Below are the key skills that students should possess by the end of the first semester of Algebra 2. They are based on the Common Core State Standards and are written in student-friendly terms. The learning targets are grouped by unit of study, and the corresponding state standards and textbook resources are listed. Bold lines indicate the end of a quarter.

Power Standard	#	Learning Target	CCSSM	Textbook Resource
Equations and Inequalities	1	I can create equations and inequalities and use them to solve problems (including equations and inequalities with absolute value).	A.REI.3 A.CED.1	1.1-1.5
Linear and Absolute Value Functions	2	I can write and graph functions that describe relationships between two quantities.	A.CED.2 F.IF.4 F.IF.6 F.IF.7a F.BF.1	2.1-2.7
	3	I can graph two-variable inequalities, absolute value, step, and piecewise functions.	F.IF.7b F.BF.3	
Systems	4	I can create and solve systems of linear and non-linear equations algebraically and graphically.	A.CED.2 A.REI.11	3.1-3.4
	5	I can create systems of linear inequalities to represent constraints in context and use them to solve problems.	A.CED.3 A.REI.12	
Quadratics	6	I can solve a quadratic equation by factoring.	A.REI.4	5.1-5.8
	7	I can add, subtract, and multiply complex numbers using the relation $i^2 = -1$.	N.CN.1 N.CN.2	
	8	I can complete the square to solve a quadratic equation or change the form of a quadratic function.	A.REI.4 F.IF.8a	
	9	I can solve a quadratic equation using the quadratic formula. (Include equations with complex solutions).	A.REI.4 N.CN.7	
	10	I can graph quadratic functions and indicate key features including intercepts, increasing/decreasing intervals, relative maximums/minimums, symmetry, and end behavior.	F.IF.4 F.IF.7	
Polynomials	11	I can add, subtract, multiply, and divide polynomials.	A.SSE.1 A.APR.1 A.APR.6	6.1-6.6
	12	I can factor polynomials, identify zeros, and use the zeros to sketch a graph.	F.IF.7 A.SSE.2 A.APR.2 A.APR.3	
Rationals	13	I can graph rational functions, identifying zeros, asymptotes, and end behavior.	F.IF.7d(+)	9.1-9.6
	14	I can add, subtract, multiply, divide, and simplify rational expressions.	A.APR.7	
	15	I can solve rational equations and identify extraneous solutions, if present.	A.REI.2	

Below are the key skills that students should possess by the end of the second semester of Algebra 2. They are based on the Common Core State Standards and are written in student-friendly terms. The learning targets are grouped by unit of study, and the corresponding state standards and textbook resources are listed. Bold lines indicate the end of a quarter.

Power Standard	#	Learning Target	CCSSM	Textbook Resource
Radicals	16	I can simplify radical expressions and extend the properties of exponents to rational exponents.	N.RN.1 N.RN.2	7.1-7.5
	17	I can solve radical equations and identify extraneous solutions, if present.	A.REI.2	
Function Operations	18	I can perform operations on functions including composition.	F.BF.1	7.6-7.7 (7.8 if time allows)
	19	I can find inverse functions.	F.BF.4	
Exponential and Logarithmic Functions	20	I can create, graph, and evaluate exponential functions in context.	A.SSE.1 A.CED.2 F.IF.7e F.IF.8b F.LE.1c	8.1-8.6
	21	I can graph and evaluate logarithmic functions.	F.IF.7e	
	22	I can use logarithms to solve problems.	F.LE.4 F.BF.5	
Statistics	23	I can use mean, standard deviation, and normal distribution to estimate population percentages.	S.ID.4	12.1, 12.3-12.5, 12.7 CC11-13
	24	I can make inferences and justify conclusions from sample surveys, experiments, and observational studies. (Include margin of error and tests of significance).	S.IC.1-6	
Trigonometry	25	I can use special right triangles, the unit circle, and radian measures to evaluate trigonometric functions.	F.TF.1 F.TF.2 F.TF.3(+) F.TF.5 F.TF.8 F.TF.7(+) G.SRT.8 G.SRT.11 (+)	13.1-13.8
	26	I can model periodic phenomena with trigonometric functions.		
	27	I can prove and apply trigonometric identities.		14.1-14.5
	28	I can solve applied problems using trigonometric ratios, inverse functions, and the Laws of Sines and Cosines.		