Topic: Fractions, Decimals, and Numbers – Grade 6

Standard Plus® Reteach - Math - Lesson Index

Lesson	Focus	Lesson Objective	Standards
Assess 1A	Place Value/# Lines/Order & Compare Fractions, Decimals, & Integers		
Lesson 1	Place Value of Decimals to 0.1	*Demonstrate an understanding of place value to the tenths place.*	*5 NS 1.1*
Lesson 2	Place Value of Decimals to 0.01	*Demonstrate an understanding of place value to the hundredths place.*	
Lesson 3	# Lines: +/- Fractions & Mixed Numbers	*Identify and place positive and negative fractions, mixed numbers, and decimals on a number line.*	*6 NS 1.1*
Lesson 4	# Lines: +/- Decimals		
Lesson 5	Using Number Lines	*Identify and place whole numbers, decimals, and positive and negative integers on a number line.*	*4 NS 1.9* *5 NS 1.5*
Lesson 6	Ordering +/- Fractions & Mixed Numbers	*Order positive and negative fractions, decimals, and mixed numbers from least to greatest.*	*6 NS 1.1*
Lesson 7	Ordering +/- Decimals		
Lesson 8	Comparing Decimals	*Demonstrate the ability to use the symbols <, >, = to compare decimals.*	*4 NS 1.2*
Lesson 9	Comparing Positive & Negative Integers	*Demonstrate the ability to use the symbols <, >, = to compare positive and negative integers.*	*4 NS 1.8*
Lesson 10	Comparing +/- Fractions & Mixed Numbers	*Compare positive and negative fractions, decimals, and mixed numbers.*	*6 NS 1.1*
Lesson 11	Comparing +/- Decimals		
Assess 1B	Place Value/# Lines/Order & Compare Fractions, Decimals, & Integers		
Assess 2A	Proportions/Percent/Decimals		
Lesson 12	Proportions	*Solve problems with proportions and inverse proportions.*	*6 NS 1.3*
Lesson 13	Inverse Proportions		
Lesson 14	Fraction/Decimal Conversion	*Convert decimals to fractions and fractions to decimals.*	*5 NS 1.2*
Lesson 15	Computing with Decimals	*Add, subtract, multiply, and divide with decimals.*	*4 NS 2.1* *5 NS 2.1*
Lesson 16	Solve for a %	*Use percent to solve problems.*	*6 NS 1.4*
Lesson 17	% Discounted		
Assess 2B	Proportions/Percent/Decimals		
Assess 3A	Adding & Subtracting Fractions & Mixed Numbers		
Lesson 18	Add/Subtract Fractions w/ Like Denominators	*Add and subtract fractions with like denominators.*	*6 NS 2.1*
Lesson 19	Finding the Lowest Common Denominator	*Find the lowest common denominator of given numbers.*	*5 NS 2.3*
Lesson 20	Least Common Multiple	*Calculate the least common multiple and greatest common divisor of whole numbers.*	*6 NS 2.4*
Lesson 21	Least Common Multiple		
Lesson 22	Greatest Common Divisor		
Lesson 23	Greatest Common Divisor		

California Standards References

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Lesson 24	Adding and Subtracting Unlike Fractions	*Add and subtract fractions with unlike denominators.*	*5 NS 2.3*
Lesson 25	Add/Subtract Fractions w/ Unlike Denominators	*Add and subtract unlike fractions.*	*6 NS 2.1*
Lesson 26	Add/Subtract Fractions w/ Unlike Denominators		
Lesson 27	Converting Between Improper Fractions and Mixed Numbers	*Convert mixed numbers to improper fractions to add and subtract. Convert improper fractions to mixed numbers.*	*6 NS 2.1*
Lesson 28	Adding Mixed Numbers		
Lesson 29	Subtracting Mixed Numbers		
Assess 3B	Adding & Subtracting Fractions & Mixed Numbers		

Assess 4A	Multiplying & Dividing Fractions & Mixed Numbers		
Lesson 30	Multiplying Fractions	*Multiply and divide fractions.*	*5 NS 2.4, 2.5* *6 NS 2.1*
Lesson 31	Dividing Fractions		
Lesson 32	Multiplying and Dividing Fractions		
Lesson 33	Multiplying and Dividing Fractions		
Lesson 34	Converting Between Improper Fractions and Mixed Numbers	*Convert mixed numbers to improper fractions to multiply and divide.*	*6 NS 2.1*
Lesson 35	Multiplying and Dividing Mixed Numbers		
Assess 4B	Multiplying & Dividing Fractions & Mixed Numbers		

1.0 Number Sense

1.1 Compare and order positive and negative fractions, decimals, and mixed numbers and place them on a number line. (3 items on CST)

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*). (1 item on CST)

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. (6 items on CST)

1.4 Calculate given percentages of quantities and solve problems involving discounts at sales, interest earned, and tips. (5 items on CST)

2.0 Number Sense

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. (1 item every 2 yrs. on CST)

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). (3 items on CST)

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Topic: Computing and Problem Solving – Grade 6

Standard Plus® Reteach - Math - Lesson Index

Lesson	Focus	Lesson Objective	Standards
Assess 1A	Addition & Subtraction		
Lesson 1	Adding Whole Numbers & Decimals	*Add and subtract whole numbers and decimals.*	*6 NS 2.3*
Lesson 2	Subtracting Whole Numbers & Decimals		
Lesson 3	Addition in Context	*Add and subtract whole numbers and decimals in context.*	*6 NS 2.3*
Lesson 4	Subtraction in Context		
Lesson 5	Addition/Subtraction in Context		
Lesson 6	Adding with Positive & Negative Integers	*Add & subtract positive & negative integers.*	*5 NS 2.1*
Lesson 7	Subtracting with Positive & Negative Integers		
Lesson 8	Adding Integers	*Add positive and negative integers.*	*6 NS 2.3*
Lesson 9	Subtracting Integers	*Subtract positive and negative integers.*	*6 NS 2.3*
Lesson 10	A Strategy for Solving Word Problems	*Practice a strategy for solving word problems.*	*6 NS 2.3*
Lesson 11	A Strategy for Solving Word Problems		
Assess 1B	Addition & Subtraction		

Assess 2A	Multiplication/Factors/Exponents		
Lesson 12	Multiplication Facts	*Demonstrate the knowledge of the basic multiplication facts.*	*3 NS 2.2, 2.6*
Lesson 13	Multi-digit Multiplication	*Demonstrate the ability to multiply multi-digit whole numbers.*	*4 NS 3.2, 3.3*
Lesson 14	Multiplication of Whole Numbers & Decimals	*Multiply whole numbers and decimals.*	*6 NS 2.3*
Lesson 15	Multiplication of Whole Numbers & Decimals		
Lesson 16	Multiplication of Whole Numbers & Decimals		
Lesson 17	Multiplication in Context	*Multiply and divide whole numbers and decimals in context.*	*6 NS 1.4, 2.3*
Lesson 18	Factors	*Demonstrate the understanding of the factors of larger numbers.*	*4 NS 4.2* *5 NS 1.4*
Lesson 19	Exponents	*Demonstrate the ability to use exponents.*	*5 NS 1.3*
Lesson 20	Multiplying Integers	*Multiply positive and negative integers.*	*6 NS 2.3*
Lesson 21	Evaluating Reasonable Solutions	*Evaluate solutions to determine reasonability.*	*6 NS 1.4, 2.3*
Lesson 22	Evaluating Reasonable Solutions		
Assess 2B	Multiplication/Factors/Exponents		

Assess 3A	Division/Multiplication & Division in Context		
Lesson 23	Division Facts	*Demonstrate the knowledge of the basic division facts.*	*4 NS 3.4*
Lesson 24	Long Division	*Demonstrate the ability to divide multi-digit whole numbers by single digit divisors.*	*4 NS 3.4* *5 NS 2.2*

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Topic: Computing and Problem Solving – Grade 6

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Lesson 25	Division of Whole Numbers & Decimals	*Divide whole numbers and decimals.*	*6 NS 2.3*
Lesson 26	Division of Whole Numbers & Decimals		
Lesson 27	Division of Whole Numbers & Decimals		
Lesson 28	Division in Context	*Multiply and divide whole numbers and decimals in context.*	*6 NS 1.4, 2.3*
Lesson 29	Multiplication/Division in Context		
Lesson 30	Multiple Operations in Context	*Solve multi-step computation problems from context.*	*4 NS 2.1, 3.2, 3.3, 3.4* *5 NS 2.1*
Lesson 31	Dividing Integers	*Divide positive and negative integers.*	*6 NS 2.3*
Lesson 32	Obtaining Information from a Chart	*Use information from a chart to solve problems.*	*6 NS 1.4, 2.3*
Lesson 33	Obtaining Information from a Chart		
Assess 3B	Division/Multiplication & Division in Context		

Assess 4A	Equivalence/Percent/Fraction Word Problems		
Lesson 34	Fraction/Decimals Equivalents	*Demonstrate the ability to show fraction and decimal equivalents.*	*4 NS 1.5* *5 NS 1.2*
Lesson 35	Representing % as Fractions & Decimals	*Demonstrate the ability to show percents as fractions & decimals.*	
Lesson 36	Calculating Percent	*Calculate the percent of a number. Calculate increases and decreases of a quantity.*	*5 NS 1.2* *6 NS 1.4*
Lesson 37	Calculating Percent		
Lesson 38	Calculating Percent		
Lesson 39	Solving Fraction Word Problems	*Solve word problems with fractions.*	*6 NS 1.4*
Assess 4B	Equivalence/Percent/Fraction Word Problems		

1.0 Number Sense

1.4 Calculate given percentages of quantities and solve problems involving discounts at sales, interest earned, and tips. (5 items on CST)

2.0 Number Sense

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. (1 item every 2 yrs. on CST)

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. (6 items on CST)

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Topic: Algebraic Operations and Problem Solving – Grade 6

Standard Plus® Reteach - Math - Lesson Index

Lesson	Focus	Lesson Objective	Standards
Assess 1A	Properties		
Lesson 1	Commutative Property of Addition & Multiplication	*Demonstrate an understanding of the properties used in problem solving.*	*6 AF 1.3*
Lesson 2	Associative Property of Addition & Multiplication		
Lesson 3	Commutative & Identity Properties		
Lesson 4	Associative Properties / Zero Property		
Lesson 5	Distributive Property	*Demonstrate the ability to use the distributive property in equations & expressions with variables.*	*5 AF 1.3* *6 AF 1.3*
Lesson 6	Using the Distributive Property		
Lesson 7	Using the Distributive Property		
Assess 1B	Properties		
Assess 2A	Variables/Equations/Inequalities/Order of Operations		
Lesson 8	Determining the Operation	*Demonstrate the ability to determine the operation needed to solve a problem.*	*3 AF 1.1, 1.2, 1.3*
Lesson 9	Solving Equations with Variables	*Use variables in computing solutions to problems.*	*4 AF 1.1, 1.5, 2.1, 2.2* *5 AF 1.2*
Lesson 10	Evaluating Variable Expressions	*Write and evaluate expressions with variables.*	*6 AF 1.2*
Lesson 11	Evaluating Variable Expressions		
Lesson 12	Order of Operations	*Demonstrate an understanding of the order of operations.*	*6 AF 1.3, 1.4*
Lesson 13	Order of Operations		
Lesson 14	Writing Equations	*Write equations to match problem situations.*	*4 AF 1.1* *5 AF 1.2* *6 AF 1.2*
Lesson 15	Writing Equations		
Lesson 16	Writing Equations		
Lesson 17	Writing Inequalities	*Demonstrate an ability to write inequalities.*	*4 AF 2.1, 2.2*
Assess 2B	Variables/Equations/Inequalities/Order of Operations		
Assess 3A	Solving Equations & Inequalities		
Lesson 18	Solving Linear Equations	*Identify, solve, and graph equations.*	*6 AF 1.1*
Lesson 19	Solving Linear Equations		
Lesson 20	Solving Linear Equations		
Lesson 21	Solving One-Step Equations	*Solve one-step equations.*	*6 AF 1.1*
Lesson 22	Solving One-Step Equations		
Lesson 23	Solving Addition & Subtraction Equations	*Add and subtract to solve equations.*	*6 AF 1.1*
Lesson 24	Solving Addition & Subtraction Equations		
Lesson 25	Solving Multiplication & Division Equations	*Multiply and divide to solve equations.*	*6 AF 1.1*
Lesson 26	Solving Multiplication & Division Equations		

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Topic: Algebraic Operations and Problem Solving – Grade 6

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Lesson 27	Inequalities	*Identify, solve, and graph inequalities.*	*6 AF 1.1*
Lesson 28	Solving Inequalities by Adding/Subtracting		
Lesson 29	Solving Inequalities by Multiplying/Dividing		
Assess 3B	Solving Equations & Inequalities		

Assess 4A	Unit Conversions/Total Cost/Rate/Proportions		
Lesson 30	Using Unit Conversions	*Express and compute using unit conversions.*	*3 AF 1.4* *3 MG 1.4*
Lesson 31	Determining Total Cost	*Determine the total cost when given unit cost.*	*3 AF 2.1*
Lesson 32	Solving Rate Problems	*Solve rate and average speed problems.*	*6 AF 2.1, 2.2, 2.3*
Lesson 33	Solving Average Speed Problems		
Lesson 34	Solving Rate & Average Speed Problems		
Lesson 35	Proportions: Solving for *n*	*Solve problems involving proportions.*	*6 AF 2.1, 2.2, 2.3, 3.1*
Lesson 36	Using Proportions to Solve Problems		
Lesson 37	Proportions: Solving for the Length of a Side		
Assess 4B	Unit Conversions/Total Cost/Rate/Proportions		

1.0 Algebra and Functions

1.1 Write and solve one-step linear equations in one variable. (6 items on CST)

1.2 Write and evaluate an algebraic expression for a given situation, using up to three variables. (1 item on CST)

1.3 Apply algebraic order of operations and the commutative, associative, and distributive properties to evaluate expressions; and justify each step in the process. (1 item on CST)

2.0 Algebra & Functions

2.1 Convert one unit of measurement to another (e.g., from feet to miles, from centimeters to inches). (1 item on CST)

2.2 Demonstrate an understanding that *rate* is a measure of one quantity per unit value of another quantity. (6 items on CST)

2.3 Solve problems involving rates, average speed, distance, and time. (1 item on CST)

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Topic: Measurement, Geometry, Statistics, and Probability – Grade 6

Standard Plus® Reteach - Math - Lesson Index

Lesson	Focus	Lesson Objective	Standards
Assess 1A	Circles/Area/Volume		
Lesson 1	Circles	*Demonstrate understanding of pi (π); determine the circumference and area of a circle.*	*6 MG 1.1, 1.2*
Lesson 2	Circles		
Lesson 3	Circles		
Lesson 4	Circles		
Lesson 5	Circles		
Lesson 6	Circles		
Lesson 7	Determining Area	*Determine area of given figures.*	*4 MG 1.1, 1.4*
Lesson 8	Determining Volume	*Determine volume of triangular prisms, rectangular solids, and cylinders.*	*5 MG 1.3* *6 MG 1.2, 1.3*
Lesson 9	Determining Volume		
Lesson 10	Determining Volume		
Lesson 11	Determining Volume		
Lesson 12	Determining Volume		
Assess 1B	Circles/Area/Volume		
Assess 2A	Angles & Triangles		
Lesson 13	Classifying Angles	*Classify angles by their measure, and as vertical, adjacent, complementary, and supplementary.*	*6 MG 2.1, 2.2*
Lesson 14	Classifying Angles		
Lesson 15	Classifying Angles		
Lesson 16	Classifying Angles		
Lesson 17	Classifying Angles		
Lesson 18	Classifying Angles		
Lesson 19	Classifying Triangles by their Angles	*Classify triangles as acute, right, or obtuse.*	*3 MG 2.4* *MG 3.7*
Lesson 20	Classifying Triangles	*Classify triangles by their angle and side measures.*	*6 MG 2.2*
Lesson 21	Classifying Triangles		
Lesson 22	Find the Measure of an Angle in a Triangle	*Determine the measure of a missing angle in a triangle.*	*4 MG 3.5* *5 MG 1.1, 2.2*
Lesson 23	Use Attributes of Angles & Triangles to Determine Unknown Measures	*Use the attributes of angles and triangles to determine the measure of an unknown angle.*	*6 MG 2.1, 2.2*
Lesson 24	Use Attributes of Angles & Triangles to Determine Unknown Measures		
Assess 2B	Angles & Triangles		
Assess 3A	Statistics & Data Analysis		
Lesson 25	Determining Mode	*Determine mean, median, mode, and range for a data set; identify outliers and determine their impact on measures of central tendency.*	*4 SDAP 1.2* *5 SDAP 1.1* *6 SDAP 1.1, 1.2, 1.3*
Lesson 26	Determining Mode		
Lesson 27	Determining Median		
Lesson 28	Determining Median		
Lesson 29	Determining Mean		
Lesson 30	Determining Mean		
Lesson 31	Mean, Median, Mode, Range, Outliers		
Lesson 32	Mean, Median, Mode, Range, Outliers		
Assess 3B	Statistics & Data Analysis		

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Topic: Measurement, Geometry, Statistics, and Probability – Grade 6

Standard Plus® Reteach - Math - Lesson Index

Assess 4A	Probability		
Lesson 33	Certain, Likely, Unlikely, and Improbable	*Classify events as certain, likely, unlikely, or improbable.*	*3 SDAP 1.1*
Lesson 34	Probability	*Determine probabilities.*	*6 SDAP 3.1*
Lesson 35	Probability		
Lesson 36	Samples of Populations	*Identify ways to select samples to gather data.*	*6 SDAP 2.2*
Lesson 37	Samples of Populations		
Lesson 38	Predict Outcomes for a Simple Event	*Identify, predict, and calculate the probability and outcomes of simple, compound, and dependent events.*	*6 SDAP 3.1, 3.3, 3.4, 3.5*
Lesson 39	Independent & Dependent Events		
Lesson 40	Probability and Proportions		
Lesson 41	Calculate Probability for Compound Events		
Lesson 42	Calculate Probability for Dependent Events		
Lesson 43	Calculate Probability for Compound/ Dependent Events		
Assess 4B	Probability		

1.0 Measurement & Geometry

1.1 Understand the concept of a constant such as p; know the formulas for the circumference and area of a circle. (3 items on CST)

1.2 Know common estimates of p (3.14; 22/7) and use these values to estimate and calculate the circumference and the area of circles; compare with actual measurements. (1 item every 2 yrs. on CST)

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. (1 item every 2 yrs. on CST)

2.0 Measurement & Geometry

2.1 Identify angles as vertical, adjacent, complementary, or supplementary and provide descriptions of these terms. (1 item on CST)

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. (4 items on CST)

1.0 Statistics, Data Analysis, & Probability

1.1 Compute the range, mean, median, and mode of data sets. (1 item every 3 yrs. on CST)

1.2 Understand how additional data added to data sets may affect these computations of measures of central tendency. (1 item every 3 yrs. on CST)

1.3 Understand how the inclusion or exclusion of outliers affects measures of central tendency. (1 item every 3 yrs. on CST)

2.0 Statistics, Data Analysis, & Probability

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. (3 items on CST)

3.0 Statistics, Data Analysis, & Probability

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. (3 items on CST)

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. (3 items on CST)

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. (1 item every 3 yrs. on CST)

3.5 Understand the difference between independent and dependent events. (1 item every 3 yrs. on CST)

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