

## **K-9 Progression of Context Through the Grades**

Taken from

[https://education.alberta.ca/media/3653317/00-alberta\\_math\\_k-12\\_scope\\_sequence-2017.pdf](https://education.alberta.ca/media/3653317/00-alberta_math_k-12_scope_sequence-2017.pdf)

### **Counting Outcomes**

#### Counting

Forward and backward by 1s (1–10) (KN1) --- Forward by 1s, 5s and 10s (0–100); forward by 2s (0–20); and backward by 1s (20–0) (1N1) --- Forward and backward by 2s, 5s and 10s (0–100) (2N1) --- Forward and backward by 3s, 4s, 5s, 10s, 25s and 100s (0–1000) 3(N1)

Understanding counting (1N3) --- Conservation of number (1N7) ---

Ordinal numbers to tenths (2N3)

Even and odd numbers (2N2)

#### Subitizing

Subitizing 1–5 (KN2) --- Subitizing 1–10 (1N2)

#### Estimate using referents

Estimate to 20 using referents (1N6) --- Estimate to 100 using referents (2N6) --- Estimate to 1000 using referents (3N4)

### **Number Concept Outcomes**

#### Numbers

Natural numbers to 10 (KN3, KN4, KN5) --- Whole numbers to 20 (1N4, 1N5) --- Whole numbers to 100 (2N4, 2N5) --- Whole numbers to 1000 (3N2, 3N3) --- Whole numbers to 10 000 (4N1, 4N2) and decimals to hundredths (4N9) --- Whole numbers to 1 000 000 (5N1) and decimals to thousandths (5N8, 5N10) --- Integers (7N7)

#### Place value

Place value to 100 (2N7) --- Place value to 1000 (3N5) --- Whole numbers to 20 (1N4, 1N5) --- Whole numbers to 100 (2N4, 2N5) --- Whole numbers to 1000 (3N2, 3N3) --- Whole numbers to 10 000 (4N1, 4N2) and decimals to hundredths (4N9) --- Whole numbers to 1 000 000 (5N1) and decimals to thousandths (5N8, 5N10) --- Integers (6N7)

#### Fractions

Fractions, like denominators and parts of a whole (3N13) --- Fractions and parts of a whole or a set (4N8) --- Decimals to fractions and fractions to decimals (4N10) --- Fractions, like and unlike denominators and equivalent fractions (5N7) --- Decimals to fractions and fractions to decimals (5N9) --- Improper fractions and



mixed numbers (6N4) --- Fractions and terminating and repeating decimals (7N4) Fractions, decimals and whole numbers (7N7)

### Percent

Percent (6N6) --- Solve problems 1–100% (7N3) --- Percent  $\geq 0$  and  $> 100$  (8N3) ---

### Ratio

Ratio (6N5) --- Rate and ratio (8N4, N5)

### Squares/ Square root

Perfect squares and square roots (8N1) Approximate square root (8N2) --- Square roots of rational numbers (9N5, 9N6) Powers with whole-number exponents (9N1) and operations on powers (9N2)

### Rational Numbers

Rational numbers (9N3) --- addition and subtractions of Rational numbers, including order of operations (9N3, 9N4) --- Multiplication and division of Rational numbers, including order of operations (9N3, 9N4)

### Addition and subtraction facts

Addition and subtraction • strategies to  $9 + 9$  • recall to a sum of 5 (1N10) --- Addition and subtraction • strategies to  $9 + 9$  • recall to  $5 + 5$  (2N10) --- Addition and subtraction • understand, recall and apply to  $9 + 9$  (2N10)

### Addition and Subtraction

Whole numbers to 20 (1N9) --- Whole numbers to 100 (2N9) ---Whole numbers to 1000 (3N9) ---Whole numbers to 10 000 (4N3) and decimals to hundredths (4N11) --- Decimals to thousandths (5N11) --- Problems using whole numbers and decimals (6N2) --- Problems using whole numbers and decimals (6N2) --- Decimals (7N2) Fractions (7N5) Integers (7N6) --- Rational numbers, including order of operations (9N3, 9N4)

Identify 1 or 2 more/less than a number, up to 20 (1N8) --- Effect of zero (2N8) ---

Mental math strategies (3N6, 3N7)

Estimation strategies (3N8) --- Estimation strategies in context 5(N2)



### Multiplication and Division facts

Multiplication and division • understand and recall to  $5 \times 5$  (3N11, 3N12) --- Multiplication and division • strategies to  $9 \times 9$  • recall to  $7 \times 7$  (4N5) --- Multiplication and division • understand, recall and apply to  $9 \times 9$  (5N3)

### Multiplication and Division

Multiplication, including estimation (2- or 3-digit by 1-digit) (4N6) --- Multiply by 0 and 1 and divide by 1 (4N4) --- Multiplication (two 2-digit) (5N5)

Mental math strategies for multiplication (4N4)

Division including estimation (1-digit divisor, up to 2-digit dividend) (4N7) --- Multiply by 0 and 1 and divide by 1 (4N4) --- Division (3-digit by 1-digit) and remainders (5N6) ---

Decimals (1-digit multiplier and divisor) (6N8) Problems using whole numbers and decimals (6N2) ---

Decimals (1-digit multiplier and divisor) (6N8) Problems using whole numbers and decimals (6N2) ---

Decimals (7N2) Divisibility rules (including 0) (7N1) --- Fractions (8N6) Integers (8N7)

### Rational Numbers

Rational numbers (9N3) --- addition and subtractions of Rational numbers, including order of operations (9N3, 9N4) --- Multiplication and division of Rational numbers, including order of operations (9N3, 9N4)

Factors and multiples, prime and composite (6N3)

