Cord Algebra 1, Learning in Context, 3rd edition correlation to Oregon 2009 High School Mathematics Academic Content Standards

| Academic Content Standard | Cord Algebra 1 Lesson(s) | |
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| H.1A Algebra and Numeracy: Demonstrate a deep understanding of real numbers | | |
| and algebraic symbols by fluently creating, manipulating, computing with, and | | |
| determining equivalent expressions, both numeric | and symbolic with fluency. | |
| H.1A.1 Compare, order, and locate real numbers | 1.1, 1.3 | |
| on a number line. | | |
| H.1A.2 Evaluate, compute with, and determine | 1.3, 1.4, 1.5, 1.7, 1.8, 10.2, 10.3, | |
| equivalent numeric and algebraic expressions | 13.3 | |
| with real numbers and variables that may also | | |
| include absolute value, integer exponents, square | | |
| roots, pi, and/or scientific notation. | | |
| H.1A.3 Express square roots in equivalent | 5.5, 13.3 | |
| radical form and their decimal approximations | | |
| when appropriate. | | |
| H.1A.4 Develop, identify, and/or justify | 1.8, 3.1, 3.2, 3.3, 9.2, 9.3, 10.2, | |
| equivalent algebraic expressions, equations, and | 10.3 | |
| inequalities using the properties of exponents, | | |
| equality and inequality, as well as the | | |
| commutative, associative, inverse, identity, and | | |
| distributive properties. | | |
| H.1A.5 Factor quadratic expressions limited to | 10.5, 10.6, 10.7, 11.3 | |
| factoring common monomial terms, perfect- | | |
| square trinomials, differences of squares, and | | |
| quadratics of the form $x^2 + bx + c$ that factor over | | |
| the integers. | | |
| H.2A Algebra: Use linear equations and functions | s to represent relationships and | |
| solve linear equations, linear inequalities, systems of linear equations, and systems | | |
| of linear inequalities. | | |
| H.2A.1 Identify, construct, extend, and analyze | 1.2, 4.3, 4.4, 4.5, 4.6, 4.7, 5.1, | |
| linear patterns and functional relationships that | 5.2, 5.3, 5.4, 5.5, 5.6 | |
| are expressed contextually, numerically, | | |
| algebraically, graphically, in tables, or using | | |
| geometric figures. | | |
| H.2A.2 Given a rule, a context, two points, a | 4.2, 4.3, 4.4, 4.5, 4.6, 4.7 | |
| table of values, a graph, or a linear equation in | | |
| either slope intercept or standard form, identify | | |
| the slope, determine the <i>x</i> and/or <i>y</i> intercept(s), | | |
| and interpret the meaning of each. | | |

| any of the following information: two points on the line, its slope and one point on the line, or its graph. Also, determine an equation of a new line parallel or perpendicular to a given line, through a given point. $4.2, 4.3, 4.4, 4.5, 4.6, 4.7$ H.2A.4 Fluently convert among representations of linear relationships given in the form of a graph of a line, a table of values, or an equation of a line in slope-intercept and standard form. $4.2, 4.3, 4.4, 4.5, 4.6, 4.7$ H.2A.5 Given a linear function, interpret and analyze the relationship between the independent and dependent variables. Solve for x given $f(x)$ or solve for $f(x)$ given x. $4.2, 4.3, 3.4, 4.5, 4.6, 4.7$ H.2A.6 Analyze how changing the parameters transforms the graph of $f(x) = mx + b$. $3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 4.3,$ $4.4, 4.5, 4.6, 4.7, 9.1, 9.2, 9.3,$ $9.4, 9.5$ H.2A.8 Solve systems of two linear equations of two linear inequalities graphically, and solve systems of two linear inequalities graphically. $8.1, 8.2, 8.3, 8.4, 8.5, 9.6, 9.7$ H.3A.1 Given a quadratic or exponential $5.3, 5.4, 11.1, 11.2$ | any of the following information: two points on the line, its slope and one point on the line, or its | 4.4.4.5.4.6.4.7 | |
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| pattern to make predictions. | H.3A.1 Given a quadratic or exponential function, identify or determine a corresponding table or graph. H.3A.2 Given a table or graph that represents a quadratic or exponential function, extend the | 5.3, 5.4, 11.1, 11.2 5.3, 5.4, 11.1, 11.2 | |
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| the domain and range of each as it applies to a | H.3A.1 Given a quadratic or exponential function, identify or determine a corresponding table or graph. H.3A.2 Given a table or graph that represents a quadratic or exponential function, extend the pattern to make predictions. H.3A.3 Compare the characteristics of and distinguish among linear, quadratic, and exponential functions that are expressed in a table of values, a sequence, a context, algebraicably, and/or graphicably, and interpret | 5.3, 5.4, 11.1, 11.2 5.3, 5.4, 11.1, 11.2 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 5.3, 5.4, 11.1, 11.2 | |
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| H 2A 4 Given a quadratia or exponential 5.3.5.4.11.1.11.2 | H.3A.1 Given a quadratic or exponential function, identify or determine a corresponding table or graph. H.3A.2 Given a table or graph that represents a quadratic or exponential function, extend the pattern to make predictions. H.3A.3 Compare the characteristics of and distinguish among linear, quadratic, and exponential functions that are expressed in a table of values, a sequence, a context, algebraically, and/or graphically, and interpret the domain and range of each as it applies to a given context. | 5.3, 5.4, 11.1, 11.2 5.3, 5.4, 11.1, 11.2 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 5.3, 5.4, 11.1, 11.2 | |
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| between the independent and dependent | H.3A.1 Given a quadratic or exponential function, identify or determine a corresponding table or graph. H.3A.2 Given a table or graph that represents a quadratic or exponential function, extend the pattern to make predictions. H.3A.3 Compare the characteristics of and distinguish among linear, quadratic, and exponential functions that are expressed in a table of values, a sequence, a context, algebraically, and/or graphically, and interpret the domain and range of each as it applies to a given context. H.3A.4 Given a quadratic or exponential function, interpret and analyze the relationship | 5.3, 5.4, 11.1, 11.2 5.3, 5.4, 11.1, 11.2 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 5.3, 5.4, 11.1, 11.2 5.3, 5.4, 11.1, 11.2 | |
| variables and evaluate the function for specific | H.3A.1 Given a quadratic or exponential function, identify or determine a corresponding table or graph. H.3A.2 Given a table or graph that represents a quadratic or exponential function, extend the pattern to make predictions. H.3A.3 Compare the characteristics of and distinguish among linear, quadratic, and exponential functions that are expressed in a table of values, a sequence, a context, algebraically, and/or graphically, and interpret the domain and range of each as it applies to a given context. H.3A.4 Given a quadratic or exponential function, interpret and analyze the relationship between the independent and dependent | 5.3, 5.4, 11.1, 11.2 5.3, 5.4, 11.1, 11.2 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 5.3, 5.4, 11.1, 11.2 5.3, 5.4, 11.1, 11.2 | |
| values of the domain | H.3A.1 Given a quadratic or exponential function, identify or determine a corresponding table or graph. H.3A.2 Given a table or graph that represents a quadratic or exponential function, extend the pattern to make predictions. H.3A.3 Compare the characteristics of and distinguish among linear, quadratic, and exponential functions that are expressed in a table of values, a sequence, a context, algebraically, and/or graphically, and interpret the domain and range of each as it applies to a given context. H.3A.4 Given a quadratic or exponential function, interpret and analyze the relationship between the independent and dependent variables, and evaluate the function for specific | 5.3, 5.4, 11.1, 11.2 5.3, 5.4, 11.1, 11.2 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 5.3, 5.4, 11.1, 11.2 5.3, 5.4, 11.1, 11.2 | |

| H.3A.5 Given a quadratic function of the form | 11.1, 11.2, 11.3, 11.4, 11.5, 11.6 |
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| $f(x) = x^2 + bx + c$ (or equation of the form | |
| $y = x^2 + bx + c$) with integer roots, determine and | |
| interpret the roots, the vertex of the parabola, and | |
| the equation for the axis of symmetry of the | |
| parabola graphically and algebraically. | |