

**West Linn-Wilsonville School District  
Mathematics Curriculum Content Standards  
Grades 6-8**

ODE Content Standard	<b>Grade 7 Algebra (Part 1)</b>
7.1  7.1.4	<p><u>Number and Operations</u> and <u>Algebra</u>: <b>Develop an understanding of operations on all rational numbers and solving linear equations.</b></p> <ul style="list-style-type: none"> <li>• Apply properties of rational numbers and algebra to write and solve linear equations in one variable.</li> </ul>
7.2	<p><u>Number and Operations</u>, <u>Algebra</u> and <u>Geometry</u>: <b>Develop an understanding of and apply proportionality, including similarity.</b></p> <ul style="list-style-type: none"> <li>• Represent proportional relationships with coordinate graphs and tables, and identify unit rate as the slope of the related line.</li> <li>• Apply ratio and proportionality to solve problems, including percent and simple probability.</li> <li>• Use coordinate graphs, tables, and equations to distinguish proportional relationships from other relationships, including inverse proportionality.</li> <li>• Develop and use scale factors and proportional relationships to solve problems, including similarity and congruence.</li> <li>• Convert among different units of measurement to solve problems, including rates.</li> <li>• Apply scale factor to analyze how the change in one measure (e.g., length, area, volume) affects another.</li> </ul>
8.3	<p><u>Geometry</u> and <u>Measurement</u>: <b>Analyze two- and three-dimensional spaces and figures by using distance and angle.</b></p> <ul style="list-style-type: none"> <li>• Use properties of parallel lines, transversals, and angles to find missing sides and angles, and to solve problems including determining similarity or congruence of triangles.</li> <li>• Use models to show that the sum of the angles of any triangle is 180 degrees and apply this fact to find unknown angles.</li> <li>• Use models and logical arguments to show that the sum of the angles of any quadrilateral is 360 degrees, and apply this fact to find unknown angles.</li> <li>• Use models to explore the validity of the Pythagorean Theorem, and use it to find missing lengths.</li> <li>• Apply the Pythagorean Theorem to find distances in a variety of 2- and 3-dimensional contexts, including distances on coordinate graphs.</li> <li>• Use models and referents to explore and estimate square roots.</li> </ul>
H.1A  H.1A.1 thru H.1A.3	<p><u>Algebra</u> and <u>Numeracy</u>: <b>Demonstrate a deep understanding of real numbers and algebraic symbols by fluently creating, manipulating, computing with, and determining equivalent expressions, both numeric and symbolic.</b></p> <ul style="list-style-type: none"> <li>• Compare, order, and locate real numbers on a number line.</li> <li>• Evaluate, compute with, and determine equivalent numeric and algebraic expressions with real numbers and variables that may also include absolute value, integer exponents, square roots, pi, and/or scientific notation.</li> <li>• Express square roots in equivalent radical form and their decimal approximations when appropriate.</li> </ul>

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<b>H.2A</b>  H.2A.1 & H.2A.2	<p><b>Algebra: Use linear equations and functions to represent relationships and solve linear equations, linear inequalities, systems of linear equations, and systems of linear inequalities.</b></p> <ul style="list-style-type: none"><li>• Identify, construct, extend, and analyze linear patterns and functional relationships that are expressed contextually, numerically, algebraically, graphically, in tables, or using geometric figures.</li><li>• Given a rule, a context, two points, a table of values, a graph, or a linear equation in either slope intercept or standard form, identify the slope of the line, determine the x and/or y intercept(s), and interpret the meaning of each.</li></ul>

It is essential that these standards be addressed in contexts that promote problem solving, reasoning, communication, making connections, and designing and analyzing representations.