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Year 7 maths

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Whole numbers

- A.1 Place values in whole numbers
- A.2 Word names for numbers
- A.3 Roman numerals
- A.4 Rounding
- A.5 Add and subtract whole numbers
- **A.6** Add and subtract whole numbers: word problems

Multiplication

- **B.1** Multiply whole numbers
- **B.2** Multiply whole numbers: word problems
- **B.3** Multiply whole numbers with four or more digits
- **B.4** Multiply numbers ending in zeroes
- **B.5** Multiply numbers ending in zeroes: word problems
- **B.6** Multiply three or more numbers
- **B.7** Multiply three or more numbers: word problems
- **B.8** Estimate products

Division

- C.1 Divisibility rules
- C.2 Division patterns with zeroes
- **C.3** Divide numbers ending in zeroes: word problems
- 11 **C.4** Estimate quotients
 - **C.5** Divide whole numbers two-digit divisors
 - **C.6** Divide whole numbers three-digit divisors

Indices and square roots

- **D.1** Write multiplication expressions using indices
- **D.2** Evaluate indices
- **D.3** Find the missing index or base
- **D.4** Indices with decimal bases
- **D.5** Indices with fractional bases
- **D.6** Square roots of perfect squares
- **D.7** Relationship between squares and square roots

Number theory

- E.1 Multiplicative inverses
- E.2 Prime or composite
- E.3 Identify factors
- **E.4** Find all the factor pairs of a number
- **E.5** Prime factorisation
- E.6 Prime factorisation with indices
- E.7 Highest common factor
- E.8 Lowest common multiple

Integers

- M.1 Understanding integers
- M.2 Integers on number lines
- **M.3** Graph integers on horizontal and vertical number lines
- M.4 Understanding opposite integers
- M.5 Opposite integers
- M.6 Compare integers
- M.7 Put integers in order

Add and subtract integers

- N.1 Add integers using number lines
- N.2 Add integers using counters
- N.3 Integer addition rules
- N.4 Add integers
- N.5 Add three or more integers
- **N.6** Subtract integers using number
- N.7 Subtract integers using counters
- N.8 Integer subtraction rules
- N.9 Subtract integers
- **N.10** Integer addition and subtraction rules
- N.11 Add and subtract integers
- **N.12** Complete addition and subtraction equations with integers
- **N.13** Add and subtract integers: word problems
- **N.14** Add and subtract integers: input/output tables

Multiply and divide integers

- **O.1** Understand multiplying by a negative integer using a number line
- **0.2** Integer multiplication rules
- **0.3** Multiply integers
- **0.4** Integer division rules
- **0.5** Divide integers
- **O.6** Integer multiplication and division rules
- **O.7** Multiply and divide integers
- **0.8** Complete multiplication and division equations with integers

Mixed operations

- **P.1** Add, subtract, multiply or divide two whole numbers
- **P.2** Add, subtract, multiply or divide two whole numbers: word problems
- **P.3** Evaluate simple numerical expressions
- **P.4** Evaluate numerical expressions one step at a time
- P.5 Evaluate numerical expressions involving whole numbers

Expressions and properties

- AA.1 Write variable expressions
- **AA.2** Write variable expressions: word problems
- **AA.3** Evaluate variable expressions with whole numbers
- **AA.4** Evaluate multi-variable expressions
- **AA.5** Evaluate variable expressions with decimals
- AA.6 Identify terms and coefficients
- **AA.7** Identify equivalent expressions using bar models
- AA.8 Properties of addition
- AA.9 Add and subtract like terms
- AA.10 Properties of multiplication
- **AA.11** Solve for a variable using properties of multiplication
- **AA.12** Multiply using the distributive property: area models
- **AA.13** Multiply using the distributive property
- **AA.14** Factorise linear expressions: area models
- AA.15 Factors of linear expressions
- AA.16 Sort factors of expressions
- **AA.17** Write equivalent expressions using properties
- **AA.18** Identify equivalent expressions

One-variable equations

- **BB.1** Which x satisfies an equation?
- BB.2 Write an equation from words
- **BB.3** Identify expressions and equations
- **BB.4** Model and solve one-step equations using algebra tiles
- **BB.5** Write and solve one-step equations that represent diagrams
- **BB.6** Solve one-step equations with whole numbers
- **BB.7** Solve one-step equations with decimals
- **BB.8** Write a one-step equation: word problems
- **BB.9** Solve one-step equations: word problems
- **BB.10** Which word problem matches the one-step equation?
- **BB.11** Solve one-step equations involving integers
- **BB.12** Model and solve two-step equations using algebra tiles
- **BB.13** Write and solve two-step equations that represent diagrams
- **BB.14** Solve two-step equations: positive numbers
- **BB.15** Solve two-step equations: including negative numbers

E.9 HCF and LCM: word problems

Decimals

- **F.1** What decimal number is illustrated?
- F.2 Decimal place values
- F.3 Word names for decimal numbers
- **F.4** Convert decimals to mixed numbers
- F.5 Put decimal numbers in order
- F.6 Inequalities with decimals
- F.7 Round decimals
- F.8 Round whole numbers and decimals: find the missing digit
- F.9 Decimal number lines

Add and subtract decimals

- **G.1** Add and subtract decimal numbers
- **G.2** Add and subtract decimals: word problems
- **G.3** Complete the decimal addition or subtraction number sentence
- **G.4** Estimate sums and differences of decimals
- G.5 Maps with decimal distances

Multiply and divide decimals

- **H.1** Multiply and divide decimals by powers of ten
- **H.2** Multiply a decimal by a one-digit whole number
- **H.3** Multiply a decimal by a multidigit whole number
- **H.4** Multiply decimals and whole numbers: word problems
- H.5 Multiply two decimals using grids
- H.6 Multiply decimals
- **H.7** Estimate products of decimal numbers
- **H.8** Inequalities with decimal multiplication
- **H.9** Divide decimals by whole numbers
- **H.10** Divide decimals by whole numbers: word problems
- H.11 Division with decimal divisors
- **H.12** Inequalities with decimal division

Fractions and mixed numbers

- I.1 Fractions and mixed numbers review
- **I.2** Understanding fractions: word problems
- **I.3** Understanding fractions: graphs and tables
- **I.4** Equivalent fractions review
- **I.5** Write fractions in lowest terms
- **I.6** Fractions of a set: word problems
- **I.7** Lowest common denominator
- **I.8** Compare fractions with same and different denominators
- **I.9** Compare fractions: word problems
- **I.10** Convert between improper fractions and mixed numbers
- **I.11** Convert fractions to terminating decimals
- **I.12** Convert fractions to terminating and recurring decimals
- I.13 Convert decimals to fractions
- **I.14** Convert between decimals and fractions
- $\textbf{I.15} \ \ \text{Convert between decimals and}$

- **P.6** Identify mistakes involving the order of operations
- **P.7** Add, subtract, multiply or divide two decimals
- **P.8** Add, subtract, multiply or divide two decimals: word problems
- **P.9** Evaluate numerical expressions involving decimals
- **P.10** Add, subtract, multiply or divide two fractions
- **P.11** Add, subtract, multiply or divide two fractions: word problems
- **P.12** Evaluate numerical expressions involving fractions
- **P.13** Add, subtract, multiply or divide two integers
- **P.14** Evaluate numerical expressions involving integers

Rational numbers

- **Q.1** Rational numbers on number lines
- **Q.2** Compare and order rational numbers using number lines
- **Q.3** Compare rational numbers
- Q.4 Put rational numbers in order
- **Q.5** Compare and order rational numbers: word problems
- Q.6 Rational numbers: find the sign

Problem solving and estimation

- R.1 Estimate to solve word problems
- R.2 Multi-step word problems
- **R.3** Multi-step word problems: identify reasonable answers
- **R.4** Word problems with extra or missing information
- R.5 Guess-and-check word problems
- **R.6** Distance/direction to starting point
- **R.7** Use logical reasoning to find the order

Ratios and rates

- S.1 Write a ratio
- **S.2** Write a ratio: word problems
- **S.3** Which model represents the ratio?
- S.4 Identify equivalent ratios
- **S.5** Write an equivalent ratio
- **S.6** Equivalent ratios: word problems
- S.7 Ratio tables
- S.8 Unit rates
- S.9 Equivalent rates
- **S.10** Use tape diagrams to solve ratio word problems
- **S.11** Compare ratios: word problems
- S.12 Compare rates: word problems
- **S.13** Ratios and rates: word problems
- **S.14** Do the ratios form a proportion?
- S.15 Solve the proportion
- **S.16** Scale drawings: word problems
- **S.17** Scale drawings: scale factor word problems

Percents

- **T.1** What percentage is illustrated?
- **T.2** Convert between percents, fractions and decimals
- **T.3** Convert between percents, fractions and decimals: word problems
- T 4 Compare percents to each other

equations: word problems

BB.16 Solve one- and two-step

One-variable inequalities

- CC.1 Solutions to inequalities
- CC.2 Graph inequalities on number lines
- **CC.3** Write inequalities from number lines
- **CC.4** Write and graph inequalities: word problems
- CC.5 Solve one-step inequalities
- **CC.6** Graph solutions to one-step inequalities
- **CC.7** One-step inequalities: word problems

Two-variable equations

- **DD.1** Does (x, y) satisfy an equation?
- **DD.2** Identify independent and dependent variables
- **DD.3** Write an equation from a graph using a table
- **DD.4** Find a value using two-variable equations
- **DD.5** Find a value using two-variable equations: word problems
- **DD.6** Solve word problems by finding two-variable equations
- **DD.7** Complete a table for a two-variable relationship
- **DD.8** Write a two-variable equation from a table
- **DD.9** Write a two-variable equation
- **DD.10** Identify the graph of an equation
- **DD.11** Complete a table and graph a two-variable equation
- **DD.12** Graph a two-variable equation
- **DD.13** Interpret a graph: word problems

Two-dimensional figures

- **EE.1** Identify and classify polygons
- EE 3 Management and lan
- **EE.2** Measure angles **EE.3** Types of angles
- **EE.4** Estimate angle measurements
- **EE.5** Classify triangles
- **EE.6** Classify quadrilaterals
- **EE.7** Graph triangles and quadrilaterals
- **EE.8** Find missing angles in triangles
- **EE.9** Find missing angles in quadrilaterals
- **EE.10** Sums of angles in polygons
- **EE.11** Lines, line segments and rays
- **EE.12** Name angles
- **EE.13** Identify vertical and supplementary angles
- **EE.14** Find measures of vertical and supplementary angles
- **EE.15** Transversals of parallel lines: name angle pairs
- **EE.16** Transversals of parallel lines: find angle measures
- **EE.17** Find lengths and measures of bisected line segments and angles
- **EE.18** Parts of a circle
- **EE.19** Central angles of circles

Symmetry and transformations

- **FF.1** Line symmetry
- FF.2 Rotational symmetry

- mixed numbers
- **I.16** Put a mix of decimals, fractions and mixed numbers in order
- **I.17** Understand fractions as division: word problems

Add and subtract fractions

- **J.1** Add and subtract fractions with the same denominator using number lines
- **J.2** Add and subtract fractions with the same denominator
- J.3 Add and subtract fractions with the same denominator: word problems
- **J.4** Add and subtract mixed numbers with the same denominator
- **J.5** Add fractions with different denominators using models
- **J.6** Add fractions with different denominators
- **J.7** Subtract fractions with different denominators using models
- **J.8** Subtract fractions with different denominators
- **J.9** Add and subtract fractions with different denominators: word problems
- **J.10** Complete addition and subtraction number sentences with fractions
- **J.11** Inequalities with addition and subtraction of fractions
- **J.12** Estimate sums and differences of mixed numbers
- **J.13** Add and subtract mixed numbers
- **J.14** Add and subtract mixed numbers: word problems
- **J.15** Inequalities with addition and subtraction of mixed numbers

Multiply fractions

- **K.1** Multiply fractions by whole numbers using number lines
- **K.2** Multiply fractions by whole numbers: choose the model
- **K.3** Multiply fractions by whole numbers using models: complete the equation
- **K.4** Multiply fractions and whole numbers: sorting
- **K.5** Multiply fractions by whole numbers I
- **K.6** Multiply fractions by whole numbers II
- **K.7** Fractions of a number I
- K.8 Fractions of a number II
- **K.9** Fractions of a number: word problems
- **K.10** Estimate products of fractions and whole numbers
- **K.11** Scaling whole numbers by fractions: justify your answer
- **K.12** Scaling whole numbers by fractions
- **K.13** Multiply two fractions using models
- K.14 Multiply two fractions
- **K.15** Multiply fractions: word problems
- **K.16** Complete the fraction multiplication number sentence
- **K.17** Multiply three or more fractions and whole numbers
- **K.18** Multiply mixed numbers and whole numbers
- K.19 Multiply mixed numbers
- **K.20** Estimate products of fractions, whole numbers and mixed numbers

- and to fractions
- **T.5** Compare percents and fractions: word problems
- **T.6** Solve percent problems using grid models
- **T.7** Solve percent problems using bar models
- T.8 Estimate percents of numbers
- **T.9** Percents of numbers and money amounts
- **T.10** Percents of numbers: word problems
- **T.11** Find what percent one number is of another
- **T.12** Find what percent one number is of another: word problems
- **T.13** Solve percent equations: word problems

Units of measurement

- **U.1** Estimate metric measurements
- **U.2** Convert and compare metric units
- **U.3** Multi-step problems with metric unit conversions
- U.4 Metric mixed units
- **U.5** Convert square and cubic units of length
- **U.6** Convert between cubic metres and litres
- **U.7** Compare temperatures above and below zero
- **U.8** Estimate imperial measurements
- **U.9** Convert and compare imperial units
- U.10 Imperial mixed units
- **U.11** Convert between metric and imperial units
- U.12 Precision

Money

- **V.1** Find the number of each type of coin
- V.2 Add and subtract money amounts
- V.3 Add and subtract money amounts: word problems
- **V.4** Multiply money by whole numbers
- V.5 Multiply money: word problems
- V.6 Divide money amounts
- **V.7** Divide money amounts: word problems

Consumer maths

- W.1 Sale prices
- W.2 Which is the better coupon?
- W.3 Unit prices
- **W.4** Unit prices with fractions and decimals
- **W.5** Unit prices: find the total price
- **W.6** Percents calculate tip, mark-up and more
- W.7 Percents calculate VAT

Time

- X.1 Elapsed time
- X.2 Time units
- X.3 Find start and end times
- **X.4** Convert between 12-hour and 24-hour time
- X.5 Time zones 12-hour time
- X.6 Time zones 24-hour time
- X.7 Transportation schedules

- **FF.3** Identify reflections, rotations and translations
- FF.4 Translations: graph the image
- FF.5 Translations: find the
- coordinates
- **FF.7** Identify congruent figures
- **FF.8** Congruence statements and corresponding parts
- **FF.9** Side lengths and angle measures of congruent figures

Three-dimensional figures

- **GG.1** Which figure is being described?
- **GG.2** Bases of three-dimensional figures
- **GG.3** Nets of three-dimensional figures
- **GG.4** Front, side and top view

Geometric measurement

- HH.1 Perimeter
- HH.2 Area of squares and rectangles
- **HH.3** Understanding area of a triangle
- HH.4 Area of triangles
- **HH.5** Understanding area of a parallelogram
- HH.6 Area of parallelograms
- **HH.7** Understanding area of a trapezium
- HH.8 Area of trapeziums
- HH.9 Area of rhombuses
- HH.10 Area of quadrilaterals
- HH.11 Area of compound figures
- **HH.12** Area of compound figures with triangles
- HH.13 Area between two rectangles
- HH.14 Area between two triangles
- **HH.15** Area and perimeter of squares and rectangles: word problems
- **HH.16** Rectangles: relationship between perimeter and area
- **HH.17** Compare area and perimeter of two figures
- HH.18 Volume of cubes and cuboids
- **HH.19** Volume of cubes and cuboids: word problems

Data and graphs

- II.1 Interpret pictograms
- II.2 Create pictograms
- II.3 Interpret stem-and-leaf plots
- II.4 Create stem-and-leaf plots
- II.5 Interpret line plots
- **II.6** Create line plots
- II.7 Create frequency tables
- **II.8** Interpret bar graphs for categorical data
- **II.9** Create bar graphs for categorical data
- II.10 Interpret categorical data
- **II.11** Interpret double bar graphs
- II.12 Create double bar graphsII.13 Interpret bar graphs for
- grouped data

 II.14 Create bar graphs for grouped
- II.15 Pie charts with fractions
- II.16 Interpret line graphs
- II.17 Create line graphs
- II.18 Interpret double line graphs

Divide fractions

- L.1 Divide unit fractions by whole numbers using models
- L.2 Divide unit fractions by whole numbers
- L.3 Divide whole numbers by unit fractions using models
- L.4 Divide whole numbers by unit fractions
- L.5 Divide unit fractions and whole numbers using area models
- L.6 Divide whole numbers and unit fractions
- L.7 Divide fractions by whole numbers
- L.8 Divide whole numbers by fractions
- L.9 Divide two fractions
- **L.10** Divide fractions and mixed numbers
- **L.11** Divide fractions and mixed numbers: word problems

Coordinate plane

- Y.1 Objects on a coordinate plane
- Y.2 Graph points on a coordinate plane
- Y.3 Quadrants
- Y.4 Coordinate planes as maps
- Y.5 Follow directions on a coordinate

Number sequences

- **Z.1** Identify arithmetic and geometric sequences
- **Z.2** Arithmetic sequences
- **Z.3** Geometric sequences
- **Z.4** Number sequences: mixed review
- **Z.5** Number sequences: word problems
- **Z.6** Evaluate variable expressions for arithmetic sequences
- **Z.7** Write variable expressions for arithmetic sequences

- II.19 Create double line graphs
- II.20 Choose the best type of graph

Statistics

- **JJ.1** Identify statistical questions
- **JJ.2** Identify representative, random and biased samples
- JJ.3 Calculate mean, median, mode and range
- **JJ.4** Interpret charts to find mean, median, mode and range
- **JJ.5** Mean, median, mode and range: find the missing number
- **JJ.6** Identify an outlier
- **JJ.7** Identify an outlier and describe the effect of removing it
- JJ.8 Describe distributions in line

Probability

- KK.1 Probability of simple events
- KK.2 Probability of simple events and opposite events
- KK.3 Probability of mutually exclusive events and overlapping events
- KK.4 Experimental probability
- KK.5 Make predictions using theoretical probability
- KK.6 Make predictions using experimental probability

Financial literacy

- LL.1 Balance a budget
- **LL.2** Adjust a budget
- LL.3 Debit cards and credit cards

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