

Scope and Sequence:

Calculations, Word Problems, and Geometry series,
Grades 1–6

KUMON
PUBLISHING

Grade 1

GRADE 1 ADDITION

Counting, reading, writing, and ordering numbers to 120

Understanding the whole number system

Addition of sums beyond 30

Patterns & sequencing

GRADE 1 SUBTRACTION

Counting, reading & writing numbers to 100

Addition review

Two-digit minus two-digit subtraction

Addition & subtraction with three numbers

Patterns & sequencing

GRADE 1 WORD PROBLEMS

Addition

Subtraction

Ordinal numbers

GRADE 1 GEOMETRY AND MEASUREMENT

Count and skip-count to 100

Compare and order numbers

Identify, recognize, name, sort and compare basic two- and three-dimensional shapes

Use non-standard units to measure and compare concrete shapes

Coins (penny, nickel, dime, quarter)

Telling time (to the hour and a half hour)

Grade 2

GRADE 2 ADDITION

Horizontal addition review

Vertical form addition

Two-digit plus two-digit addition to 198

Early three- & four-digit addition

Addition of three two-digit numbers

Commutative property of addition

Patterns & sequencing

GRADE 2 SUBTRACTION

Horizontal subtraction review

Vertical form subtraction

Regrouping (borrowing)

Three-digit minus two-digit subtraction

Early three- & four-digit subtraction

Addition & subtraction of three two-digit numbers

Patterns & sequencing

GRADE 2 WORD PROBLEMS

Addition and subtraction

Reading graphs

Drawing graphs and counting given concrete objects



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GRADE 2 GEOMETRY AND MEASUREMENT

Count and skip-count to 100

Compare and order numbers

Identify, recognize, name, sort and compare basic two- and three-dimensional shapes

Use non-standard units to measure and compare concrete shapes

Coins (penny, nickel, dime, quarter)

Telling time (to the hour and a half hour)

Grade 3

GRADE 3 ADDITION AND SUBTRACTION

Addition & subtraction review

Four-digit vertical form addition

Four-digit vertical form subtraction

Regrouping (borrowing)

Patterns & sequencing

GRADE 3 MULTIPLICATION

Repeated addition

Skip counting

Multiplication facts to 10×10

Inverse relationship of multiplication & division

Commutative property of multiplication

Identity property of multiplication

Zero property of multiplication

Patterns & sequencing

GRADE 3 DIVISION

Review of multiplication

Inverse relationship of multiplication & division

Two-digit by one-digit vertical form division

Division with remainders -Early three- & four-digit by one-digit division

Identity property of division

Zero property of division

Patterns & sequencing

GRADE 3 WORD PROBLEMS

Addition, subtraction, multiplication, and division

Estimation (round numbers)

Reading bar graphs and pictographs

GRADE 3 GEOMETRY AND MEASUREMENT

Ordinal numbers

Read and compare numbers to 1000

Compose and decompose two-dimensional shapes

Group two-dimensional objects and shapes by like properties

Length (inch, foot, yard, centimeter, meter)

Weight (pound, gram, kilogram)

Capacity (pint, quart, liter)

Time (to five minutes)

Temperature (degrees Celsius, Fahrenheit)

Money (coins and bills, \$1, \$5, \$10, \$20)

Find the area of rectangles and squares using a grid

Grade 4

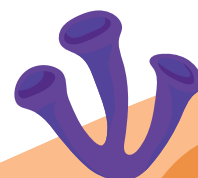
GRADE 4 MULTIPLICATION

Vertical form multiplication

Three-digit times three-digit multiplication

Commutative property of multiplication

Patterns & sequencing



Scope and Sequence:

Calculations, Word Problems, and Geometry series, Grades 1–6

GRADE 4 DIVISION

Addition, subtraction, multiplication & division review

Vertical form division

Five-digit by three-digit division

Remainders

Order of operations

GRADE 4 DECIMALS AND FRACTIONS

Addition & subtraction review

Read, write & order decimals to the hundredth place

Vertical form addition & subtraction of decimals

Read, write & identify fractions up to $\frac{20}{11}$

Rewriting improper fractions

Addition & subtraction of fractions with like denominators

GRADE 4 WORD PROBLEMS

Multiplication and division of whole numbers

Fractions and decimals

Estimation (round numbers, addition and subtraction)

Reading and writing line graphs and pictographs

Determining number outcomes

GRADE 4 GEOMETRY AND MEASUREMENT

Read and write fractions on a number line

Read and write decimals on a number line

Understand and apply concepts of lines, angles, and circles

Draw two-dimensional figures

Measure and find the area and perimeter of rectangular shapes using appropriate units.

Measure volume using standard cubic units.

Measure surface area of cubes and rectangular prisms by adding up the area of the faces

Calculate elapsed time in hours and half hours

Calculate elapsed time in days and weeks

Grade 5

GRADE 5 DECIMALS AND FRACTIONS

Multiplication & division review

Vertical form multiplication & division of decimals

Calculations with three decimal numbers

Rewriting improper fractions

Addition & subtraction of fractions up to $\frac{20}{11}$

Rewriting improper fractions

Addition & subtraction of fractions with like denominators

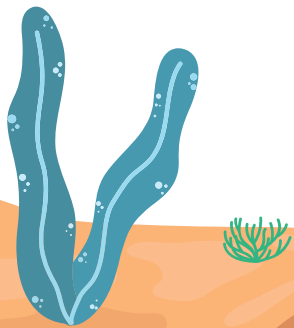
GRADE 5 WORD PROBLEMS

Fractions and decimals

Addition and subtraction of measurements

Determining percentage and drawing graphs

Determining probability from trial results



Scope and Sequence:

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GRADE 5 GEOMETRY AND MEASUREMENT

Compare and order whole numbers, fractions, and decimals on a number line

Understand and apply concepts of lines and angles (e.g. parallel and perpendicular)

Identify polygons

Understand the relationship of the circumference of a circle, its diameter, and pi

Measure and find the area and the perimeter of two-dimensional shapes using formulae

Measure and find the volumes of cubes and rectangular prisms using formulae

Coordinate geometry

Convert measurement units within a system

Grade 6

GRADE 6 FRACTIONS

Reducing fractions to lowest possible denominator

Factors and multiples

Greatest common factor (GCF)

Lowest common multiple (LCM)

Addition & subtraction of fractions with unlike denominators

Multiplication & division of fractions and mixed numbers

Changing decimals into fractions

Calculations with three fractions

GRADE 6 WORD PROBLEMS

Fractions

Solving percent problems including percent, rate, and base

Solving problems including speed, distance, time

Determining probability

Determining an average from pictographs

GRADE 6 GEOMETRY AND MEASUREMENT

Identify factors and common factors, as well as the greatest common factor

Identify multiples and common multiples, as well as the least common multiple

Reduce fractions

Identify properties of circle (e.g. radius, diameter, chords, central angles)

Find and use ratio in similar plane figures

Understand reflections, rotations, and translations

Determine and use line symmetry and rotational symmetry

Calculate the volume of a geometric solid

Measure and identify capacity

Convert measures within the same measurement system

Use a scale to find a distance on a map or length on a scale drawing

