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91271 Ratios and Proportions: Problem Solving

Lesson Objective	CCSS	Page	Lesson Title
Determine a unit rate.	7.RP.A.1	1	Unit Rates
Compare prices using unit rates.	7.RP.A.1	2	Which Is the Better Buy?
Compute unit rates involving ratios of measured quantities.	7.RP.A.1	3	Rates and Ratios
Solve a problem using a rate.	7.RP.A.1	4–5	Using Rates
Find unit rates involving ratios of length and area.	7.RP.A.1	6	Ratios of Length and Area
Determine whether a pair of ratios expresses a proportional relationship.	7RP.A.2.A	7	Proportional Relationships
Identify proportions in tables.	7RP.A.2.A	8–9	Proportions in Tables
Identify proportions in graphs.	7RP.A.2.A	10–11	Proportions in Graphs
Find the missing term in a proportion.	7RP.A.2.A	12	Equal on Both Sides
Identify the constant of proportionality in a diagram or verbal description.	7RP.A.2.B	13	Constant of Proportionality
Identify the constant of proportionality in a table.	7RP.A.2.B	14–15	Constant of Proportionality in a Table
Identify the constant of proportionality in a graph.	7RP.A.2.B	16–17	Constant of Proportionality in a Graph
Identify the constant of proportionality in an equation.	7RP.A.2.B	18	Proportionality in an Equation
Convert measurements using unit rates and proportions.	TEKS 7.4 E	19	Unit Rates and Conversions
Represent proportional relationships using equations.	7RP.A.2.C	20–21	Proportional Relationships and Equations
Identify what the point (x, y) means in the graph of a proportional relationship.	7RP.A.2.D	22–23	Interpret Data Points
Use a proportion to find the percent of increase.	7RP.A.3	24	Percent of Increase
Use a proportion to find the percent of decrease.	7RP.A.3	25	Percent of Decrease
Find the amount of sales tax and total cost.	7RP.A.3	26	Taxing Problems
Find the amount of discount and the sale price.	7RP.A.3	27	Sale Time!
Find the amount of mark-up and the selling price.	7RP.A.3	28	Mark-Ups and Price
Solve problems involving gratuities.	7RP.A.3	29	Gratuities and Price
Solve problems involving commissions.	7RP.A.3	30	Commissions and Price
Find the simple interest for a loan.	7RP.A.3	31	Simply Interesting!
Solve percent error problems.	7RP.A.3	32	Percent Error

91272 The Number System: Rational Numbers Addition and Subtraction

Lesson Objective	CCSS	Page	Lesson Title
Find pairs of additive inverses.	7.NS.A.1.A	1	The Additive Inverse of Fractions
Combine opposite quantities to make 0 in mathematical and real-world situations.	7.NS.A.1.B	2	Opposite Fractions
Find the sum of integers by modeling with positive counters.	7.NS.A.1.B	3	Let's Be Positive!
Find the sum of integers by modeling with negative counters.	7.NS.A.1.B	4	Don't Be Negative!
Add pairs of integers with the same sign.	7.NS.A.1.B	5	Follow the Signs
Use a number line to find the sum of integers with the same sign.	7.NS.A.1.B	6	Move on Down the Line
Combine positive and negative counters to create zero pairs.	7.NS.A.1.B	7	Zero in on the Solution!
Find the sum of integers by modeling with positive and negative counters.	7.NS.A.1.B	8	Model Building
Find the sum of pairs of positive and negative integers using a number line.	7.NS.A.1.B	9	You Can Count on It!
Add positive and negative integers on the number line.	7.NS.A.1.B	10	Not in Alphabetical Order

Lesson Objective	CCSS	Page	Lesson Title
Add positive and negative integers.	7.NS.A.1.B	11	Positive Versus Negative
Add positive and negative integers.	7.NS.A.1.B	12	Follow the Signs with Integers
Add positive and negative fractions.	7.NS.A.1.B	13	Follow the Signs with Fractions
Add positive and negative decimals.	7.NS.A.1.B	14	Follow the Signs with Decimals
Solve problems involving sums of negative and positive numbers.	7.NS.A.1.B	15	Mix It Up!
Solve problems involving sums of negative and positive numbers.		16	More Mixing
Find the difference of two integers by modeling with positive and negative counters.	7.NS.A.1.C	17	Model Numbers
Find the difference of two integers by modeling with positive and negative counters.	7.NS.A.1.C	18	Subtracting Integers
Find the difference of two integers using a number line.	7.NS.A.1.C	19	Reverse Direction
Find the difference of two integers using a number line.	7.NS.A.1.C	20	Integers and Lines
Subtract integers by adding the additive inverse.	7.NS.A.1.C	21	Adding to Subtract Integers
Find the difference between two integers.	7.NS.A.1.C	22	Subtract How You Like!
Add positive and negative fractions.	7.NS.A.1.C	23	Adding to Subtract Fractions
Add positive and negative decimals.	7.NS.A.1.C	24	Adding to Subtract Decimals
Solve problems involving differences of negative and positive numbers.	7.NS.A.1.C	25	Mix Up the Difference!
Use absolute value to find the distance between two rational numbers on a number line.	7.NS.A.1.C	26–27	The Difference is the Distance
Add and subtract integers.	7.NS.A.1.B and C	28	It's Really Just Adding with Integers
Add and subtract negative and positive fractions and decimals.	7.NS.A.1.B and C	29	Now with Fractions and Decimals
Use the commutative property as a strategy to add and subtract rational numbers.	7.NS.A.1.D	30	Pair Up in Any Order
Use the associative property as a strategy to add and subtract rational numbers.	7.NS.A.1.D	31	Associate with Groups
Use the associative and commutative properties to add and subtract rational numbers.	7.NS.A.1.D	32	Square Dancing

91273 The Number System: Rational Numbers Multiplication and Division

Lesson Objective	CCSS	Page	Lesson Title
Find the product of a positive integer multiplied by a positive or negative integer.	7.NS.A.2.C	1	Multiplying Models
Use patterns to find the product of a negative integer multiplied by a positive or negative integer.	7.NS.A.2.C	2	Integer Patterns
Find the product of integers using rules.	7.NS.A.2.C	3	Integers Rule
Find the product of integers using rules.	7.NS.A.2.C	4	Rules That Work
Find the product of three integers.	7.NS.A.2.C	5	Multiply Three Integers
Solve a multistep problem involving addition, subtraction, and multiplication with integers.	7.NS.A.3	6–7	More Than One Step
Use the distributive property to multiply a sum or difference by a negative factor.	7.NS.A.2.A	8	Distribute a Negative
Find the product of two decimals.	7.NS.A.2.C	9	Multiply Decimals
Find the product of two fractions.	7.NS.A.2.C	10	Multiply Fractions
Find the product of two mixed numbers.	7.NS.A.2.C	11	Multiply Mixed Numbers

Lesson Objective	CCSS	Page	Lesson Title
Find the product of two rational numbers.	7.NS.A.2.C	12	Multiply Rationals
Use multiplication to find the quotient of an integer divided by an integer.	7.NS.A.2.C	13	Multiply to Divide
Use patterns to find the quotient of an integer divided by an integer.	7.NS.2.C	14	Use Patterns to Divide
Find the quotient of two integers using rules.	7.NS.A.2.C	15	Division Rules
Solve a multistep problem involving addition, subtraction, and multiplication with integers.	7.NS.A.3	16–17	Integer Problems
Find the product or quotient of two integers.	7.NS.A.2.C	18	Rules That Stay the Same
Find equivalent quotients.	7.NS.A.2.B	19	Equivalent Quotients
Find the quotient of two decimals.	7.NS.A.2.C	20	Divide Decimals
Find the quotient of two fractions.	7.NS.A.2.C	21	Divide Fractions
Find the quotient of two mixed numbers.	7.NS.A.2.C	22	Divide Mixed Numbers
Find the product or quotient of two rational numbers.	7.NS.A.2.C	23	Multiply or Divide
Interpret products and quotients of rational numbers in real-world contexts.	7.NS.A.2.A; 7.NS.A.2.B	24–25	Interpret Products and Quotients
Use long division to convert a rational number to a decimal.	7.NS.A.2.D	26	Fractions Are Division
Rename a fraction as a decimal.	7.NS.A.2.D	27	Fractions as Decimals
Solve a multistep problem involving addition, subtraction, and multiplication of decimals.	7.NS.A.3	28–29	Multistep Problems
Solve real-world problems with rational numbers.	7.NS.A.3	30–31	Working Backward
Rename a fraction as a repeating decimal.	7.NS.A.2.D	32	Repeat After Me!

91274 Expressions and Equations: Write, Solve, and Analyze

Lesson Objective	CCSS	Page	Lesson Title
Use the Commutative and Associative Properties to add linear expressions with integer coefficients.	7.EE.A.1	1	Add Expressions with Integer Coefficients
Use the Commutative and Associative Properties to add linear expressions with rational coefficients.	7.EE.A.1	2	Add Expressions with Rational Coefficients
Subtract linear expressions with integer coefficients by using the Distributive, Commutative, and Associative Properties.	7.EE.A.1	3	Subtract Expressions with Integer Coefficients
Subtract linear expressions with rational coefficients by using the Distributive, Commutative, and Associative Properties.	7.EE.A.1	4	Subtract Expressions with Rational Coefficients
Apply the Distributive Property to expand linear expressions with integer coefficients.	7.EE.A.1	5	Expand Expressions with Integer Coefficients
Apply the Distributive Property to expand linear expressions with rational coefficients.	7.EE.A.1	6	Expand Expressions with Rational Coefficients
Factor linear expressions.	7.EE.A.1	7	Factor Expressions
Interpret linear expressions.	7.EE.A.2	8–9	Express the Meaning
Identify equivalent expressions.	7.EE.A.2	10	Equivalent Expressions
Identify equivalent expressions for a problem situation.	7.EE.A.2	11	Different Ways
Solve multi-step real-life problems with positive and negative rational numbers.	7.EE.B.3	12–13	Solve Problems with Rational Numbers
Convert between decimals and fractions to solve multi-step real-world problems.	7.EE.B.3	14–15	Convert Between Number Forms in Problems

Lesson Objective	CCSS	Page	Lesson Title
Solve a 2-step equation involving whole numbers and/ or decimals.	7.EE.B.4	16	Doing the Two-Step
Solve a 2-step equation involving whole numbers, decimals, fractions and/ or mixed numbers.	7.EE.B.4	17	Care for Another Two-Step?
Solve a 2-step equation that requires simplifying before solving.	7.EE.B.4	18	Simplify to Solve
Solve equations in the form $p(x+q) = r$.	7.EE.B.4	19	Expand to Solve
Solve a 2-step equation involving integers.	7.EE.B.4	20	Two-Step Integer Equations
Solve a 2-step equation involving integers.	7.EE.B.4	21	Two-Steps Forward...
Solve word problems that lead to equations in the form $px + q = r$ and $p(x + q) = r$.	7.EE.B.4.A	22–23	Use Linear Equations to Solve Problems
Solve word problems leading to inequalities in the form $px + q > r$ or $px + q < r$ and choose the graph of the solution set.	7.EE.B.4.B	24–25	Use Linear Inequalities to Solve Problems
Interpret the solution to an inequality in the context of the problem.	7.EE.B.4.B	26–27	Interpreting Solutions to Problems Involving Inequalities
Solve multi-step real-life problems with positive and negative rational numbers.	7.EE.B.4.B	28	Solve Real-World Problems Involving Rational Numbers
Identify a graph that represents a given equation.		29	Equations and Graphs
Represent linear relationships with verbal descriptions, tables, graphs, and equations.		30–31	Represent Linear Relationships
Determine if a given value makes a two-step equation or inequality true.		32	Is It True?

91275 Geometry: Problem Solving

Lesson Objective	CCSS	Page	Lesson Title
Identify whether 3 given side-lengths could form a triangle.	7.G.A.2	1	To Be or Not to Be A Triangle?
Identify conditions that define a unique triangle.	7.G.A.2	2	Unique Triangles
Identify conditions that define more than one possible triangle.	7.G.A.2	3	More Than One Triangle
Identify conditions that cannot characterize any triangle.	7.G.A.2	4	Can A Triangle Be Made?
Tell whether a set of conditions determines a unique triangle, more than one triangle, or no triangle.	7.G.A.2	5	How Many Triangles?
Solve problems involving area of polygons.	7.G.B.6	6–7	Use the Diagram
Compute an actual length from a scale drawing.	7.G.A.1	8–9	Scaled Length
Compute an actual area from a scale drawing.	7.G.A.1	10–11	Scaled Area
Match scale drawings drawn at different scales.	7.G.A.1	12–13	Match Scale Drawings
Determine the two-dimensional figure that results from slicing a three-dimensional figure.	7.G.A.3	14–15	Where Should We Meet?
Find the circumference of a circle.	7.G.B.4	16	Circumference
Find the area of a circle.	7.G.B.4	17	Areas of Circles
Solve problems using circumference and area of circles.	7.G.B.4	18–19	Circumference and Area of Circles
Use understanding about the area of a circle to find the area of an irregular figure.	7.G.B.4	20	Parts Sectioned Off
Find complementary and supplementary angles.	7.G.B.5	21	Complements and Supplements
Solve simple equations for an unknown angle in a figure.	7.G.B.5	22–23	Angles and Equations

Lesson Objective	CCSS	Page	Lesson Title
Use vertical, adjacent, complementary, and supplementary angle pairs to solve problems.	7.G.B.5	24	Angle Problems
Find vertical and adjacent angles.	7.G.B.5	25	Vertical and Adjacent
Define vertical, adjacent, complementary, and supplementary angle pairs.	7.G.B.5	26	All About Angles
Find the surface area of a rectangular prism.	7.G.B.6	27	On the Surface
Find the surface area of a cylinder.	7.G.B.6	28	Surface Areas of Cylinders
Find the volume of a rectangular prism or cube.	7.G.B.6	29	Volumes of Rectangular Prisms
Find the volume of a triangular prism.	7.G.B.6	30	Volumes of Triangular Prisms
Find the volume of a rectangular pyramid.		31	Volumes of Rectangular Pyramids
Find the volume of a triangular pyramid.		32	Volumes of Triangular Pyramids

91276 Statistics and Probability: Variability and Displays

Lesson Objective	CCSS	Page	Lesson Title
Find the mean of a data set.	7.SP.B.4	1	What Does It Mean?
Find the median of a data set.	7.SP.B.4	2	Right In the Middle!
Find the median of an unordered data set.	7.SP.B.4	3	Center of Attention
Find the mode of a data set.	7.SP.B.4	4	Mode
Find the range of a data set.	7.SP.B.4	5	Range
Identify a representative sample of a population.	7.SP.A.1	6–7	Representative Samples
Use data from a random sample to draw inferences about a population.	7.SP.A.2	8–9	Inferences from Samples
Informally compare data distributions.	7.SP.B.3	10–11	Data Distributions
Find the interquartile range of a data set.	7.SP.B.4	12–13	Interquartile Range
Use measures of center to compare data sets.	7.SP.B.4	14–15	Measures of Center
Use measures of variability to compare data sets.	7.SP.B.4	16–17	Measures of Variation
Given a probability, tell whether an event is likely or unlikely.	7.SP.C.5	18	Likely or Unlikely?
Use a fraction to show the probability of an event using a spinner.	7.SP.C.5	19	Spinners and Probability
Use a fraction to show the probability of a given outcome using a number cube.	7.SP.C.5	20	Number Cubes and Probability
Use a fraction to show the probability of a given outcome.	7.SP.C.5	21	What's in the Cards?
Given a spinner, predict the number of times an event will occur in 100 spins.	7.SP.C.6	22	Predict the Spins
Given number cubes, predict the number of times an event will occur in 100 rolls.	7.SP.C.6	23	What Will You Roll?
Find the probability of independent compound events using multiplication.	7.SP.C.7.A	24	Independent Events
Determine the number of outcomes based on spinners, number cubes, cards, or coins using a tree diagram.	7.SP.C.7.B	25	Tree Diagrams
Identify the probability of a compound event.	7.SP.C.C	26–27	Probability of a Compound Event
Solve a multistep problem involving any of the four operations.		28–29	Probability Problems
Use data from a vertical single-bar graph to solve a problem.		30	Vertical Bar Graphs
Use data from a line plot to solve a problem.		31	Line Plots
Use data from a circle graph to solve a problem.		32	Circle Graphs