

Algebra I

State Standard Number	State Standard Area/Description	Unit Name	Course Topic Description
0	Number and Number Relations		
1	Identify and describe differences among natural numbers, whole numbers, integers, rational numbers, and irrational numbers	Variables and Expressions Real Numbers	Section 3, Part 1 Section 1, Part 1 Section 1, Part 2
2	Evaluate and write numerical expressions involving integer exponents	Variables and Expressions	Section 1, Part 2
3	Apply scientific notation to perform computations, solve problems, and write representations of numbers	Polynomials	Section 1
4	Distinguish between an exact and an approximate answer, and recognize errors introduced by the use of approximate numbers with technology		
5	Demonstrate computational fluency with all rational numbers (e.g., estimation, mental math, technology, paper/pencil)	Variables and Expressions	Section 1 Section 2 Section 3 Section 4
6	Simplify and perform basic operations on numerical expressions involving radicals (e.g., $2 \times$ the square root of 3 + $5 \times$ the square root of 3 = $7 \times$ the square root of 3)	Quadratics and Radicals	Section 3, Part 1 Section 4
7	Use proportional reasoning to model and solve real-life problems involving direct and inverse variation	Rational Expressions	Section 1, Part 1
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8	Use order of operations to simplify or rewrite variable expressions	Variables and Expressions	Section 3, Part 5

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9	Model real-life situations using linear expressions, equations, and inequalities	Solving Systems Inequalities	Section 1 Section 2 Section 1, Part 2
10	Identify independent and dependent variables in real-life relationships	Functions and Linear Equations	Section 1, Part 4
11	Use equivalent forms of equations and inequalities to solve real-life problems	Inequalities Solving Systems	Section 2, Part 1 Section 3, Part 3
12	Evaluate polynomial expressions for given values of the variable		
13	Translate between the characteristics defining a line (i.e., slope, intercepts, points) and both its equation and graph	Functions and Linear Equations	Section 4, Part 6
14	Graph and interpret linear inequalities in one or two variables and systems of linear inequalities	Inequalities Solving Systems	Section 1, Part 1 Section 4, Part 2 Section 3, Part 1 Section 3, Part 2
15	Translate among tabular, graphical, and algebraic representations of functions and real-life situations	Functions and Linear Equations	Section 4, Part 3 Section 4, Part 4

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16	Interpret and solve systems of linear equations using graphing, substitution, elimination, with and without technology, and matrices using technology		
0	Measurement		
17	Distinguish between precision and accuracy		
18	Demonstrate and explain how the scale of a measuring instrument determines the precision of that instrument		
19	Use significant digits in computational problems		
20	Demonstrate and explain how relative measurement error is compounded when determining absolute error		
21	Determine appropriate units and scales to use when solving measurement problems		
22	Solve problems using indirect measurement		

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0	Geometry		
23	Use coordinate methods to solve and interpret problems (e.g., slope as rate of change, intercept as initial value, intersection as common solution, midpoint as equidistant)	Solving Systems Functions and Linear Equations	Section 1, Part 4 Section 2, Part 3 Section 2, Part 4
24	Graph a line when the slope and a point or when two points are known	Functions and Linear Equations	Section 2, Part 3 Section 2, Part 4
25	Explain slope as a representation of "rate of change"	Functions and Linear Equations	Section 4, Part 2
26	Perform translations and line reflections on the coordinate plane		
0	Data Analysis, Probability, and Discrete Math		
27	Determine the most appropriate measure of central tendency for a set of data based on its distribution	Solving Systems	Section 5, Part 1 Section 5, Part 2
28	Identify trends in data and support conclusions by using distribution characteristics such as patterns, clusters, and outliers	Solving Systems	Section 5, Part 2 Section 5, Part 4

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29	Create a scatter plot from a set of data and determine if the relationship is linear or nonlinear		
30	Use simulations to estimate probabilities	Rational Expressions	Section 5, Part 4
31	Define probability in terms of sample spaces, outcomes, and events	Rational Expressions	Section 5, Part 1
32	Compute probabilities using geometric models and basic counting techniques such as combinations and permutations	Rational Expressions	Section 5, Part 6 Section 5, Part 7
33	Explain the relationship between the probability of an event occurring, and the odds of an event occurring and compute one given the other		
34	Follow and interpret processes expressed in flow charts		
0	Patterns, Relations, and Functions		
35	Determine if a relation is a function and use appropriate function notation	Functions and Linear Equations	Section 4, Part 1 Section 3, Part 3

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36	Identify the domain and range of functions	Functions and Linear Equations	Section 1, Part 4
37	Analyze real-life relationships that can be modeled by linear functions	Functions and Linear Equations	Section 2, Part 1
38	Identify and describe the characteristics of families of linear functions, with and without technology	Functions and Linear Equations	Section 2, Part 1
39	Compare and contrast linear functions algebraically in terms of their rates of change and intercepts	Functions and Linear Equations	Section 4, p. 2
40	Explain how the graph of a linear function changes as the coefficients or constants are changed in the function's symbolic representation		

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