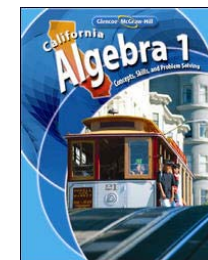


Algebra 1: Textbook Connections

Glencoe McGraw-Hill: Algebra 1 Concepts, Skills, and Problem Solving



UNIT 1

Topic

Standards

Textbook Sections

Analyze and Graph Linear Equations

1.1 Students use properties of numbers to demonstrate whether assertions are true or false.
2.0 Students understand and use such operations as taking the opposite, finding the reciprocal, taking a root, and raising to a fractional power. They understand and use the rules of exponents.
4.0 Students simplify expressions prior to solving linear equations and inequalities in one variable, such as $3(2x-5) + 4(x-2) = 12$.
5.0 Students solve multistep problems, including word problems, involving linear equations and linear inequalities in one variable, and provide justification for each step.
6.0 Students graph a linear equation and compute the x and y-intercepts (e.g., graph $2x + 6y = 4$). They are also able to sketch the region defined by linear inequality (e.g., they sketch the region defined by $2x + 6y < 4$).

1.1 Variables and Expressions
1.2 Order of Operations
1.3 Open Sentences
1.4 Identity and Equality Properties
1.5 The Distributive Property
1.6 Commutative and Associative Properties
1.7 Logical Reasoning and Counterexamples
1.8 Number Systems
1.9 Functions and Graphs

Solve Systems of Linear Equations

7.0 Students verify that a point lies on a line, given an equation of the line. Students are able to derive linear equations using the point slope formula.
16.0 Students understand the concepts of a relation and a function, determine whether a given relation defines a function, and give pertinent information about given relations and functions.
17.0 Students determine the domain of independent variables defined by a graph, a set of ordered pairs, or a symbolic expression.
18.0 Students determine whether a relation defined by a graph, a set of ordered pairs, or a symbolic expression is a function and justify the conclusion

2.1 Writing Equations
2.2 Solving Equations by Using Addition and Subtraction
2.3 Solving Equations by Using Multiplication and Division
2.4 Solving Multi-Step Equations
2.5 Solving Equations with the Variable on Each Side
2.6 Ratios and Proportions
2.7 Percent of Change
2.8 Solving for a Specific Variable

Solve and Graph Linear Inequalities

24.0 Students know and use simple aspects of a logical argument
25.0 Students use properties of the number system to judge the validity of results, to justify each step of a procedure, and to prove or disprove statements

3.1 Representing Relations
3.2 Representing Functions
3.3 Linear Functions
3.4 Arithmetic Sequences
3.5 Proportional and Non-proportional Relationships

Standards in bold are key standards as defined by the Mathematics Framework for California Public Schools

**To be covered as time permits. While this material is not necessary for CA Algebra 1, it may be very useful in preparing students for the CAHSEE examination, and/or previewing topics in to be covered in Geometry and Algebra 2*