

Topic: Fractions, Decimals, and Numbers – Grade 8

Standard Plus® Intervention System® - Lesson Index

Lesson	Focus	Lesson Objective	Standards
Assess 1A	Adding & Subtracting Fractions and Mixed Numbers		
Lesson 1	Add/Subtract Fractions w/ Like Denominators	<i>Add and subtract fractions with like denominators.</i>	6 NS 2.1 7 NS 1.2
Lesson 2	Add/Subtract Fractions w/ Like Denominators		
Lesson 3	Least Common Multiple	<i>Calculate the least common multiple and greatest common divisor of whole numbers.</i>	6 NS 2.4 7 NS 2.2
Lesson 4	Least Common Multiple		
Lesson 5	Greatest Common Divisor		
Lesson 6	Greatest Common Divisor		
Lesson 7	Add/Subtract Fractions w/ Unlike Denominators	<i>Add and subtract unlike fractions.</i>	6 NS 2.1 7 NS 1.2, 2.2
Lesson 8	Add/Subtract Fractions w/ Unlike Denominators		
Lesson 9	Converting Between Improper Fractions and Mixed Numbers	<i>Convert mixed numbers to improper fractions to add and subtract. Convert improper fractions to mixed numbers.</i>	6 NS 2.1 7 NS 1.2, 2.2
Lesson 10	Adding Mixed Numbers		
Lesson 11	Adding Mixed Numbers		
Lesson 12	Subtracting Mixed Numbers		
Lesson 13	Subtracting Mixed Numbers		
Assess 1B	Adding & Subtracting Fractions and Mixed Numbers		
Assess 2A	Multiplying & Dividing Fractions & Mixed Numbers		
Lesson 14	Multiplying and Dividing Fractions	<i>Multiply and divide fractions.</i>	6 NS 2.1 7 NS 1.2
Lesson 15	Multiplying and Dividing Fractions		
Lesson 16	Multiplying and Dividing Fractions		
Lesson 17	Converting Between Improper Fractions and Mixed Numbers	<i>Convert mixed numbers to improper fractions to multiply and divide.</i>	6 NS 2.1 7 NS 1.2
Lesson 18	Multiplying and Dividing Mixed Numbers		
Lesson 19	Multiplying and Dividing Mixed Numbers		
Assess 2B	Multiplying & Dividing Fractions & Mixed Numbers		
Assess 3A	Fraction/Decimal Conversion and Comparison		
Lesson 20	Fraction/Decimal Conversion	<i>Convert decimals to fractions and fractions to decimals.</i>	7 NS 1.3
Lesson 21	Fraction/Decimal Conversion		
Lesson 22	Comparing and Ordering Fractions by Converting Fractions to Decimals	<i>Use fraction/decimal conversion to compare and order decimals and fractions.</i>	6 NS 1.1 7 NS 1.1, 1.3
Lesson 23	Comparing & Ordering Fractions & Decimals		
Lesson 24	Comparing & Ordering Fractions & Decimals		
Assess 3B	Fraction/Decimal Conversion and Comparison		

California Standards References

NS – Number Sense

SDAP – Statistics, Data Analysis, & Probability

AF – Algebra & Functions

MR – Mathematical Reasoning

MG – Measurement & Geometry

©2007, 2010 Learning Plus Associates

Topic: Fractions, Decimals, and Numbers – Grade 8

Standard Plus® Intervention System® - Lesson Index

Assess 4A	Rate/Ratio/Unit Rate/Percent/Exponents		
Lesson 25	Ratio	<i>Solve problems involving rate, ratio, and unit rate.</i>	6 NS 1.2, 1.4 7 MG 1.3 7 NS 1.6
Lesson 26	Unit Rate		
Lesson 27	Rate		
Lesson 28	Rate, Ratio, Unit Rate		
Lesson 29	Solve for a %	<i>Use percent to solve problems.</i>	6 NS 1.4 7 NS 1.6, 1.7 7 MG 1.3
Lesson 30	% Discounted		
Lesson 31	Sales Tax		
Lesson 32	Exponents	<i>Multiply and divide expressions with positive and negative exponents with common bases.</i>	7 NS 2.1, 2.3
Lesson 33	Exponents		
Lesson 34	Exponents		
Lesson 35	Exponents		
Assess 4B	Rate/Ratio/Unit Rate/Percent/Exponents		

1.0 Number Sense

1.1 Read, write, and compare rational numbers in scientific notation (positive and negative powers of 10), compare rational numbers in general. (1 item on General Math CST)

1.2 Add, subtract, multiply, and divide rational numbers (integers, fractions, and terminating decimals) and take positive rational numbers to whole-number powers. (4 items on General Math CST)

1.3 Convert fractions to decimals and percents and use these representations in estimations, computations, and applications. (4 items on General Math CST)

1.6 Calculate the percentage of increases and decreases of a quantity. (1 item on General Math CST)

1.7 Solve problems that involve discounts, markups, commissions, and profit and compute simple and compound interest. (2 items on General Math CST)

2.0 Number Sense

2.1 Understand negative whole-number exponents. Multiply and divide expressions involving exponents with a common base. (1 item on General Math CST)

2.2 Add and subtract fractions by using factoring to find common denominators. (4 items on General Math CST)

2.3 Multiply, divide, and simplify rational numbers by using exponent rules. (2 items on General Math CST)

1.0 Measurement & Geometry

1.3 Use measures expressed as rates (e.g., speed, density) and measures expressed as products (e.g., person-days) to solve problems; check the units of the solutions; and use dimensional analysis to check the reasonableness of the answer. (2 items on General Math CST)

California Standards References

NS – Number Sense

SDAP – Statistics, Data Analysis, & Probability

AF – Algebra & Functions

MR – Mathematical Reasoning

MG – Measurement & Geometry

©2007, 2010 Learning Plus Associates

Topic: Computing and Problem Solving – Grade 8

Standard Plus® Intervention System® - Lesson Index

Lesson	Focus	Lesson Objective	Standards
Assess 1A	Add, Subtract, Multiply, and Divide		
Lesson 1	Adding Whole Numbers & Decimals	<i>Add and subtract whole numbers and decimals.</i>	6 NS 2.3 7 NS 1.2
Lesson 2	Addition in Context		
Lesson 3	Subtracting Whole Numbers & Decimals		
Lesson 4	Subtraction in Context		
Lesson 5	Addition/Subtraction in Context		
Lesson 6	Multiplication of Whole Numbers & Decimals	<i>Multiply whole numbers and decimals.</i>	6 NS 1.4, 2.3 7 NS 1.2, 1.7
Lesson 7	Multiplication of Whole Numbers & Decimals		
Lesson 8	Multiplication of Whole Numbers & Decimals		
Lesson 9	Multiplication of Whole Numbers & Decimals		
Lesson 10	Multiplication in Context		
Lesson 11	Division of Whole Numbers & Decimals	<i>Divide whole numbers and decimals.</i>	6 NS 1.4, 2.3 7 NS 1.2, 1.7
Lesson 12	Division of Whole Numbers & Decimals		
Lesson 13	Division of Whole Numbers & Decimals		
Lesson 14	Division of Whole Numbers & Decimals		
Lesson 15	Division of Whole Numbers & Decimals		
Lesson 16	Division of Whole Numbers & Decimals		
Lesson 17	Division in Context		
Lesson 18	Multiplication/Division in Context		
Assess 1B	Add, Subtract, Multiply, and Divide		

Assess 2A	Word Problems/Obtaining Information from a Chart		
Lesson 19	A Strategy for Solving Word Problems	<i>Practice a strategy for solving word problems.</i>	6 NS 2.3 7 NS 1.2
Lesson 20	A Strategy for Solving Word Problems		
Lesson 21	Evaluating Reasonable Solutions	<i>Evaluate solutions to determine reasonability.</i>	6 NS 1.4, 2.3 7 NS 1.2, 1.7
Lesson 22	Evaluating Reasonable Solutions		
Lesson 23	Solving Fraction Word Problems	<i>Solve word problems with fractions.</i>	6 NS 1.4, 2.1 7 NS 1.2
Lesson 24	Solving Fraction Word Problems		
Lesson 25	Solving Fraction Word Problems		
Lesson 26	Obtaining Information from a Chart	<i>Use information from a chart to solve problems.</i>	6 NS 1.4, 2.3 7 NS 1.2, 1.7
Lesson 27	Obtaining Information from a Chart		
Lesson 28	Obtaining Information from a Chart		
Lesson 29	Obtaining Information from a Chart		
Lesson 30	Obtaining Information from a Chart		
Assess 2B	Word Problems/Obtaining Information from a Chart		

California Standards References

NS – Number Sense

MG – Measurement & Geometry

MR – Mathematical Reasoning

AF – Algebra & Functions

SDAP – Statistics, Data Analysis, & Probability

©2007, 2010 Learning Plus Associates

Topic: Computing and Problem Solving – Grade 8

Standard Plus® Intervention System® - Lesson Index

Assess 3A	Add, Subtract, Multiply, & Divide Integers		
Lesson 31	Adding Integers	<i>Add positive and negative integers.</i>	6 NS 2.3 7 NS 1.2
Lesson 32	Adding Integers		
Lesson 33	Subtracting Integers	<i>Subtract positive and negative integers.</i>	6 NS 2.3 7 NS 1.2
Lesson 34	Subtracting Integers		
Lesson 35	Multiplying Integers	<i>Multiply positive and negative integers.</i>	6 NS 2.3 7 NS 1.2
Lesson 36	Multiplying Integers		
Lesson 37	Dividing Integers	<i>Divide positive and negative integers.</i>	6 NS 2.3 7 NS 1.2
Lesson 38	Dividing Integers		
Assess 3B	Add, Subtract, Multiply, & Divide Integers		
Assess 4A	Absolute Value / Square Roots		
Lesson 39	Absolute Value	<i>Interpret and determine absolute value.</i>	7 NS 2.5
Lesson 40	Absolute Value		
Lesson 41	Perfect Squares	<i>Demonstrate an understanding between raising a number to a power and perfect squares.</i>	7 NS 2.4
Lesson 42	Perfect Squares		
Lesson 43	Estimating Square Roots	<i>Determine the two integers between which a square root lies.</i>	7 NS 2.4
Lesson 44	Estimating Square Roots		
Assess 4B	Absolute Value / Square Roots		

1.0 Number Sense

1.2 Add, subtract, multiply, and divide rational numbers (integers, fractions, and terminating decimals) and take positive rational numbers to whole-number powers. (4 items on General Math CST)

1.7 Solve problems that involve discounts, markups, commissions, and profit and compute simple and compound interest. (2 items on General Math CST)

2.0 Number Sense

2.4 Use the inverse relationship between raising to a power and extracting the root of a perfect square integer; for an integer that is not square, determine without a calculator the two integers between which its square root lies and explain why. (1 item on General Math CST)

2.5 Understand the meaning of the absolute value of a number; interpret the absolute value as the distance of the number from zero on a number line; and determine the absolute value of real numbers. (2 items on General Math CST)

California Standards References

NS – Number Sense

MG – Measurement & Geometry

MR – Mathematical Reasoning

AF – Algebra & Functions

SDAP – Statistics, Data Analysis, & Probability

©2007, 2010 Learning Plus Associates

Topic: Algebraic Operations & Problem Solving – Grade 8

Standard Plus® Intervention System® - Lesson Index

Lesson	Focus	Lesson Objective	Standards
Assess 1A	Expressions, Operations, and Properties		
Lesson 1	Evaluating Variable Expressions	<i>Write and evaluate expressions with variables.</i>	6 AF 1.2 7 AF 1.1
Lesson 2	Evaluating Variable Expressions		
Lesson 3	Writing Variable Expressions		
Lesson 4	Order of Operations	<i>Demonstrate an understanding of the order of operations.</i>	6 AF 1.3, 1.4 7 AF 1.2
Lesson 5	Order of Operations		
Lesson 6	Order of Operations		
Lesson 7	Commutative Property of Addition & Multiplication	<i>Demonstrate an understanding of the properties used in problem solving.</i>	6 AF 1.3 7 AF 1.3
Lesson 8	Associative Property of Addition & Multiplication		
Lesson 9	Commutative & Identity Properties		
Lesson 10	Associative Properties / Zero Property		
Lesson 11	Using the Distributive Property		
Lesson 12	Using the Distributive Property		
Assess 1B	Expressions, Operations, and Properties		
Assess 2A	Writing & Solving Equations		
Lesson 13	Solving Addition & Subtraction Equations	<i>Add & subtract to solve equations.</i>	6 AF 1.1
Lesson 14	Solving Multiplication & Division Equations	<i>Multiply and divide to solve equations.</i>	6 AF 1.1
Lesson 15	Solving Two-Step Equations	<i>Solve two-step equations.</i>	7 AF 4.1
Lesson 16	Solving Two-Step Equations		
Lesson 17	Writing Equations	<i>Write equations to match problem situations.</i>	6 AF 1.2 7 AF 1.1
Lesson 18	Writing Equations		
Lesson 19	Writing Equations		
Lesson 20	Writing Equations		
Assess 2B	Writing & Solving Equations		
Assess 3A	Equations & Inequalities / Slope / Inverse Operations		
Lesson 21	Solve Linear Equations	<i>Identify, solve, and graph equations.</i>	6 AF 1.1 7 AF 1.5, 4.1
Lesson 22	Solve Linear Equations		
Lesson 23	Solve and Graph Linear Equations		
Lesson 24	Solve and Graph Linear Equations		
Lesson 25	Determining Slope	<i>Interpret the slope of a line.</i>	7 AF 3.3, 3.4
Lesson 26	Determining Slope		
Lesson 27	Inequalities	<i>Identify, solve, and graph inequalities.</i>	6 AF 1.1 7 AF 1.5, 4.1
Lesson 28	Solving Inequalities by Adding/Subtracting		
Lesson 29	Solving Inequalities by Multiplying/Dividing		
Lesson 30	Solving and Graphing Inequalities		

California Standards References

NS – Number Sense

MG – Measurement & Geometry

MR – Mathematical Reasoning

AF – Algebra & Functions

SDAP – Statistics, Data Analysis, & Probability

©2007, 2010 Learning Plus Associates

Topic: Algebraic Operations & Problem Solving – Grade 8

Standard Plus® Intervention System® - Lesson Index

Lesson 31	Using Inverse Operations	<i>Use inverse operations to solve problems.</i>	7 AF 1.3, 2.1
Lesson 32	Using Inverse Operations		
Assess 3B	Equations & Inequalities / Slope / Inverse Operations		
Assess 4A	Solving Problems / Multiplying & Dividing Monomials		
Lesson 33	Solving Rate Problems	<i>Solve rate and average speed problems.</i>	6 AF 2.1, 2.2, 2.3 7 AF 4.2
Lesson 34	Solving Average Speed Problems		
Lesson 35	Solving Rate & Average Speed Problems		
Lesson 36	Multiplying Monomials	<i>Multiply and divide monomials.</i>	7 AF 2.1, 2.2
Lesson 37	Dividing Monomials		
Assess 4B	Solving Problems / Multiplying & Dividing Monomials		

1.0 Algebra and Functions

1.1 Use variables and appropriate operations to write an expression, an equation, an inequality, or a system of equations or inequalities that represents a verbal description (e.g., three less than a number, half as large as area A). (3 items on General Math CST)

1.2 Use the correct order of operations to evaluate algebraic expressions such as $3(2x + 5)^2$. (3 items on General Math CST)

1.3 Simplify numerical expressions by applying properties of rational numbers (e.g., identity, inverse, distributive, associative, commutative) and justify the process used. (2 items on General Math CST)

1.5 Represent quantitative relationships graphically and interpret the meaning of a specific part of a graph in the situation represented by the graph. (1 item on General Math CST)

2.0 Algebra and Functions

2.1 Interpret positive whole-number powers as repeated multiplication and negative whole-number powers as repeated division or multiplication by the multiplicative inverse. Simplify and evaluate expressions that include exponents. (1 item on General Math CST)

2.2 Multiply and divide monomials; extend the process of taking powers extracting roots to monomials when the latter results in a monomial an integer exponent. (1 item on General Math CST)

3.0 Algebra and Functions

3.3 Graph linear functions, noting that the vertical change (change in y-value) per unit of horizontal change (change in x-value) is always the same and know that the ratio (“rise over run”) is called the slope of a graph. (2 items on General Math CST)

3.4 Plot the values of quantities whose ratios are always the same (e.g., cost to the number of an item, feet to inches, circumference to diameter of a circle). Fit a line to the plot and understand that the slope of the line equals the ratio of the quantities. (1 item on General Math CST)

4.0 Algebra and Functions

4.1 Solve two-step linear equations and inequalities in one variable over the rational numbers, interpret the solution or solutions in the context from which they arose, and verify the reasonableness of the results. (4 items on General Math CST)

4.2 Solve multistep problems involving rate, average speed, distance, and time or a direct variation. (2 items on General Math CST)

California Standards References

NS – Number Sense

MG – Measurement & Geometry

MR – Mathematical Reasoning

AF – Algebra & Functions

SDAP – Statistics, Data Analysis, & Probability

©2007, 2010 Learning Plus Associates

Topic: Measurement, Geometry, Statistics, & Probability– Grade 8
Standard Plus® Intervention System® - Lesson Index

Lesson	Focus	Lesson Objective	Standards
Assess 1A	Perimeter & Area / Surface Area		
Lesson 1	Determining Perimeter & Area	<i>Determine perimeter and area of figures.</i>	7 MG 2.1
Lesson 2	Determining Perimeter & Area		
Lesson 3	Determining Surface Area	<i>Determine the surface area of geometric solids.</i>	7 MG 2.1, 2.3
Lesson 4	Determining Surface Area		
Lesson 5	Determining Surface Area		
Assess 1B	Perimeter & Area / Surface Area		

Assess 2A	Graphing in the Coordinate Plane / Triangles		
Lesson 6	Graphing in the Coordinate Plane	<i>Graph geometric figures in the coordinate plane.</i>	7 MG 3.2
Lesson 7	Graphing in the Coordinate Plane		
Lesson 8	Graphing in the Coordinate Plane		
Lesson 9	Graphing in the Coordinate Plane		
Lesson 10	Classifying Angles	<i>Classify angles by their measure, and as vertical, adjacent, complementary, and supplementary.</i>	6 MG 2.1, 2.2
Lesson 11	Classifying Triangles	<i>Classify triangles by their angle and side measures.</i>	6 MG 2.2
Lesson 12	Classifying Triangles		
Lesson 13	Use Attributes of Angles & Triangles to Determine Unknown Measures	<i>Use the attributes of angles and triangles to determine the measure of an unknown angle.</i>	6 MG 2.1, 2.2
Lesson 14	Use Attributes of Angles & Triangles to Determine Unknown Measures		
Assess 2B	Graphing in the Coordinate Plane / Triangles		

Assess 3A	Pythagorean Theorem		
Lesson 15	Pythagorean Theorem	<i>Know and apply the Pythagorean Theorem to find the length of the missing side of a right triangle.</i>	7 MG 3.3
Lesson 16	Pythagorean Theorem		
Lesson 17	Pythagorean Theorem		
Lesson 18	Pythagorean Theorem		
Lesson 19	Pythagorean Theorem		
Lesson 20	Pythagorean Theorem		
Assess 3B	Pythagorean Theorem		

Assess 4A	Interpreting & Displaying Data		
-----------	--------------------------------	--	--

California Standards References

NS – Number Sense

MG – Measurement & Geometry

MR – Mathematical Reasoning

AF – Algebra & Functions

SDAP – Statistics, Data Analysis, & Probability

©2007, 2010 Learning Plus Associates

Topic: Measurement, Geometry, Statistics, & Probability– Grade 8

Standard Plus® Intervention System® - Lesson Index

Lesson 21	Determining Mean	<i>Determine mean, median, mode, and range for a data set; identify outliers and determine their impact on measures of central tendency.</i>	6 SDAP 1.1, 1.2, 1.3 7 SDAP 1.3
Lesson 22	Determining Median		
Lesson 23	Determining Mode		
Lesson 24	Mean, Median, Mode, and Range		
Lesson 25	Mean, Median, Mode, Range, & Outliers		
Lesson 26	Mean, Median, Mode, Range, & Outliers		
Lesson 27	Tree Diagrams	<i>Use tree diagrams to display data.</i>	7 SDAP 1.1
Lesson 28	Tree Diagrams		
Lesson 29	Stem-and-Leaf Plots	<i>Use stem-and-leaf plots to display data.</i>	7 SDAP 1.1
Lesson 30	Stem-and-Leaf Plots		
Lesson 31	Quartiles	<i>Understand quartiles of a data set.</i>	7 SDAP 1.1, 1.3
Lesson 32	Quartiles		
Lesson 33	Box-and-Whiskers Plots	<i>Use box-and-whiskers plots to display data.</i>	7 SDAP 1.1, 1.3
Lesson 34	Box-and-Whiskers Plots		
Assess 4B	Interpreting & Displaying Data		

Grade 6:

1.0 Statistics, Data Analysis, and Probability

1.1 Compute the range, mean, median, and mode of data sets. (1 item on General Math CST)

Grade 7:

2.0 Measurement & Geometry

2.1 Use formulas routinely for finding the perimeter and area of basic two-dimensional figures and the surface area and volume of basic three-dimensional figures, including rectangles, parallelograms, trapezoids, squares, triangles, circles, prisms, and cylinders. (1 item on General Math CST)

2.2 Estimate and compute the area of more complex or irregular two- and three-dimensional figures by breaking the figures down into more basic geometric objects. (1 item on General Math CST)

2.3 Compute the length of the perimeter, the surface area of the faces, and the volume of a three-dimensional object built from rectangular solids. Understand that when the lengths of all dimensions are multiplied by a scale factor, the surface area is multiplied by the square of the scale factor and the volume is multiplied by the cube of the scale factor. (1 item every two years on General Math CST)

3.0 Measurement & Geometry

3.2 Understand and use coordinate graphs to plot simple figures, determine lengths and areas related to them, and determine their image under translations and reflections. (1 item on General Math CST)

3.3 Know and understand the Pythagorean theorem and its converse and use it to find the length of the missing side of a right triangle and the lengths of other line segments and, in some situations, empirically verify the Pythagorean theorem by direct measurement. (3 items on General Math CST)

1.0 Statistics, Data Analysis, and Probability

1.1 Know various forms of display for data sets, including a stem-and-leaf plot or box-and-whisker plot; use the forms to display a single set of data or to compare two sets of data. (1 item on General Math CST)

1.3 Understand the meaning of, and be able to compute, the minimum, the lower quartile, the median, the upper quartile, and the maximum of a data set. (2 items on General Math CST)

California Standards References

NS – Number Sense

AF – Algebra & Functions

MG – Measurement & Geometry

SDAP – Statistics, Data Analysis, & Probability

MR – Mathematical Reasoning

©2007, 2010 Learning Plus Associates