

## **APA Alberta-based Math Curricula: Grade 5 Math**

### **Place values and number sense**

- Place values
- Convert between place values
- Compare numbers up to millions
- Word names for numbers
- Roman numerals
- Rounding
- Even and odd arithmetic patterns

### **Geometry**

- Identify planar and solid figures
- Types of triangles
- Open and closed shapes and qualities of polygons
- Regular and irregular polygons
- Number of sides in polygons
- Which figure is being described?
- Classify quadrilaterals
- Reflection, rotation and translation
- Count and compare sides, edges, faces and vertices
- Similar and congruent
- Nets of 3-dimensional figures
- Types of angles
- Measure angles with a protractor
- Perimeter
- Area of squares and rectangles
- Area and perimeter of irregular figures
- Use area and perimeter to determine cost
- Volume
- Three-dimensional figures viewed from different perspectives
- Lines of symmetry
- Rotational symmetry
- Parallel, perpendicular, intersecting

### **Decimals**

- What decimal number is illustrated?
- Model decimals and fractions
- Understanding decimals expressed in words
- Place values in decimal numbers
- Convert decimals between standard and expanded form
- Equivalent decimals
- Round decimals
- Decimal number lines
- Compare decimals on number lines
- Compare decimal numbers
- Put decimal numbers in order
- Convert fractions to decimals
- Convert decimals to fractions
- Convert decimals between standard and expanded form using fractions
- Compare decimals and fractions on number lines
- Compare decimals and fractions
- Put assorted decimals, fractions and mixed numbers in order

### **Addition and subtraction**

- Add and subtract whole numbers up to millions
- Add and subtract whole numbers: word problems
- Add and subtract money amounts
- Add and subtract money: word problems
- Complete addition and subtraction sentences
- Fill in the missing digits
- Choose numbers with a particular sum or difference
- Properties of addition
- Inequalities with addition and subtraction
- Estimate sums and differences of whole numbers
- Estimate sums and differences: word problems

### **Add and subtract decimals**

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

### **Multiplication**

- Multiply by one-digit numbers
- Multiply by one-digit numbers: word problems
- Multiplication patterns over increasing place values
- Multiply numbers ending in zeroes
- Multiply numbers ending in zeroes: word problems
- Properties of multiplication
- Choose numbers with a particular product
- Estimate products
- Estimate products: word problems
- Box multiplication
- Lattice multiplication
- Multiply by 2-digit numbers: complete the missing steps
- Multiply 2-digit numbers by 2-digit numbers
- Multiply by 2-digit numbers: word problems
- Multiply three or four numbers
- Multiply three or four numbers: word problems
- Multiply money amounts: word problems
- Inequalities with multiplication

### **Division**

- Division facts to 12
- Division facts to 12: word problems
- Divide by one-digit numbers
- Divide by one-digit numbers: word problems
- Divide by one-digit numbers: interpret remainders
- Estimate quotients
- Estimate quotients: word problems
- Division patterns over increasing place values
- Divide numbers ending in zeroes
- Divide numbers ending in zeroes: word problems
- Divide money amounts: word problems
- Choose numbers with a particular quotient

### **Multiply and divide decimals**

- Estimate products of decimals
- Multiply a decimal by a power of ten
- Multiply decimals and whole numbers
- Multiply decimals and whole numbers: word problems
- Multiply money amounts with decimals: word problems
- Inequalities with decimal multiplication
- Divide by powers of ten
- Decimal division patterns over increasing place values

### **Problem solving**

- Multi-step word problems
- Word problems with extra or missing information
- Guess-and-check problems
- Find the order
- Use Venn diagrams to solve problems
- Price lists

### **Number theory**

- Prime and composite numbers
- Prime factorization
- Divisibility rules
- Divisibility rules: word problems
- Greatest common factor
- Least common multiple

### **Fractions and mixed numbers**

- Fractions review
- Equivalent fractions
- Patterns of equivalent fractions
- Reduce fractions to lowest terms
- Mixed numbers
- Graph and compare fractions on number lines
- Compare fractions and mixed numbers
- Put fractions in order
- Fractions of a number
- Fractions of a number: word problems
- Arithmetic sequences with fractions
- Geometric sequences with fractions
- Round mixed numbers
- Understanding fractions: word problems

### **Add, subtract and multiply fractions**

- Decompose fractions multiple ways
- Add and subtract fractions with like denominators using number lines
- Add and subtract fractions with like denominators
- Add and subtract fractions with like denominators: word problems
- Add and subtract mixed numbers with like denominators
- Add and subtract mixed numbers with like denominators: word problems
- Add up to 4 fractions with denominators of 10 and 100
- Add three or more fractions
- Add three or more fractions: word problems
- Complete addition and subtraction sentences with fractions
- Inequalities with addition and subtraction of fractions
- Estimate sums and differences of mixed numbers

- Multiply unit fractions by whole numbers using number lines
- Multiply unit fractions by whole numbers using models
- Multiples of fractions
- Multiply unit fractions and whole numbers: sorting
- Multiply fractions by whole numbers using number lines
- Multiply fractions by whole numbers using models
- Multiply fractions and whole numbers: sorting
- Multiply fractions by whole numbers
- Multiply fractions by whole numbers: input/output tables

#### **Mixed operations**

- Add, subtract, multiply and divide whole numbers
- Add, subtract, multiply and divide whole numbers: word problems
- Add, subtract, multiply and divide decimals
- Add, subtract and multiply decimals: word problems

#### **Algebra**

- Simplify expressions using order of operations and parentheses
- Write variable expressions
- Evaluate variable expressions
- Write equations to represent word problems
- Solve equations
- Function tables
- Convert graphs to input/output tables
- Write linear functions
- Graph linear functions
- Evaluate functions

#### **Coordinate graphs**

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

#### **Data and graphs**

- Read a table
- Interpret line graphs
- Create line graphs
- Interpret bar graphs
- Create bar graphs
- Interpret pictographs
- Create pictographs
- Interpret histograms
- Create histograms
- Interpret line plots
- Create line plots
- Frequency charts
- Stem-and-leaf plots
- Circle graphs
- Choose the best type of graph

#### **Patterns and sequences**

- Geometric growth patterns
- Increasing growth patterns
- Patterns involving addition and multiplication
- Numeric patterns: word problems
- Mixed patterns review

**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
- Choose the more reasonable temperature

**Time**

- Convert time units
- Add and subtract mixed time units
- Elapsed time
- Find start and end times: word problems
- Convert between 12-hour and 24-hour time
- Time zones – 12-hour time
- Time zones – 24-hour time
- Schedules and time lines – 12-hour time
- Schedules – 24-hour time
- Time patterns

**Probability and statistics**

- Calculate mean, median and mode
- Mean, median and mode: find the missing number
- Interpret charts to find mean, median and mode
- Calculate probability
- Make predictions
- Combinations