

OREGON CONTENT STANDARDS IN MATHEMATIC EDUCATION
CORRELATION DOCUMENT
MATHSCAPE

Common Curriculum Goals
Mathematic Skills.

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

CONTENT STANDARDS	6 TH GRADE	REFERENCES
NUMBER AND OPERATIONS: Develop an understanding of fluency with multiplication and division of fractions and decimals.	6.1.1 Select and use appropriate strategies to estimate fractions and decimal products and quotients.	“From Wholes to Parts” 134, 139 (fraction multiplication and division); 224 (decimals multiplication)
	6.1.2 Use and analyze a variety of strategies, including models, for solving problems with multiplication and division of fractions.	“From Wholes to Parts” 130-141, 156-161
	6.1.3 Use and analyze a variety of strategies, including models, for solving problems with multiplication and division of decimals.	“Beside the Point” 222-227, 261-263
	6.1.4 Develop fluency with efficient procedures for multiplying and dividing fractions and decimals and justify why the procedures work.	“From Wholes to Parts” 130-141, 156-161
	6.1.5 Apply the inverse relationship between multiplication and division to make sense of procedures for multiplying and dividing fractions and justify why they work.	“From Wholes to Parts” 140-141, 161
	6.1.6 Apply the properties of operations to simplify calculations.	“From Wholes to Parts” 102-105, 145-146
	6.1.7 Use the relationship between common decimals and fractions to solve problems including problems involving measurement.	“Besides the Point” 210-213, 216-217, 256-257 “Gulliver’s Worlds” 308, 312, 316, 317, 319
NUMBER AND OPERATIONS and PROBABILITY: Connect ratio, rate, and percent to multiplication and division.	6.2.1 Develop, analyze, and apply the meaning of ratio, rate, and percent to solve problems.	“Gulliver’s Worlds 280-281 Course 2 – “Buyer Beware” 6-45
	6.2.2 Determine decimal and percent equivalents for common fractions, including approximations.	“Beside the Point” 232-241, 265-268
	6.2.3 Understand the meaning of probability and represent probabilities as ratios, decimals, and percents.	“What Does the Data Say?” 29-35, 45-47 (represented as ratio) Course 2 – “Chance Encounters” 70-79, 88-91 (represented as ratio, decimal, %)
	6.2.4 Determine simple probabilities,	“What Does the Data Say?” 29-35,

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	both experimental and theoretical.	45-47
	6.2.5 Develop the concept of π as the ratio of the circumference of a circle to its diameter.	Course 2 – “Getting in Shape” 294-295, 310
ALGEBRA: Write, interpret, and use mathematical expressions and equations.	6.3.1 Use order of operations to simplify expressions that may include exponents and grouping symbols.	“From Wholes to Parts” 102, 145
	6.3.2 Develop the meanings and uses of variable.	“Patterns in Numbers and Shapes” 332-337
	6.3.3 Write, evaluate, and use expressions and formulas to solve problems.	“Patterns in Numbers and Shapes” 332-337, 357-359
	6.3.4 Identify and represent equivalent expressions (e.g. different ways to see a pattern).	“Patterns in Numbers and Shapes” 324-337, 357-359
	6.3.5 Represent, analyze, and determine relationships and patterns using tables, graphs, words and when possible, symbols.	“ Patterns in Numbers and Shapes”, 344-345, 350-353, 362-365
	6.3.6 Recognize that the solutions of an equation are the values of the variables that make the equation true.	Course 2 – “Language of Algebra” 206-207
	6.3.7 Solve one-step equations by using number sense, properties of operations, and the idea of maintaining equality on both sides of an equations.	Course 2 – “Language of Algebra” 203-211, 221-223

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CONTENT STANDARDS	7 TH GRADE	REFERENCES
NUMBER & OPERATIONS & ALGEBRA: Develop an understanding of operations on all rational numbers and solving linear equations.	7.1.1 Develop, analyze, and apply models (including everyday contexts), strategies, and procedures to compute with integers, with an emphasis on negative integers.	“Making Mathematical Arguments” 96-103, 124-127 ***There are no problems with everyday context that emphasize negative integers.
	7.1.2 Extend knowledge of integers and positive rational numbers to solve problems involving negative rational numbers.	Course 1 – “Besides the Point” 244-255, 270-275 (This only considers the rational numbers to be integers, not negative fractions or decimals.
	7.1.3 Develop and use strategies to estimate the result of rational number computations and justify the reasonableness of results.	“Buyer Beware” 26-27, 42 Course 1 - “From Wholes to Parts” 134, 139, 158 “Besides the Point” 224, 235
	7.1.4 Apply properties of rational numbers and algebra to write and solve linear equations in one variable.	“The Language of Algebra” 204-207, 210-211, 220-223
NUMBER & OPERATIONS, ALGEBRA & GEOMETRY: Develop an understanding of and apply proportionality, including similarity.	7.2.1 Represent proportional relationships with coordinate graphs and tables, and identify unit rate as the slope of the related line.	“Buyer Beware” 8-9, 35,
	7.2.2 Apply ratio and proportionality to solve problems, including percent and simple probability.	“Buyer Beware” 16-23, 28-29, 43
	7.2.3 Use coordinate graphs, tables, and equations to distinguish proportional relationships from other relationships, including inverse proportionality.	“Buyer Beware” 22-23, 41
	7.2.4 Develop and use scale factors and proportional relationships to solve problems, including similarity and congruence.	“From the Ground Up” 138-145, 169 ****There are no problems that find missing parts of similar figures by using proportions.
	7.2.5 Convert among different units of measurement to solve problems, including rates.	“Buyer Beware” 40 (#16) Course 3 – “Shapes and Space” 118-119, 132
	7.2.6 Apply scale factor to analyze	“From the Ground Up” 178 (#9-10)

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	how the change in one measure (e.g., length, area, volume) affects another.	Course 1 – “Gulliver’s Worlds” 304-305
MEASUREMENT & GEOMETRY: Develop an understanding of and use formulas to determine surface area and volume.	7.3.1 Use models to explain the reasonableness of formulas for the circumference and area of circles.	“Getting in Shape” 294-295, 298-299
	7.3.2 Know common estimates of π and use these values to estimate and calculate the circumference and area of a circle.	“Getting in Shape” 294-295, 298-299
	7.3.3 Solve problems involving areas and circumferences of circles.	“Getting in Shape” 310, 312
	7.3.4 Use models to explain the reasonableness of formulas for the surface area of pyramids and cylinders, and volume of pyramids, cylinders, and cones.	Course 3 – “Shapes and Space” 108-109, 114-117,
	7.3.5 Find and justify relationships among the formulas for the areas of different polygons when determining surface area.	“From the Ground Up” 154-157 “Getting in Shape” 296-297, 311
	7.3.6 Solve problems involving surface areas of pyramids and cylinders and volumes of pyramids, cylinders, and cones.	Course 3 – “Shapes and Space” 130-131, 133
	7.3.7 Estimate and compute the area and volume of complex or irregular shapes by dividing them into basic shapes.	“From the Ground Up” 160-161 Course 3 – “Shapes and Space” 110-111

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CONTENT STANDARDS	8 TH GRADE	REFERENCES
ALGEBRA: Analyze and represent linear functions and solve linear equations and systems of linear equations.	8.1.1 Translate among contextual, verbal, tabular, graphical, and algebraic representations of linear functions.	“Family Portraits” 280-285, 305-307 Course 2 – “The Language of Algebra” 198-210, 218-220
	8.1.2 Determine the slope of a line and understand that it is a constant rate of change.	“Roads and Ramps” 244-247 “Family Portraits” 280-285
	8.1.3 Identify and interpret the properties (i.e. slope, intercepts, continuity, and discreteness) of linear relationships as they are shown in the different representations and recognize proportional relationships ($y/x = k$ or $y = kx$) as a special case.	“Roads and Ramps” 240-247, 262-263 “Family Portraits” 274-277, 280-285, 335-307 “Mathematics of Motion” 66, 85 (These graphs show continuous – hunger or tiredness – and discrete – distance – but do not denote them by name.)
	8.1.4 Use linear functions and equations to represent, analyze and solve problems, and to make predictions and inferences.	“Looking Behind the Numbers” 22-23, 41 “What Comes Next” 152-161, 172-175 “Exploring the Unknown” 208-209, 221
	8.1.5 Relate systems of two linear equations in two variables and their solutions to pairs of lines that are intersecting, parallel, or the same line.	****There are no problems involving systems of equations
	8.1.6 Use informal strategies (e.g., graphs or tables) to solve problems involving systems of linear equations in two variables.	****There are no problems involving systems of equations
DATA ANALYSIS & ALGEBRA: Analyze and summarize data sets.	8.2.1 Organize and display data (e.g., histograms, box-and-whisker plots, scatter plots) to pose and answer questions, and justify the reasonableness of the choice of display.	“Looking Behind the Numbers” 12-23, 37-41
	8.2.2 Use measures of center and spread to summarize and compare data sets.	“Looking Behind the Numbers” 8-11, 35-36
	8.2.3 Interpret and analyze displays of	“Looking Behind the Numbers” 6-9,

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	data and descriptive statistics.	12-45
	8.2.4 Compare descriptive statistics and evaluate how changes in data affect those statistics.	Course 2 – “Chance Encounters” 66-75, 86-89
	8.2.5 Describe the strengths and limitations of a particular statistical measure, and justify or critique its use in a given situation.	“Looking Behind the Numbers” 8-9, 28-29, 35, 43
	8.2.6 Use sample data to make predictions regarding a population.	“What Comes Next?” 148-151, 154-161, 164-165, 169-170, 174-177
	8.2.7 Identify claims based on statistical data and evaluate the reasonableness of claims.	“Looking Behind the Numbers” 6-9, 34 “What Comes Next?” 154-155, 173
	8.2.8 Use data to estimate the likelihood of future events and evaluate the reasonableness of predictions.	“Looking Behind the Numbers” 6-9, 34 Course 2 – “Chance Encounters” 50-51, 54-55, 80, 82
GEOMETRY & MEASUREMENT: Analyze two- and three-dimensional spaces and figures by using distance and angle.	8.3.1 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.	****There are no problems that use parallel lines, transversals, and angles to determine missing information or similarity or congruence of triangles.
	8.3.2 Use models to show that the sum of the angles of any triangle is 180 degrees and apply this fact to find unknown angles.	Course 2 – “Getting in Shape” 276-277, 303
	8.3.3 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.	Course 2 – “Getting in Shape” 286-287, 307
	8.3.4 Use models to explore the validity of the Pythagorean Theorem, and use it to find missing lengths.	“Roads and Ramps” 236-237, 260
	8.3.5 Apply the Pythagorean Theorem to find distances in a variety of 2- and 3-dimensional contexts, including distances on coordinate graphs.	“Roads and Ramps” 238-239, 252-255, 261, 266-267 ****There are no problems that find the distance on coordinate graphs.
	8.3.6 Use models and referents to explore and estimate square roots.	Course 2 – “Making Mathematical Arguments” 106-109, 128, 129