Algebra I 1997 & Common Core Standards Comparison

1997 Algebra I	Common Core Course
1.0 Students identify & use the arithmetic properties of subset of integers, rational, irrational & real numbers….	8th grade Common Core – CC3
2.0 Students understand & use operations – reciprocal, taking a root & raising to fractional power….	8th grade Common Core – CC3
3.0 Students solve equations & inequalities involving absolute values	Integrated Math I
4.0 Students simplify expressions before solving linear equations *& inequalities..	8th grade Common Core – CC3
5.0 Students solve multi step problems….	8th grade Common Core – CC3
6.0 Students graph a linear equation…	8th grade Common Core – CC3 & Math Integrated I
7.0 Students verify that a point lies on a line….	8th grade Common Core – CC3
8.0 Students understand the concepts of parallel lines & perpendicular lines…	8th grade Common Core & Integrated Math I
9.0 Students solve a system of two linear equations…	8th grade Common Core & Integrated Math I
10.0 Students add, subtract, multiply & divide monomials & polynomials	8th grade Common Core & Integrated Math I
11.0 Apply basic factoring techniques to polynomials…	Integrated Math II

1997 Algebra I continued	Common Core Course
12.0 Students simplify fractions with polynomials	Integrated Math III
13.0 add, subtract, multiply & divide rational expressions & functions	Integrated Math III
14.0 Quadratic equations	Integrated Math II
15.0 Apply Algebraic techniques to solve rate problems, work problems & percent mixture problems	8th grade Common Core – CC3
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.	8th grade Common Core & Integrated Math I
17.0 Students determine the domain of independent variables and the range of dependent variables defined by a graph, a set of ordered pairs, or a symbolic expression.	8th grade Common Core – CC3
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.	8th grade Common Core – CC3
19.0 Students know the quadratic formula...	Integrated Math II
20.0 Students use the quadratic formula to find the roots of a second degree polynomial....	Integrated Math II
21.0 Students graph quadratic functions...	Integrated Math II
22.0 Students use the quadratic formula or factoring techniques to determine whether the graph of a quadratic function will intersect...	Integrated Math II

1997 Algebra I continued	Common Core Course
23.0 Apply quadratic equations to physical problems, such as the motion of an object...	8th grade Common Core – CC3

24.0 Students use & know simple aspects of a logical argument:

24.1. Students explain the difference between inductive & deductive reasoning

24.2. Identify the hypothesis & conclusion in logical deduction

24.3. Use counterexamples to show that an assertion is false & recognize that a single counterexample is sufficient to refute an exertion

25.0 Students use the properties of the number system to judge the validity of results, to justify each step of a procedure, and to prove or disprove statements:

8th grade Common Core – CC3

25.1 use properties of numbers to construct simple, valid arguments.

25.2 judge the validity of an argument according to whether the properties of the real number system & the order of operations have been applied correctly each step.

25.3 Given a specific algebraic statement involving linear, quadratic, or absolute value expressions or equations or inequalities, students determine whether the statement is true sometimes, always or never.