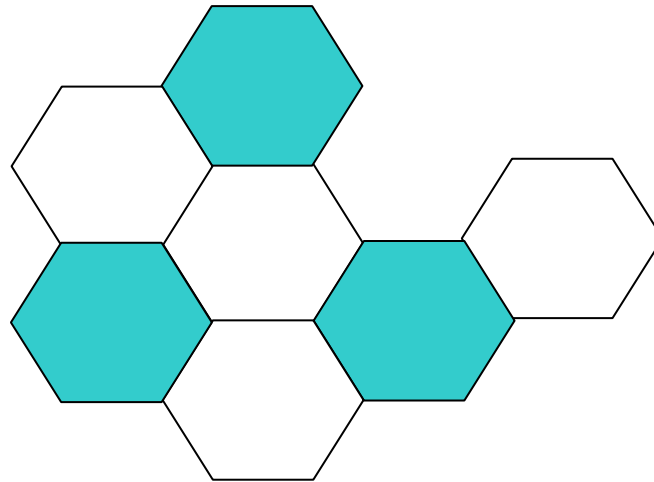
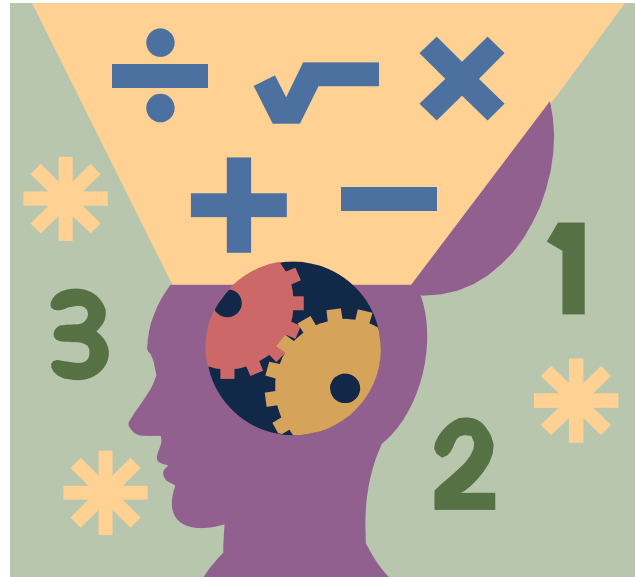


Grade 8 Mathematics

Correlation
between
1996 Curriculum
and
2008 Curriculum





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>Demonstrates and explains the meaning of a negative exponent, using patterns (limited to base 10) Represents any number in scientific notation (N.I.3.8)</p>	
<p>Represents square roots concretely, pictorially, and symbolically (N-I.4.8)</p>	<p>8.N.1. Demonstrate an understanding of perfect squares and square roots, concretely, pictorially, and symbolically (limited to whole numbers). [C, CN, R, V]</p> <p>8.N.2. Determine the approximate square root of whole numbers that are not perfect squares (limited to whole numbers). [C, CN, ME, R, T]</p>
<p>Distinguishes between a square root and its decimal approximation as it appears on a calculator Demonstrates concretely, pictorially, and symbolically that the product of reciprocals is equal to 1 (N.II.2.8)</p>	<p>8.N.2. Determine the approximate square root of whole numbers that are not perfect squares (limited to whole numbers). [C, CN, ME, R, T]</p>
<p>Defines, compares, and orders any rational numbers (N-II.3.8)</p>	
<p>Expresses 3 –term ratios in equivalent forms (N-IV.1.8)</p>	<p>8.N.5. Solve problems that involve rates, ratios, and proportional reasoning. [C, CN, PS, R]</p>
<p>Represents and applies fractional per cents, and per cents greater than 100, in fraction or decimal form, and vice versa (N-IV.2.8)</p>	<p>8.N.3. Demonstrate an understanding of percents greater than or equal to 0%. [CN, PS, R, V]</p>
<p>Adds and subtracts fractions concretely, pictorially, and symbolically Estimates, computes, and verifies sums and differences of rational numbers, using only decimal representations of negative rationals (N-V.1.8)</p>	

1996 Curriculum	2008 Curriculum
<p>Estimates, computes, and verifies the product and quotient of rational numbers, using only decimal representations of negative rationals</p> <p>Multiplies and divides fractions, concretely, pictorially, and symbolically</p> <p>Estimates, computes (using a calculator) and verifies approximate square roots of whole numbers and of decimals (N-V.2.8)</p>	<p>8.N.2. Determine the approximate square root of whole numbers that are not perfect squares (limited to whole numbers). [C, CN, ME, R, T]</p> <p>8.N.6. Demonstrate an understanding of multiplying and dividing positive fractions and mixed numbers, concretely, pictorially, and symbolically. [C, CN, ME, PS]</p>
<p>Derives and applies unit rates</p> <p>Expresses rates and ratios in equivalent forms</p> <p>Calculates combined percentages in a variety of meaningful contexts</p> <p>Uses concepts of rate, ratio, proportion and percent to solve problems in meaningful contexts (N-V.4.8)</p>	<p>8.N.4. Demonstrate an understanding of ratio and rate. [C, CN, V]</p> <p>8.N.5. Solve problems that involve rates, ratios, and proportional reasoning. [C, CN, PS, R]</p>
	<p>8.N.7. Demonstrate an understanding of multiplication and division of integers, concretely, pictorially, and symbolically. [C, CN, PS, R, V]</p>
	<p>8.N.8. Solve problems involving positive rational numbers. [C, CN, ME, PS, R, T, V]</p>



Patterns and Relations

1996 Curriculum	2008 Curriculum
Substitutes numbers for variables in expressions, and graphs and analyzes the relation. (PR-I.3.8)	8.PR.1. Graph and analyze two-variable linear relations. [C, ME, PS, R, T, V]
Generalizes a pattern arising from a problem-solving context, using mathematical expressions and equations, and verifies by substitution. Translates between an oral or written expression and an equivalent algebraic expression. (PR-I.4.8)	
Illustrates the solution process for two-step, single-variable, first-degree equations, using concrete materials or diagrams. (PR-II.1.8)	8.PR.2. Model and solve problems using linear equations of the form <ul style="list-style-type: none"> • $ax = b$ • $\frac{x}{a} = b, a \neq 0$ • $ax + b = c$ • $\frac{x}{a} + b = c, a \neq 0$ • $a(x + b) = c$ concretely, pictorially, and symbolically, where $a, b,$ and c are integers. [C, CN, PS, V]
Solves and verifies one- and two-step, first-degree equations of the form <ul style="list-style-type: none"> ▪ $x + a = b$ ▪ $ax = b$ ▪ $x/a = b, a \neq 0$ ▪ $ax + b = c$ ▪ $x/a + b = c, a \neq 0$ where $a, b,$ and c are integers. (PR-II.2.8)	8.PR.2. Model and solve problems using linear equations of the form <ul style="list-style-type: none"> • $ax = b$ • $\frac{x}{a} = b, a \neq 0$ • $ax + b = c$ • $\frac{x}{a} + b = c, a \neq 0$ • $a(x + b) = c$ concretely, pictorially, and symbolically, where $a, b,$ and c are integers. [C, CN, PS, V]

1996 Curriculum	2008 Curriculum
<p>Creates and solves problems, using first-degree equations. (PR-II.3.8)</p>	<p>8.PR.2. Model and solve problems using linear equations of the form</p> <ul style="list-style-type: none"> • $ax = b$ • $\frac{x}{a} = b, a \neq 0$ • $ax + b = c$ • $\frac{x}{a} + b = c, a \neq 0$ • $a(x + b) = c$ <p>concretely, pictorially, and symbolically, where $a, b,$ and c are integers.</p> <p>[C, CN, PS, V]</p>

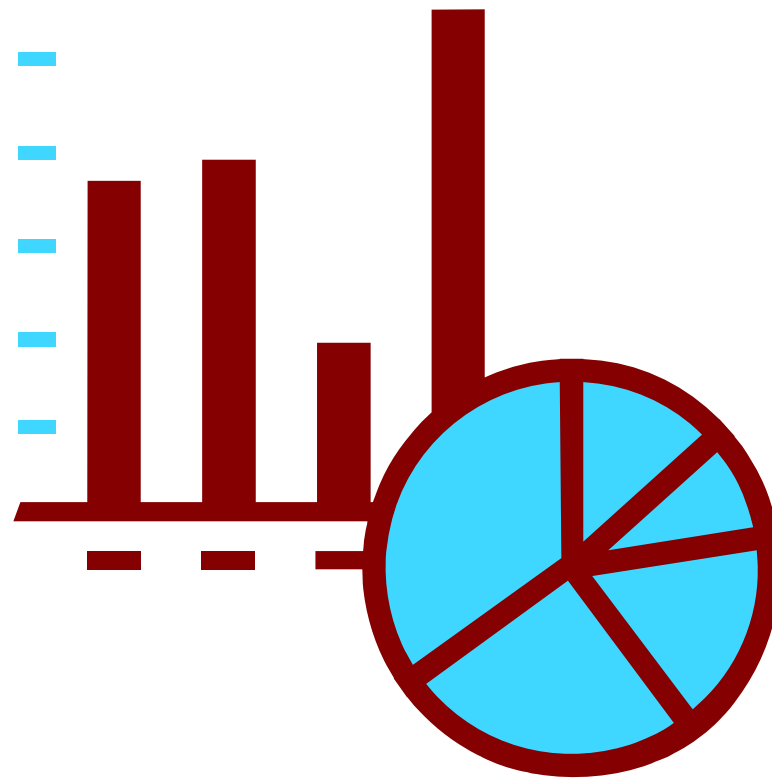
$$a^2 + b^2 = c^2$$

Shape and Space

1996 Curriculum	2008 Curriculum
<p>Estimates and determines the area of composite figures. Estimates, measures, and calculates the surface area of any right prism, cylinder, or composite 3-D object. (SS-II.1.8)</p>	<p>8.SS.3. Determine the surface area of</p> <ul style="list-style-type: none"> • right rectangular prisms • right triangular prisms • right cylinders <p>to solve problems. [C, CN, PS, R, V]</p>
<p>Uses concrete materials and diagrams to develop the Pythagorean relationship in triangles. Uses concrete materials and diagrams to determine the area of a circle. (SS-II.2.8)</p>	<p>8.SS.1. Develop and apply the Pythagorean theorem to solve problems. [CN, PS, R, T, V]</p>
<p>Establishes that for polygons of a given perimeter, the area of the polygon may vary and vice versa. Establishes the relationship between area and radius for circles. (SS-II.3.8)</p>	
<p>Uses the Pythagorean relationship to calculate the measure of the third side of a right triangle, given the other two sides, in 2-D applications Establishes the algebraic relationship $A=\pi r^2$ for circles (SS-II.4.8)</p>	<p>8.SS.1. Develop and apply the Pythagorean theorem to solve problems. [CN, PS, R, T, V]</p>
<p>Estimates, measures and calculates the volume of right prisms, cylinders, and composite 3-D objects. (SS-III.1.8)</p>	<p>8.SS.4. Develop and apply formulas for determining the volume of right prisms and right cylinders. [C, CN, PS, R, V]</p>
<p>Builds 3-D objects from a variety of representations (nets, skeletons). (SS-VII.1.8)</p>	<p>8.SS.2. Draw and construct nets for 3-D objects. [C, CN, PS, V]</p>
<p>Identifies, investigates, and classifies quadrilaterals, regular polygons, and circles according to their properties. (SS-VIII.1.8)</p>	
<p>Represents, analyzes, and describes regions and colouring problems. (SS-X.1.8)</p>	

1996 Curriculum	2008 Curriculum
Draws and interprets scale diagrams. Represents, analyzes, and describes enlargements and reductions. (SS-X.2.8)	
Describes, analyzes, and solves network problems (e.g., bus routes, a telephone exchange, and so on). (SS-X.3.8)	
	8.SS.5. Draw and interpret top, front, and side views of 3-D objects composed of right rectangular prisms. [C, CN, R, T, V]
	8.SS.6. Demonstrate an understanding of tessellation by <ul style="list-style-type: none"> • explaining the properties of shapes that make tessellating possible • creating tessellations • identifying tessellations in the environment [C, CN, PS, T, V]

Statistics and Probability



1996 Curriculum	2008 Curriculum
Formulates questions for an investigation, using existing data, and predicts results. (SP-I.1.8)	
Selects, defends, and uses appropriate methods for collecting data, such as <ul style="list-style-type: none"> ▪ designing and using surveys ▪ doing research, using electronic media (SP-II.1.8))	
Constructs sets of data, given measures of central tendency and variability (measures of distribution). Determines the effect on the mean, median, and /or mode when <ul style="list-style-type: none"> ▪ a constant is added or subtracted from each value ▪ each value is multiplied or divided by a constant ▪ a significantly different value is included. (SP-III.1.8)	
Displays data by hand or by computer in a variety of ways, including box and whisker plots. (SP-III.2.8))	
Describes the variability of data sets, using such techniques as range, and box and whisker plots. Determines and uses the most appropriate measure of central tendency in a given context. (SP-IV.1.8)	
Uses computer or other simulations to solve probability and data collection problems. (SP-V.2.8	
Determines the probability of two independent events where the combined sample space has 52 or fewer elements; and recognizes that if "n" events are equally likely, the probability of any one of them occurring is 1/n (SP-V.3.8)	8.SP.2. Solve problems involving the probability of independent events. [C, CN, PS, T]
Predicts population characteristics from sample data. (SP-V.4.8)	

1996 Curriculum	2008 Curriculum
	8.SP.1. Critique ways in which data are presented. [C, R, T, V]