

APA Alberta-based Math Curricula: Grade 4 Math

Number sense

- Place values
- Convert between place values
- Word names for numbers
- Roman numerals
- Prime and composite numbers
- Rounding
- Even and odd
- Inequalities with number lines
- Put numbers up to four digits in order
- Compare numbers up to five digits

Addition

- Add numbers up to five digits
- Add numbers up to five digits: word problems
- Addition: fill in the missing digits
- Properties of addition
- Add three or more numbers up to five digits each
- Addition patterns over increasing place values
- Choose numbers with a particular sum
- Estimate sums
- Estimate sums: word problems

Subtraction

- Subtract numbers up to five digits
- Subtract numbers up to five digits: word problems
- Subtraction: fill in the missing digits
- Subtraction patterns over increasing place values
- Choose numbers with a particular difference
- Estimate differences
- Estimate differences: word problems

Multiplication

- Multiplication facts to 10
- Choose the multiples of a given number up to 12
- Multiply 1-digit numbers by 2-digit numbers
- Multiply 1-digit numbers by 3-digit or 4-digit numbers
- Multiply 1-digit numbers by larger numbers
- Multiplication patterns over increasing place values
- Properties of multiplication
- Estimate products – multiply by 1-digit numbers
- Estimate products – multiply by larger numbers
- Estimate products: word problems
- Box multiplication
- Lattice multiplication
- Choose numbers with a particular product
- Multiply numbers ending in zeroes
- Multiply numbers ending in zeroes: word problems
- Multiply three numbers
- Inequalities with multiplication

Division

- Division facts to 10

- Division facts to 10: word problems
- Properties of division
- Divide larger numbers
- Divide larger numbers: word problems
- Complete the division table
- Interpret remainders
- Choose numbers with a particular quotient
- Divide numbers ending in zeroes
- Estimate quotients
- Estimate quotients: word problems
- Divisibility rules
- Division patterns over increasing place values
- Inequalities with division

Mixed operations

- Add, subtract, multiply and divide
- Addition, subtraction, multiplication and division word problems
- Estimate sums, differences, products and quotients: word problems
- Multi-step word problems
- Word problems with extra or missing information
- Solve word problems using guess-and-check
- Choose numbers with a particular sum, difference, product or quotient
- Mentally add and subtract numbers ending in zeroes
- Inequalities involving addition, subtraction, multiplication and division

Algebra

- Write variable expressions
- Write variable expressions: word problems
- Evaluate variable expressions
- Write variable equations to represent word problems
- Solve variable equations

Functions

- Input/output tables with addition, subtraction, multiplication and division
- Function tables
- Write linear functions
- Graph linear functions

Logical reasoning

- Find two numbers based on sum and difference
- Find two numbers based on sum, difference, product and quotient
- Find the order

Patterns and sequences

- Geometric growth patterns
- Increasing growth patterns
- Numeric patterns: word problems
- Mixed patterns review

Coordinate graphs

- Coordinate graphs review
- Graph points on a coordinate plane
- Relative coordinates
- Coordinate graphs as maps

Data and graphs

- Read a table

- Interpret line graphs
- Create line graphs
- Interpret bar graphs
- Create bar graphs
- Interpret line plots
- Create line plots
- Frequency charts
- Stem-and-leaf plots
- Circle graphs
- Choose the best type of graph

Money

- Compare money amounts
- Round money amounts
- Add and subtract money amounts
- Making change
- Price lists

Measurement

- Choose the appropriate metric unit of measure
- Compare and convert metric units of length
- Compare and convert metric units of mass
- Compare and convert metric units of volume

Time

- Convert time units
- Add and subtract mixed time units
- Fractions of time units
- Elapsed time
- Find start and end times: multi-step word problems
- Convert between 12-hour and 24-hour time
- Time zones – 12-hour time
- Time zones – 24-hour time
- Transportation schedules – 12-hour time
- Transportation schedules – 24-hour time
- Time patterns

Geometry

- Identify planar and solid figures
- Types of triangles
- Open and closed shapes and qualities of polygons
- Which 2-dimensional shape is being described?
- Which 3-dimensional figure is being described?
- Number of sides in polygons
- Count and compare sides, edges, faces and vertices
- Similar and congruent
- Nets of 3-dimensional figures
- Acute, right, obtuse and straight angles
- Perimeter
- Area
- Create figures with a given area
- Volume
- Lines of symmetry
- Rotational symmetry
- Lines, line segments and rays

- Parallel, perpendicular, intersecting

Fractions

- Find equivalent fractions using area models
- Graph equivalent fractions on number lines
- Equivalent fractions
- Patterns of equivalent fractions
- Reduce fractions to lowest terms
- Fractions review
- Graph and compare fractions on number lines
- Compare fractions
- Order fractions with like numerators or denominators
- Order fractions
- Find smaller or larger fractions
- Understanding fractions: word problems

Decimals

- What decimal number is illustrated?
- Model decimals and fractions
- Understanding decimals expressed in words
- Place values in decimal numbers
- Equivalent decimals
- Graph decimals on number lines
- Decimal number lines
- Graph fractions as decimals on number lines
- Convert fractions to decimals
- Convert decimals to fractions
- Convert decimals between standard and expanded form using fractions
- Round decimals
- Compare decimals on number lines
- Compare decimal numbers
- Put decimal numbers in order
- Compare decimals and fractions on number lines
- Compare decimals and fractions
- Put tricky decimals in order
- Number sequences involving decimals
- Solve decimal problems using diagrams

Add and subtract decimals

- Add decimal numbers
- Subtract decimal numbers
- Add and subtract decimals: word problems
- Choose decimals with a particular sum or difference
- Add three or more decimals
- Add three or more decimals: word problems
- Complete the addition or subtraction sentence
- Inequalities with addition and subtraction
- Estimate sums and differences of decimals

Probability and statistics

- Calculate probability
- Make predictions
- Mean and mode
- Interpret charts to find mean and mode
- Combinations