences Functions Graphing Linear Equations	Pages 10-13 Pages 11-12 Pages 9-12
8.15	The student will		
8.15.a	solve multistep linear equations in one variable with the variable on one and two sides of the equation;	Properties of Numbers Equations Equations with Fractions Solving Multi-Step Equations	Pages 18-19 Entire Unit Entire Unit Entire Unit
8.15.b	solve two-step linear inequalities and graph the results on a number line; and	Inequalities Solving Multi-Step Inequalities	Entire Unit Pages 1-7
8.15.c	identify properties of operations used to solve an equation.	Properties of Numbers Equations Inequalities Solving Multi-Step Equations	Pages 1-14 Pages 7, 8, 12, 13 Dispersed Throughout Dispersed Throughout
8.16	The student will graph a linear equation in two variables.	Graphing Linear Equations	Pages 9-12



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8.17	The student will identify the domain, range, independent variable, or dependent variable in a given situation.	Functions	Pages 3-10
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