Mathematics Textbook and Instructional Materials Correlation to the 2009 Algebra I Standards of Learning and Curriculum Framework

Publisher Cord Communications	**Text Cord Algebra 1, Learning in Context**	**Copyright date 2009**
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2009 Algebra I Standards of Learning	
STANDARD	**Correlation: Must address both the standards and the curriculum framework. Use page number and SE for Student Edition or CT for Core Technology. (Identify no more than 8 correlations.)**
A.1 The student will represent verbal quantitative situations algebraically and evaluate these expressions for given replacement values of the variables.	pp.44–48 SE, pp. 61, 63, 66, 67, 73, 75 SE. Math Applications pp. 61-77 SE

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A.2 The student will perform operations on polynomials, including	
a) applying the laws of exponents to perform operations on expressions;	pp.571–576 SE
b) adding, subtracting, multiplying, and dividing polynomials; and	pp.560–565 SE, pp.566–570 SE, and pp.577–583 SE
c) factoring completely first- and second-degree binomials and trinomials in one or two variables. Graphing calculators will be used as a tool for factoring and for confirming algebraic factorizations.	pp.584–590 SE, pp.591–596 SE, pp.597–601 SE, and pp.602–603 SE

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A.3 The student will express the square roots and cube roots of whole numbers and the square root of a monomial algebraic expression in simplest radical form.	pp.733–737 SE, Activity 2 pp. 123-124 SE, pp. 769, 770, 776, 777 SE

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A.4 The student will solve multistep linear and quadratic equations in two variables, including	
a) solving literal equations (formulas) for a given variable;	pp.157–159 SE, 164–165 SE, selected problems from pp. 181–191 SE
b) justifying steps used in simplifying expressions and solving equations, using field properties and axioms of equality that are valid for the set of real numbers and its subsets;	pp.140–147 SE, pp.154–160 SE, pp.161–166 SE, and pp. 167–171 SE
Graphing calculators will be used both as a primary tool in solving problems and to verify algebraic solutions.	

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STANDARD	**Correlation: Must address both the standards and the curriculum framework. Use page number and SE for Student Edition or CT for Core Technology. (Identify no more than 8 correlations.)**
c) solving quadratic equations algebraically and graphically;	pp.622–627 SE, pp.634–638 SE, pp.639–645 SE, pp.646–649 SE, and pp.650–657 SE
d) solving multistep linear equations algebraically and graphically;	pp.161–166 SE, pp.167–171 SE, pp. 214-219 SE, pp. 225-226 SE, pp. 244-246 SE, pp. 253-255 SE
e) solving systems of two linear equations in two variables algebraically and graphically; and	pp.446–450 SE, pp.451–456 SE, pp.457–462 SE, pp.463–468 SE, and pp.469–474 SE
f) solving real-world problems involving equations and systems of equations.	pp.140–147 SE, pp. 148-1534 SE, pp.154–160 SE, pp.161–166 SE, pp. 167–171 SE, pp.181–191 SE, pp.446–450 SE, pp.451–456 SE, pp.457–462 SE, pp.463–468 SE, and pp.469–474 SE and pp.480–489 SE
Graphing calculators will be used both as a primary tool in solving problems and to verify algebraic solutions.	

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A.5 The student will solve multistep linear inequalities in two variables, including	
a) solving multistep linear inequalities algebraically and graphically;	pp.501–505 SE, pp.506–511 SE, pp.512–518 SE, pp.519–522 SE, and pp.523–530 SE
b) justifying steps used in solving inequalities, using axioms of inequality and properties of order that are valid for the set of real numbers and its subsets;	pp.501–505 SE, pp.506–511 SE and pp.512–518 SE
c) solving real-world problems involving inequalities; and	pp.501–505 SE, pp.506–511 SE, pp.512–518 SE, pp.519–522 SE, pp.523–530 SE, and pp.544–553 SE

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d) solving systems of inequalities.	pp.531–535 SE

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A.6 The student will graph linear equations and linear inequalities in two variables, including	
a) determining the slope of a line when given an equation of the line, the graph of the line, or two points on the line. Slope will be described as rate of change and will be positive, negative, zero, or undefined; and	pp.207–213 SE and pp.214–222 SE
b) writing the equation of a line when given the graph of the line, two points on the line, or the slope and a point on the line.	pp. 223–229 SE

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A.7 The student will investigate and analyze function (linear and quadratic) families and their characteristics both algebraically and graphically, including	
a) determining whether a relation is a function;	pp.272–278 SE
b) domain and range;	pp.272–278 SE and pp.622–627 SE
c) zeros of a function;	pp.230–237 SE, pp.628–633 SE, and pp.646–649 SE

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d) *x*- and *y*-intercepts;	pp.214–222 SE, pp.230–237 SE, and pp.244–248 SE
e) finding the values of a function for elements in its domain; and	pp.279–282 SE
f) making connections between and among multiple representations of functions including concrete, verbal, numeric, graphic, and algebraic.	pp.288–295 SE, p. 705 SE, Activity 1 & 2 pp. 312-314 SE, Math Applications pp. 313-314 SE

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A.8 The student, given a situation in a real-world context, will analyze a relation to determine whether a direct or inverse variation exists, and represent a direct variation algebraically and graphically and an inverse variation algebraically.	pp.283–287 SE, p. 315 SE, p. 320 SE, p. 322 SE, and p. 324 SE. Activity 2 pp. 313-314 SE

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A.9 The student, given a set of data, will interpret variation in real-world contexts and calculate and interpret mean absolute deviation, standard deviation, and z-scores.	Standard Deviation: pp.421–426 SE, and p. 432 Mean absolute deviation and z-scores not covered

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A.10 The student will compare and contrast multiple univariate data sets, using box-and-whisker plots.	pp.416–420 SE

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A.11 The student will collect and analyze data, determine the equation of the curve of best fit in order to make predictions, and solve real-world problems, using mathematical models. Mathematical models will include linear and quadratic functions.	pp.404–411 SE and pp. 432–433. Activity 1, pp. 658-659 SE. Activity 3, pp. 660-662 SE