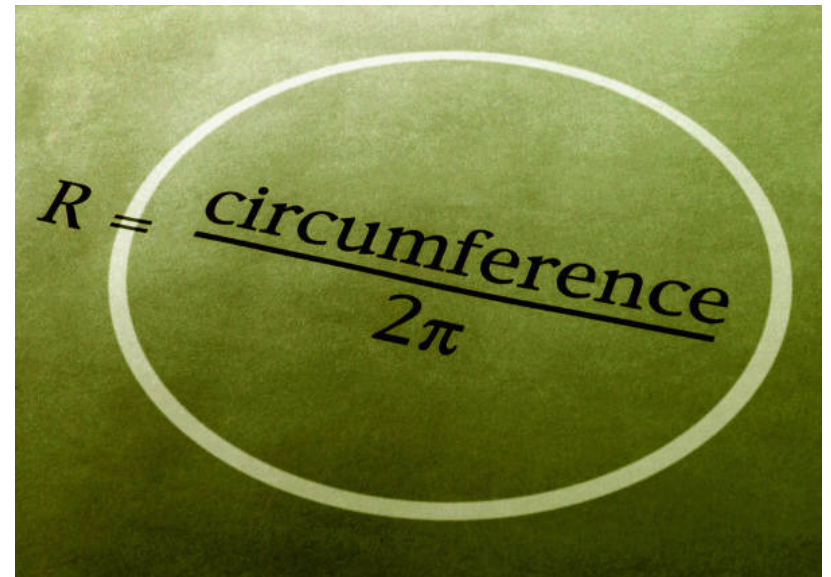
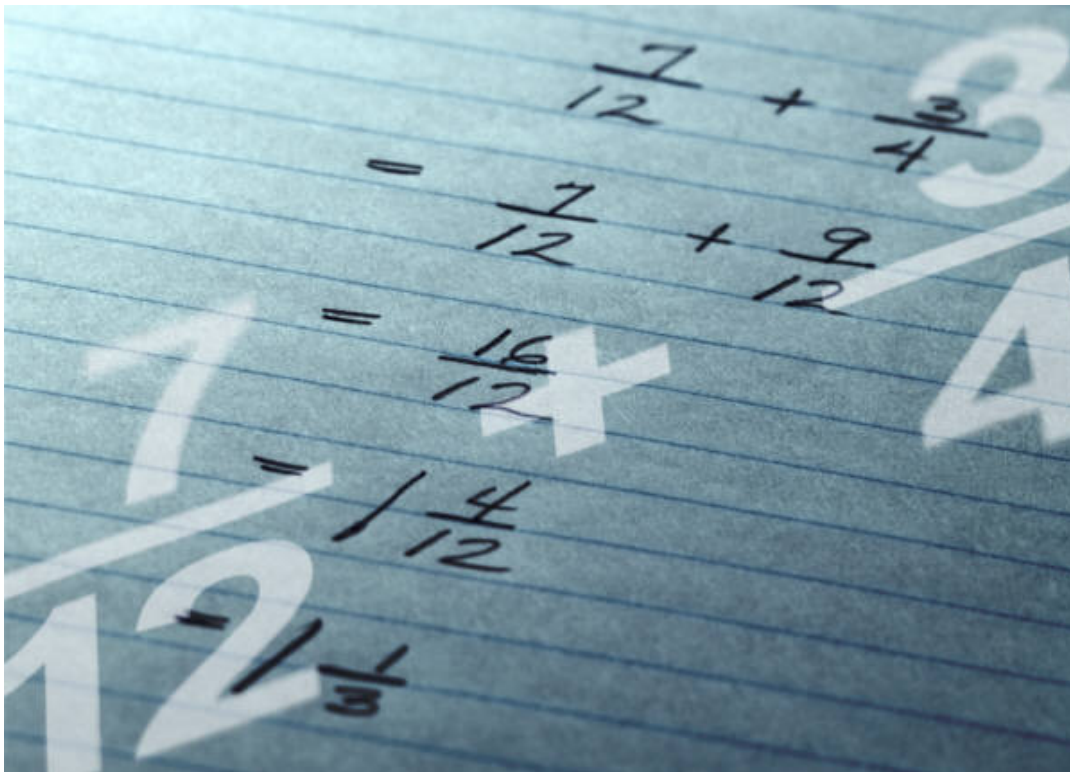


Grade 7 Mathematics

Correlation
between
1996 Curriculum
and
2008 Curriculum



$R = \frac{\text{circumference}}{2\pi}$



NUMBER

Number

C – Communication
PS – Problem Solving

CN – Connections
R – Reasoning

ME- Mental Mathematics and Estimation
T – Technology V - Visualization

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1996 Curriculum	2008 Curriculum
<p>Reads and writes any numbers to any number of decimal places Defines and uses power, base, and exponent to represent repeated multiplication (N-I.2.7)</p>	
<p>Writes a whole number as an expanded numeral, using powers of 10 scientific notation and vice versa (N-I.3.7)</p>	
<p>Uses common multiples, common factors, lowest common multiples, greatest common factors, composites, primes, and prime factorization Uses divisibility rules to determine if a number is divisible by 2, 3, 4, 5, 6, 9, 10 (N-1.4.7)</p>	<p>7.N.1. 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. [C, R]</p>
<p>Demonstrates and describes equivalent mixed numbers, improper fractions, and decimals, concretely, pictorially, and symbolically (N-II.1.7)</p>	
<p>Recognizes and illustrates that all fractions and mixed numbers can be represented in decimal form (including terminating and repeating decimals) Converts from terminating decimals to fractions Converts from single-digit repeater (0.3) decimal numbers to fractions, using patterns (N-II.2.7)</p>	<p>7.N.4. Demonstrate an understanding of the relationship between repeating decimals and fractions, and terminating decimals and fractions. [C, CN, R, T]</p>
<p>Compares and/or orders improper fractions, mixed numbers, and decimals to thousandths (N-II.3.7)</p>	<p>7.N.7. Compare and order fractions, decimals (to thousandths), and integers by using <ul style="list-style-type: none"> • benchmarks • place value • equivalent fractions and/or decimals [CN, R, V]</p>

1996 Curriculum	2008 Curriculum
<p>Represents integers in a variety of concrete, pictorial, and symbolic ways Demonstrates concretely and pictorially that the sum of opposite integers is zero (N-III.1.7)</p>	<p>7.N.6. Demonstrate an understanding of addition and subtraction of integers, concretely, pictorially, and symbolically. [C, CN, PS, R, V]</p>
<p>Compares and orders integers (N-III.2.7)</p>	<p>7.N.7. Compare and order fractions, decimals (to thousandths), and integers by using</p> <ul style="list-style-type: none"> • benchmarks • place value • equivalent fractions and/or decimals <p>[CN, R, V]</p>
<p>Uses estimation strategies to justify or assess the reasonableness of calculations (for whole numbers and decimals) Adds and subtracts integers concretely, pictorially, and symbolically (N-V.1.7)</p>	<p>7.N.2. Demonstrate an understanding of the addition, subtraction, multiplication, and division of decimals to solve problems (for more than 1-digit divisors or 2-digit multipliers, the use of technology is expected). [ME, PS, T]</p> <p>7.N.6. Demonstrate an understanding of addition and subtraction of integers, concretely, pictorially, and symbolically. [C, CN, PS, R, V]</p>
<p>Uses estimation strategies to justify or assess the reasonableness of calculations Uses patterns, manipulatives, and diagrams to demonstrate the concepts of multiplication and division by a decimal Multiplies and divides by whole numbers and decimals up to 2-digit numbers (for more than 2-digit divisors or multipliers, the use of technology is expected) Multiplies and divides integers, concretely, pictorially, and symbolically (N-V.2.7)</p>	<p>7.N.2. Demonstrate an understanding of the addition, subtraction, multiplication, and division of decimals to solve problems (for more than 1-digit divisors or 2-digit multipliers, the use of technology is expected). [ME, PS, T]</p>
<p>Illustrates and explains the order of operations, with or without a calculator (N-V.3.7)</p>	

1996 Curriculum	2008 Curriculum
Estimates and calculates percentages Converts, mentally, among fractions, decimals, and percents to facilitate the solution of problems (N-V-4.7)	7.N.3. Solve problems involving percents from 1% to 100%. [C, CN, ME, PS, R, T]
	7.N.5. Demonstrate an understanding of adding and subtracting positive fractions and mixed numbers, with like and unlike denominators, concretely, pictorially, and symbolically (limited to positive sums and differences). [C, CN, ME, PS, R, V]



Patterns and Relations

1996 Curriculum	2008 Curriculum
<p>Evaluates expressions with and without concrete models. Graphs relations, analyzes the results, and draws a conclusion from a pattern. Interpolates and extrapolates number values from a given graph. (PR-I.3.7)</p>	<p>7.PR.2. Construct a table of values from a relation, graph the table of values, and analyze the graph to draw conclusions and solve problems. [C, CN, R, V]</p> <p>7.PR.5. Evaluate an expression given the value of the variable(s). [CN, R]</p>
<p>Predicts and justifies possible n^{th} values of a number pattern. Uses patterns and relations to represent simple oral and written expressions as mathematical symbols, and vice versa. (PR-I.4.7)</p>	<p>7.PR.1. Demonstrate an understanding of oral and written patterns and their corresponding relations. [C, CN, R]</p>
<p>Illustrates the solution process for a one-step, single-variable, first-degree equation, using concrete materials or diagrams. (PR-II.1.7)</p>	<p>7.PR.6. Model and solve problems that can be represented by one-step linear equations of the form $x + a = b$, concretely, pictorially and symbolically, where a and b are integers. [CN, PS, R, V]</p> <p>7.PR.7. Model and solve problems that can be represented by linear equations of the form</p> <ul style="list-style-type: none"> • $ax + b = c$ • $ax = b$ • $\frac{x}{a} = b, a \neq 0$ <p>concretely, pictorially, and symbolically, where $a, b,$ and c are whole numbers. [CN, PS, R, V]</p>

1996 Curriculum	2008 Curriculum
<p>Solves and verifies one-step linear equations, using a variety of techniques. (PR-II.2.7)</p>	<p>7.PR.6. Model and solve problems that can be represented by one-step linear equations of the form $x + a = b$, concretely, pictorially, and symbolically, where a and b are integers. [CN, PS, R, V]</p> <p>7.PR.7. Model and solve problems that can be represented by linear equations of the form</p> <ul style="list-style-type: none"> • $ax + b = c$ • $ax = b$ • $\frac{x}{a} = b, a \neq 0$ <p>concretely, pictorially and symbolically, where a, b, and c are whole numbers. [CN, PS, R, V]</p>
<p>Writes mathematical expressions/equations that arise from problem-solving contexts. Explains how to solve simple problems, using informal algebraic methods. (PR-II.3.7)</p>	<p>7.PR.6. Model and solve problems that can be represented by one-step linear equations of the form $x + a = b$, concretely, pictorially, and symbolically, where a and b are integers. [CN, PS, R, V]</p> <p>7.PR.7. Model and solve problems that can be represented by linear equations of the form</p> <ul style="list-style-type: none"> • $ax + b = c$ • $ax = b$ • $\frac{x}{a} = b, a \neq 0$ <p>concretely, pictorially and symbolically, where a, b, and c are whole numbers. [CN, PS, R, V]</p>
	<p>7.PR.3. Demonstrate an understanding of preservation of equality by</p> <ul style="list-style-type: none"> • modelling preservation of equality concretely, pictorially, and symbolically • applying preservation of equality to solve equations <p>[C, CN, PS, R, V]</p>

1996 Curriculum	2008 Curriculum
	7.PR.4.Explain the difference between an expression and an equation. [C, CN]



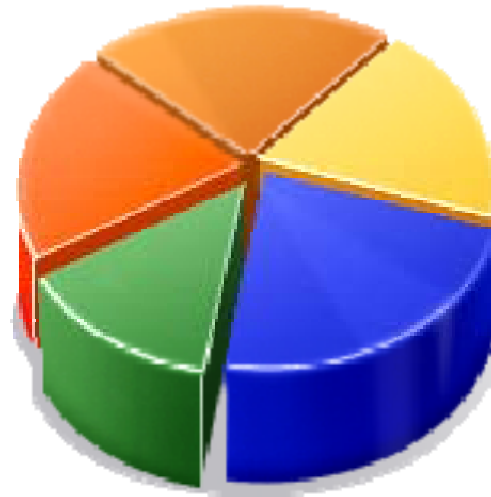
Shape and Space

1996 Curriculum	2008 Curriculum
<p>Measures the diameters, radii and circumferences of circles. Researches and reports how measurement instruments are used in the community. (SS-I.1.7)</p>	<p>7.SS.1. Demonstrate an understanding of circles by</p> <ul style="list-style-type: none"> • describing the relationships among radius, diameter, and circumference of circles • relating circumference to pi • determining the sum of the central angles • constructing circles with a given radius or diameter • solving problems involving the radii, diameters, and circumferences of circles <p>[C, CN, R, V]</p>
<p>Establishes the relationships among the radius, diameter and circumference of a circle and solves problems involving them. (SS-I.3.7)</p>	<p>7.SS.1. Demonstrate an understanding of circles by</p> <ul style="list-style-type: none"> • describing the relationships among radius, diameter, and circumference of circles • relating circumference to pi • determining the sum of the central angles • constructing circles with a given radius or diameter • solving problems involving the radii, diameters, and circumferences of circles <p>[C, CN, R, V]</p>
<p>Estimates and determines the area of parallelograms, triangles and figures composed of rectangles. (SS-II.1.7)</p>	<p>7.SS.2. Develop and apply a formula for determining the area of</p> <ul style="list-style-type: none"> • triangles • parallelograms • circles <p>[CN, PS, R, V]</p>
<p>Designs and constructs triangles and parallelograms given either the perimeter or area. (SS-II.2.7)</p>	
<p>Establishes the area relationships between rectangle, parallelogram and triangle. (SS-II-3.7)</p>	<p>7.SS.2. Develop and apply a formula for determining the area of</p> <ul style="list-style-type: none"> • triangles • parallelograms • circles <p>[CN, PS, R, V]</p>

1996 Curriculum	2008 Curriculum
<p>Develops, verifies and applies rules or expressions for the area of parallelograms and triangles. (SS-II.4.7)</p>	<p>7.SS.2. Develop and apply a formula for determining the area of</p> <ul style="list-style-type: none"> • triangles • parallelograms • circles <p>[CN, PS, R, V]</p>
<p>Explains how time zones are determined, and uses them to solve problems. (SS-V.1.7)</p>	
<p>Constructs angle bisectors and perpendicular bisectors. (SS-VI.2.7)</p>	<p>7.SS.3. Perform geometric constructions, including</p> <ul style="list-style-type: none"> • perpendicular line segments • parallel line segments • perpendicular bisectors • angle bisectors <p>[CN, R, V]</p>
<p>Measures and classifies pairs of angles as complementary or supplementary angles. Investigates, identifies, and names pairs of angles pertaining to parallel lines and transversals, including</p> <ul style="list-style-type: none"> - corresponding angles - vertically opposite angles - interior angles on the same side of the transversal - exterior angles on the same side of the transversal - alternate angles <p>(SS-IX.1.7)</p>	
<p>Describes the relationships between pairs of angles pertaining to parallel lines and transversals. Explains (in more than one way) why the sum of the measures of the angles of a triangle is 180°. Uses mathematical reasoning to determine the measures of angles in a diagram. (SS-IX.2.7)</p>	

1996 Curriculum	2008 Curriculum
<p>Draws designs using ordered pairs in all four quadrants of the coordinate grid, together with translation and reflection images. (SS-X.1.7)</p>	<p>7.SS.4. Identify and plot points in the four quadrants of a Cartesian plane using ordered pairs. [C, CN, V]</p> <p>7.SS.5. Perform and describe transformations of a 2-D shape in all four-quadrants of a Cartesian plane (limited to integral vertices). [C, CN, PS, T, V]</p>
<p>Creates, analyses and describes designs using translations (slides), reflections (flips), and rotations (turns). (SS-X.2.7)</p>	<p>7.SS.5. Perform and describe transformations of a 2-D shape in all four-quadrants of a Cartesian plane (limited to integral vertices). [C, CN, PS, T, V]</p>
<p>Relates reflections to lines and planes of symmetry. Uses informal concepts of congruence to describe images after translations, reflections and rotations. (SS-X.3.7)</p>	

Statistics and Probability



1996 Curriculum	2008 Curriculum
Formulates questions for an investigation from a real-world context, and predicts results. (SP-I.1.7)	
Selects, defends, and uses appropriate methods for collecting data, such as <ul style="list-style-type: none"> - designing and using questionnaires - interviewing - conducting experiments - doing research (SP-II.1.7)	
Describes issues to be considered when collecting data, e.g., appropriate language, ethics, cost, privacy, cultural sensitivity, and so on. (SP-II.2.7)	
Determines measures of central tendency for a set of data, i.e., <ul style="list-style-type: none"> - mode - median - mean Determines measures of distribution of a set of data, i.e., <ul style="list-style-type: none"> - range - extremes, gaps and clusters - quartiles (SP-III.1.7)	7.SP.1. Demonstrate an understanding of central tendency and range by <ul style="list-style-type: none"> • determining the measures of central tendency (mean, median, mode) and range • determining the most appropriate measures of central tendency to report findings [C, PS, R, T]
Displays data by hand or by computer in a variety of ways, including circle graphs. (SP-III.2.7)	7.SP.3. Construct, label, and interpret circle graphs to solve problems. [C, CN, PS, R, T, V]
Reads and interprets graphs. (SP-IV.1.7)	
Interpolates from data to make predictions. (SP-IV.2.7)	
Uses the Monte Carlo simulation method to solve probability problems. (SP-V.2.7)	

1996 Curriculum	2008 Curriculum
Uses a table to identify all possible outcomes of two independent events. (SP-V.3.7)	7.SP.5. Identify the sample space (where the combined sample space has 36 or fewer elements) for a probability experiment involving two independent events. [C, ME, PS]
Creates and solves problems using the numerical definition of probability: favourable outcomes divided by possible outcomes. (SP-V.4.7)	
	7.SP.2. Determine the effect on the mean, median, and mode when an outlier is included in a data set. [C, CN, PS, R]
	7.SP.4. Express probabilities as ratios, fractions, and percents. [C, CN, R, T, V]
	7.SP.6. Conduct a probability experiment to compare the theoretical probability (determined using a tree diagram, table, or another graphic organizer) and experimental probability of two independent events. [C, PS, R, T]