

Math 7

State Standard Number	State Standard Area/Description	Unit Name	Course Topic Description
	Number and Number Sense		
7.1	The student will		
7.1.a	investigate and describe the concept of negative exponents for powers of ten;	Exponents, Squares and Square Roots	Page 10
7.1.b	determine scientific notation for numbers greater than zero;	Exponents, Squares and Square Roots	Pages 7-9
7.1.c	compare and order fractions, decimals, percents, and numbers written in scientific notation;	Conversion between Fractions and Decimals Connecting Fractions, Decimals and Percents	Page 14-15 Page 11-14
7.1.d	determine square roots; and	Exponents, Squares and Square Roots	Pages 11-13
7.1.e	identify and describe absolute value for rational numbers.	Integers	Page 8
7.2	The student will describe and represent arithmetic and geometric sequences, using variable expressions.	Patterns	Entire Unit
	Computation and Estimation		
7.3	The student will		
7.3.a	model addition, subtraction, multiplication, and division of integers; and	Integers	Entire Unit
7.3.b	add, subtract, multiply, and divide integers.	Integers	Entire Unit
7.4	The student will solve single-step and multistep practical problems, using proportional reasoning.	Ratios and Proportions	Pages 1-9
	Measurement		
7.5	The student will		
7.5.a	describe volume and surface area of cylinders;	Volumes and Surface Areas	Pages 1-11; 15-17

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7.5.b	solve practical problems involving the volume and surface area of rectangular prisms and cylinders; and	Volumes and Surface Areas	Pages 1-11; 15-17
7.5.c	describe how changing one measured attribute of a rectangular prism affects its volume and surface area.	Volumes and Surface Areas	Pages 18-20
7.6	The student will determine whether plane figures-quadrilaterals and triangles-are similar and write proportions to express the relationships between corresponding sides of similar figures.	Ratios and Proportions	Pages 12-13
	Geometry		
7.7	The student will compare and contrast the following quadrilaterals based on properties: parallelogram, rectangle, square, rhombus, and trapezoid.	Quadrilaterals and Other Polygons	Pages 1-7, 10-12
7.8	The student, given a polygon in the coordinate plane, will represent transformations (reflections, dilations, rotations, and translations) by graphing in the coordinate plane.	Transformations (no dilations)	Pages 9-17
	Probability and Statistics		
7.9	The student will investigate and describe the difference between the experimental probability and theoretical probability of an event.	Probability	Pages 8, 11, 12
7.1	The student will determine the probability of compound events, using the Fundamental (Basic) Counting Principle.	Probability	Page 9-10
7.11	The student, given data for a practical situation, will		
7.11.a	construct and analyze histograms; and	Graphs and Data Analysis	Pages 13-14

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7.11.b	compare and contrast histograms with other types of graphs presenting information from the same data set.		
	Patterns, Functions, and Algebra		
7.12	The student will represent relationships with tables, graphs, rules, and words.	Functions, Graphs, and Linear Equations	Entire unit
7.13	The student will		
7.13.a	write verbal expressions as algebraic expressions and sentences as equations and vice versa; and	Number Concepts	Pages 1-8
7.13.b	evaluate algebraic expressions for given replacement values of the variables.		
7.14	The student will		
7.14.a	solve one- and two-step linear equations in one variable; and	Solving Equations with Fractions Solving Equations with Decimals Number Concepts Properties of Numbers and Variable Expressions	Pages 10-13 Pages 10-12 Pages 11-12 Pages 10-11
7.14.b	solve practical problems requiring the solution of one- and two-step linear equations.		
7.15	The student will		
7.15.a	solve one-step inequalities in one variable; and	Inequalities	Entire Unit
7.15.b	graph solutions to inequalities on the number line.	Inequalities	Pages 7-8
7.16	The student will apply the following properties of operations with real numbers:		

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7.16.a	the commutative and associative properties for addition and multiplication;	Order of Operations	Pages 15-16
7.16.b	the distributive property;	Order of Operations Properties of Numbers and Variable Expressions	Pages 15-16 Page 6, 8
7.16.c	the additive and multiplicative identity properties;	Order of Operations	Pages 15-16
7.16.d	the additive and multiplicative inverse properties; and		
7.16.e	the multiplicative property of zero.	Order of Operations	Pages 15-16