

## Algebra II Curriculum

## INTERNATIONAL ACADEMY OF SCIENCE Algebra II Course Curriculum

Lecture	Description	Lecture	Description	Lecture	Description
0	Introduction to Algebra II	30	Systems of Equations in Three Variables	60	Transformations of Functions
1	Real Numbers and Operations	31	Using a System of Three Equations	61	Stretching, Shrinking, and Reflecting Functions
2	Multiplication and Division of Real Numbers	32	Consistent and Dependent Systems	62	Graphs of Quadratic Functions
3	Algebraic Expressions and Properties of Numbers	33	Systems of Inequalities	63	Standard Form for Quadratic Functions
4	The Distributive Property	34	Polynomials and Functions	64	Graphs and x-intercepts
5	Solving Equations	35	Addition and Subtraction of Polynomials	65	Coordinate Geometry
6	Writing Equations	36	Multiplication of Polynomials	66	Conic Sections: Circles
7	Exponential Notation	37	Factoring	67	Ellipses - Part I
8	Properties of Exponents	38	The Big X Method of Factoring	68	Ellipses - Part II
9	Scientific Notation	39	Solving Equations by Factoring	69	Hyperbolas
10	Field Axioms, Theorems, and Proofs	40	Multiplying and Simplifying Rational Expressions	70	Parabolas
11	More on Solving Equations	41	Addition and Subtraction of Rational Equations	71	Second-Degree Equations and Systems
12	Using Equations	42	Complex Rational Expressions	72	Polynomials and Polynomial Functions
13	Solving Formulas	43	Division of Polynomials	73	The Remainder and Factor Theorems
14	Solving Inequalities	44	Synthetic Division	74	Rational Roots
15	Using Inequalities	45	Solving Rational Equations	75	Theorems About Roots
16	Compound Inequalities	46	Formulas	76	Graphs of Polynomial Functions
17	Absolute Value	47	Radical Expressions	77	Inverse Functions
18	Relations and Ordered Pairs	48	Multiplying and Simplifying Radical Expressions	78	Exponential and Logarithmic Functions
19	Graphs	49	Operations with Radical Expressions	79	Exponential and Logarithmic Relationships
20	Definition of a Function	50	Rational Numbers as Exponents	80	Properties of Logarithmic Functions
21	Graphs of Linear Equations	51	Solving Radical Equations	81	Logarithmic Function Values
22	Slope	52	Imaginary and Complex Numbers	82	Exponential and Logarithmic Equations
23	More Equations of Lines	53	Introduction to Quadratic Equations	83	Natural Logarithms and the Number e
24	Parallel and Perpendicular Lines	54	Using Quadratic Equations		
25	The Absolute Value Function	55	The Quadratic Formula		
26	Composition of Functions	56	Solutions of Quadratic Equations		
27	Systems of Equations in Two Variables	57	Equations Reducible to Quadratic Form		
28	Solving Systems of Equations	58	Formulas and Problem Solving		
29	Using a System of Two Equations	59	Symmetry		