



Alignment Document
State of California and Aventa Learning

Math 6

Strand	Common Curriculum Goal	Standard	Lesson Name
NS Number Sense	NS.1.0 Students compare and order positive and negative fractions, decimals, and mixed numbers. Students solve problems involving fractions, ratios, proportions, and percentages:	NS.1.1 Compare and order positive and negative fractions, decimals, and mixed numbers and place them on a number line.	Lesson 1: Compare and order numbers Lesson 5: Compare and order decimals Lesson 20: Connect Percents, decimals, and fractions
		NS.1.2 Interpret and use ratios in different contexts (e.g., batting averages, miles per hour) to show the relative sizes of two quantities, using appropriate notations (a/b , a to b , $a:b$).	Lesson 36: Proportional Relationships
		NS.1.3 Use proportions to solve problems (e.g., determine the value of N if $4/7 = N/21$, find the length of a side of a polygon similar to a known polygon). Use cross-multiplication as a method for solving such problems, understanding it as the multiplication of both sides of an equation by a multiplicative inverse.	Lesson 36: Proportional Relationships
		NS.1.4 Calculate given percentages of quantities and solve problems involving discounts at sales, interest earned, and tips.	



Alignment Document
State of California and Aventa Learning

Math 6

Strand	Common Curriculum Goal	Standard	Lesson Name
	NS.2.0 Students calculate and solve problems involving addition, subtraction, multiplication, and division:	NS.2.1 Solve problems involving addition, subtraction, multiplication, and division of positive fractions and explain why a particular operation was used for a given situation.	Lesson 14: Add and subtract like fractions Lesson 15: Add and Subtract unlike fractions Lesson 16: Add and subtract mixed numbers Lesson 17: Multiply Fractions Lesson 18: Divide Fractions
		NS.2.2 Explain the meaning of multiplication and division of positive fractions and perform the calculations (e.g., $5/8 \div 15/16 = 5/8 \times 16/15 = 2/3$).	Lesson 17: Multiply Fractions Lesson 18: Divide Fractions
		NS.2.3 Solve addition, subtraction, multiplication, and division problems, including those arising in concrete situations, that use positive and negative integers and combinations of these operations.	Lesson 33: Perimeter, Area Lesson 34: Elapsed Time
		NS.2.4 Determine the least common multiple and the greatest common divisor of whole numbers; use them to solve problems with fractions (e.g., to find a common denominator to add two fractions or to find the reduced form for a fraction).	Lesson 12: GCF and Lowest Terms Lesson 15: Add and Subtract unlike fractions



Alignment Document
State of California and Aventa Learning

Math 6

Strand	Common Curriculum Goal	Standard	Lesson Name
AF Algebra and Functions	AF.1.0 Students write verbal expressions and sentences as algebraic expressions and equations; they evaluate algebraic expressions, solve simple linear equations, and graph and interpret their results:	AF.1.1 Write and solve one-step linear equations in one variable.	Lesson 4: Properties Lesson 14: Add and subtract like fractions
		AF.1.2 Write and evaluate an algebraic expression for a given situation, using up to three variables.	Lesson 14: Add and subtract like fractions Lesson 15: Add and Subtract unlike fractions Lesson 16: Add and subtract mixed numbers
		AF.1.3 Apply algebraic order of operations and the commutative, associative, and distributive properties to evaluate expressions; and justify each step in the process.	Lesson 4: Properties
		AF.1.4 Solve problems manually by using the correct order of operations or by using a scientific calculator.	Lesson 4: Properties
	AF.2.0 Students analyze and use tables, graphs, and rules to solve problems involving rates and proportions:	AF.2.1 Convert one unit of measurement to another (e.g., from feet to miles, from centimeters to inches).	Lesson 32: Conversions
		AF.2.2 Demonstrate an understanding that rate is a measure of one quantity per unit value of another quantity.	
		AF.2.3 Solve problems involving rates, average speed, distance, and time.	Lesson 34: Elapsed Time



Alignment Document
State of California and Aventa Learning

Math 6

Strand	Common Curriculum Goal	Standard	Lesson Name
	AF.3.0 Students investigate geometric patterns and describe them algebraically:	AF.3.1 Use variables in expressions describing geometric quantities (e.g., $P = 2w + 2l$, $A = 1/2 bh$, $C = \pi d$ - the formulas for the perimeter of a rectangle, the area of a triangle, and the circumference of a circle, respectively).	Lesson 33: Perimeter, Area
		AF.3.2 Express in symbolic form simple relationships arising from geometry.	
MG Measurement and Geometry	MG.1.0 Students deepen their understanding of the measurement of plane and solid shapes and use this understanding to solve problems:	MG.1.1 Understand the concept of a constant such as pi; know the formulas for the circumference and area of a circle.	
		MG.1.2 Know common estimates of pi (3.14; 22/7) and use these values to estimate and calculate the circumference and the area of circles; compare with actual measurements.	Lesson 29: Circles
		MG.1.3 Know and use the formulas for the volume of triangular prisms and cylinders (area of base x height); compare these formulas and explain the similarity between them and the formula for the volume of a rectangular solid.	
	MG.2.0 Students identify and describe the properties of two-dimensional figures:	MG.2.1 Identify angles as vertical, adjacent, complementary, or supplementary and provide descriptions of these terms.	

Math 6

Strand	Common Curriculum Goal	Standard	Lesson Name
		MG.2.2 Use the properties of complementary and supplementary angles and the sum of the angles of a triangle to solve problems involving an unknown angle.	Lesson 28: Polygons
		MG.2.3 Draw quadrilaterals and triangles from given information about them (e.g., a quadrilateral having equal sides but no right angles, a right isosceles triangle).	Lesson 28: Polygons
SDAP Statistics, Data Analysis, and Probability	SDAP.1.0 Students compute and analyze statistical measurements for data sets:	SDAP.1.1 Compute the range, mean, median, and mode of data sets.	Lesson 24: Mean, Median, Mode, Range (centrala)
		SDAP.1.2 Understand how additional data added to data sets may affect these computations of measures of central tendency.	Lesson 24: Mean, Median, Mode, Range (centrala)
		SDAP.1.3 Understand how the inclusion or exclusion of outliers affects measures of central tendency.	
		SDAP.1.4 Know why a specific measure of central tendency (mean, median, mode) provides the most useful information in a given context.	Lesson 24: Mean, Median, Mode, Range (centrala)
	SDAP.2.0 Students use data samples of a population and describe the characteristics and limitations of the samples:	SDAP.2.1 Compare different samples of a population with the data from the entire population and identify a situation in which it makes sense to use a sample.	



Alignment Document
State of California and Aventa Learning

Math 6

Strand	Common Curriculum Goal	Standard	Lesson Name
		SDAP.2.2 Identify different ways of selecting a sample (e.g., convenience sampling, responses to a survey, random sampling) and which method makes a sample more representative for a population.	
		SDAP.2.3 Analyze data displays and explain why the way in which the question was asked might have influenced the results obtained and why the way in which the results were displayed might have influenced the conclusions reached.	
		SDAP.2.4 Identify data that represent sampling errors and explain why the sample (and the display) might be biased.	
		SDAP.2.5 Identify claims based on statistical data and, in simple cases, evaluate the validity of the claims.	
	SDAP.3.0 Students determine theoretical and experimental probabilities and use these to make predictions about events:	SDAP.3.1 Represent all possible outcomes for compound events in an organized way (e.g., tables, grids, tree diagrams) and express the theoretical probability of each outcome.	Lesson 22: Tree Diagrams
		SDAP.3.2 Use data to estimate the probability of future events (e.g., batting averages or number of accidents per mile driven).	Lesson 21: Probability



Alignment Document
State of California and Aventa Learning

Math 6

Strand	Common Curriculum Goal	Standard	Lesson Name
		SDAP.3.3 Represent probabilities as ratios, proportions, decimals between 0 and 1, and percentages between 0 and 100 and verify that the probabilities computed are reasonable; know that if P is the probability of an event, 1 - P is the probability of an event not occurring.	Lesson 21: Probability
		SDAP.3.4 Understand that the probability of either of two disjoint events occurring is the sum of the two individual probabilities and that the probability of one event following another, in independent trials, is the product of the two probabilities.	
		SDAP.3.5 Understand the difference between independent and dependent events.	
MR Mathematical Reasoning	MR.1.0 Students make decisions about how to approach problems:	MR.1.1 Analyze problems by identifying relationships, distinguishing relevant from irrelevant information, identifying missing information, sequencing and prioritizing information, and observing patterns.	Lesson 3: Patterns
		MR.1.2 Formulate and justify mathematical conjectures based on a general description of the mathematical question or problem posed.	Lesson 23: Analyze Data Lesson 24: Mean, Median, Mode, Range (central)



Alignment Document
State of California and Aventa Learning

Math 6

Strand	Common Curriculum Goal	Standard	Lesson Name
		MR.1.3 Determine when and how to break a problem into simpler parts.	Lesson 4: Properties Lesson 20: Connect Percents, Decimals, and Fractions
	MR.2.0 Students use strategies, skills, and concepts in finding solutions:	MR.2.1 Use estimation to verify the reasonableness of calculated results.	Lesson 6: Estimate Operations with Decimals
		MR.2.2 Apply strategies and results from simpler problems to more complex problems.	Lesson 15: Add and subtract unlike fractions Lesson 16: Add and subtract mixed numbers Lesson 33: Perimeter, Area
		MR.2.3 Estimate unknown quantities graphically and solve for them by using logical reasoning and arithmetic and algebraic techniques.	
		MR.2.4 Use a variety of methods, such as words, numbers, symbols, charts, graphs, tables, diagrams, and models, to explain mathematical reasoning.	Lesson 22: Tree Diagrams Lesson 23: Analyze Data Lesson 25: Problem Solve with Data
		MR.2.5 Express the solution clearly and logically by using the appropriate mathematical notation and terms and clear language; support solutions with evidence in both verbal and symbolic work.	Lesson 22: Tree Diagrams Lesson 23: Analyze Data Lesson 25: Problem Solve with Data



Alignment Document
State of California and Aventa Learning

Math 6

Strand	Common Curriculum Goal	Standard	Lesson Name
		MR.2.6 Indicate the relative advantages of exact and approximate solutions to problems and give answers to a specified degree of accuracy.	Lesson 31: Metric Measurement (Length)
		MR.2.7 Make precise calculations and check the validity of the results from the context of the problem.	
	MR.3.0 Students move beyond a particular problem by generalizing to other situations:	MR.3.1 Evaluate the reasonableness of the solution in the context of the original situation.	Lesson 25: Problem Solve with Data Lesson 33: Perimeter, Area
		MR.3.2 Note the method of deriving the solution and demonstrate a conceptual understanding of the derivation by solving similar problems.	Lesson 15: Add and subtract unlike fractions Lesson 16: Add and subtract mixed numbers
		MR.3.3 Develop generalizations of the results obtained and the strategies used and apply them in new problem situations.	Lesson 3: Patterns Lesson 8: Multiply Decimals Lesson 9: Divide Decimals Lesson 35: Ratios