

## Algebra 2

State Standard Number	State Standard Area/Description	Unit Name	Course Topic Description
A	A student should understand mathematical facts, concepts, principles, and theories.		
A.1	understand and use numeration, including		
A.1.a	numbers, number systems, counting numbers, whole numbers, integers, fractions, decimals, and percents; and	Covered throughout course	Covered throughout course
A.1.b	irrationals and complex numbers;	Linear and Quadratic Functions	Solving Quadratic Functions
A.2	select and use appropriate systems, units, and tools of measurement, including estimation;	Covered throughout course	Covered throughout course
A.3	perform basic arithmetic functions, make reasoned estimates, and select and use appropriate methods or tools for computation or estimation including mental arithmetic, paper and pencil, a calculator, and a computer;	Covered throughout course	Covered throughout course
A.4	represent, analyze, and use mathematical patterns, relations, and functions using methods such as tables, equations, and graphs;	Covered throughout course	Covered throughout course
A.5	construct, draw, measure, transform, compare, visualize, classify, and analyze the relationships among geometric figures; and	Geometry	Geometry of Quadrilaterals
A.6	collect, organize, analyze, interpret, represent, and formulate questions about data and make reasonable and useful predictions about the certainty, uncertainty, or impossibility of an event.	Probability	Determining Probability

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B	A student should understand and be able to select and use a variety of problem-solving strategies.		
B.1	use computational methods and appropriate technology as problem-solving tools;	Covered throughout course	Covered throughout course
B.2	use problem solving to investigate and understand mathematical content;	Covered throughout course	Covered throughout course
B.3	formulate mathematical problems that arise from everyday situations;	Covered throughout course	Covered throughout course
B.4	develop and apply strategies to solve a variety of problems;	Covered throughout course	Covered throughout course
B.5	check the results against mathematical rules;	Covered throughout course	Covered throughout course
B.6	use common sense to help interpret results;	Covered throughout course	Covered throughout course

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B.7	apply what was learned to new situations; and	Covered throughout course	Covered throughout course
B.8	use mathematics with confidence.	Covered throughout course	Covered throughout course
C	A student should understand and be able to form and use appropriate methods to define and explain mathematical relationships.		
C.1	express and represent mathematical ideas using oral and written presentations, physical materials, pictures, graphs, charts, and algebraic expressions;	Rational Functions	Direct and Inverse Variation
C.2	relate mathematical terms to everyday language;	Covered throughout course	Covered throughout course
C.3	develop, test, and defend mathematical hypotheses; and		
C.4	clarify mathematical ideas through discussion with others.	Covered throughout course	Covered throughout course
D	A student should be able to use logic and reason to solve mathematical problems.		

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D.1	analyze situations;	Covered throughout course	Covered throughout course
D.2	draw logical conclusions;	Covered throughout course	Covered throughout course
D.3	use models, known facts, and relationships to explain the student's reasoning;		
D.4	use deductive reasoning to verify conclusions, judge the validity of arguments, and construct valid arguments; and		
D.5	use inductive reasoning to recognize patterns and form mathematical propositions.		
E	A student should be able to apply mathematical concepts and processes to situations within and outside of school.		
E.1	explore problems and describe results using graphical, numerical, physical, algebraic, and verbal mathematical models or representations;	Exponential and Logarithmic Functions	Exponential Growth and Decay
E.2	use mathematics in daily life; and	Covered throughout course	Covered throughout course



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E.3	use mathematics in other curriculum areas.	Trigonometric Functions	Right Triangle Trigonometry
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