Term Outline

Math 7S

# Curriculum Overview Term 1 Grade 7 Math 2013-14

Each strand is addressed with a major emphasis and strands are interrelated whenever possible to provide a rich variety of math experiences for students.

TERM 1  
**UNIT 2: N6: Demonstrate an understanding of addition and subtraction of integers, concretely, pictorially and symbolically.**

**ACHIEVEMENT INDICATORS: I CAN:**

Explain using concrete materials such as integer tiles and diagrams, that the sum of opposite integers is zero.

° Illustrate, using a number line, the results of adding or subtracting negative and positive integers; e.g., a move in one direction followed by an equivalent move in the opposite direction results in no net change in position.

° Add two given integers, using concrete materials or pictorial representations, and record the process symbolically.

° Subtract two given integers, using concrete materials or pictorial representations, and record the process symbolically.

° Illustrate the relations between adding integers and subtracting integers.

° Solve a given problem involving the addition and subtraction of integers.

**Unit 1:N1 Determine and explain why a number is divisible by 2, 3, 4, 5, 6, 8, 9 or 10, and why a number cannot be divided by 0.**

**ACHIEVEMENT INDICATORS: CAN:**

I can :

° Determine if a given number is divisible by 2, 3, 4, 5, 6, 8, 9 or 10**.**

° Determine the factors of a given number using the divisibility rules.

° Explain, using an example, why numbers cannot be divided by 0.

**UNIT 1: PR1: Demonstrate an understanding of oral and written patterns and their equivalent linear relations.**

**PR1**

° Formulate a linear relation to represent the relationship in a given oral or written pattern.

° Provide a context for a given linear relation that represents a pattern.

° Represent a pattern in the environment, using a linear relation.

**UNIT1: PR2: Create a table of values from a linear relation, graph the table of values, and analyze the graph to draw conclusions and solve problems.**

**PR2**

° Create a table of values for a given linear relation by substituting values for the variable.

° Create a table of values, using a linear relation, and graph the table of values (limited to discrete elements).

° Sketch the graph from a table of values created for a given linear relation and describe the patterns found in the graph to draw conclusions; e.g., graph the relationship between *n* and 2*n* + 3.

° Describe the relationship shown on a graph, using everyday language in spoken or written form, to solve problems.

° Match a given set of linear relations to a given set of graphs.

° Match a given set of graphs to a given set of linear relations.

**UNIT 1: PR4: Explain the difference between an expression and an equation.**

**UNIT 1: PR5: Evaluate an expression given the value of the variable(s).**

**ACHIEVEMENT INDICATORS: I CAN:**

Identify and provide an example of a constant term, a numerical coefficient and a variable in an expression and an equation.

° Explain what a variable is and how it is used in a given expression.

° Provide an example of an expression and an equation, and explain how they are similar and different.

° Substitute a value for an unknown in a given expression and evaluate the expression.

**UNIT 3: N2 Demonstrate an understanding of the addition, subtraction, multiplication and division of decimals (for more than 1-digit divisors or 2-digit multipliers, the use of technology is expected) to solve problems.**

**ACHIEVEMENT INDICATORS:**

**I CAN:**

-Solve a given problem involving the addition of two or more decimal numbers.

° Solve a given problem involving the subtraction of decimal numbers.

° Solve a given problem involving the multiplication of decimal numbers.

° Solve a given problem involving the multiplication or division of decimal numbers with 2-digit multipliers or 1-digit divisors (whole numbers or decimals) without the use of technology.

° Solve a given problem involving the multiplication or division of decimal numbers with more than a 2-digit multiplier or 1-digit divisor (whole number or decimal), with the use of technology.

° Place the decimal in a sum or difference using front-end estimation, e.g., for 4.5 + 0.73 + 256.458, think 4 + 256, so the sum is greater than 260.

° Place the decimal in a product using front-end estimation, e.g., for $12.33 × 2.4, think $12 × 2, so the product is greater than $24.

° Place the decimal in a quotient using front-end estimation, e.g., for 51.50 m ÷ 2.1, think 50 m ÷ 2, so the quotient is approximately 25 m.

° Check the reasonableness of solutions using estimation.

° Solve a given problem that involves operations on decimals (limited to thousandths) taking into consideration the order of operations.

**UNIT 3: N4: Demonstrate an understanding of the relationship between positive repeating decimals and positive fractions, and positive terminating decimals and positive fractions.**

**ACHIEVEMENT INDICATORS:**

Predict the decimal representation of a given fraction using patterns, e.g.,

° Match a given set of fractions to their decimal representations.

° Sort a given set of fractions as repeating or terminating decimals.

° Express a given fraction as a terminating or repeating decimal.

° Express a given repeating decimal as a fraction.

° Express a given terminating decimal as a fraction.

° Provide an example where the decimal representation of a fraction is an approximation of its exact value. (For example, two thirds equals approximately 0.67)

**UNIT 3: N7: Compare and order positive fractions, positive decimals (to thousandths) and whole numbers by using:**

**• benchmarks**

**• place value**

**• equivalent fractions and/or decimals.**

**ACHIEVEMENT INDICATORS: I CAN:**

° Order the numbers of a given set that includes positive fractions, positive decimals and/or whole numbers in ascending or descending order, and verify the result using a variety of strategies.

° Identify a number that would be between two given numbers in an ordered sequence or on a number line.

° Identify incorrectly placed numbers in an ordered sequence or on a number line.

° Position fractions with like and unlike denominators from a given set on a number line and explain strategies used to determine order.

° Order the numbers of a given set by placing them on a number line that contains benchmarks, such as 0 and 1 or 0 and 5.

° Position a given set of positive fractions, including mixed numbers and improper fractions, on a number line and explain strategies used to determine position.

° Position a given set of positive decimals on a number line and explain strategies used to determine position.