

# Grade 6 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

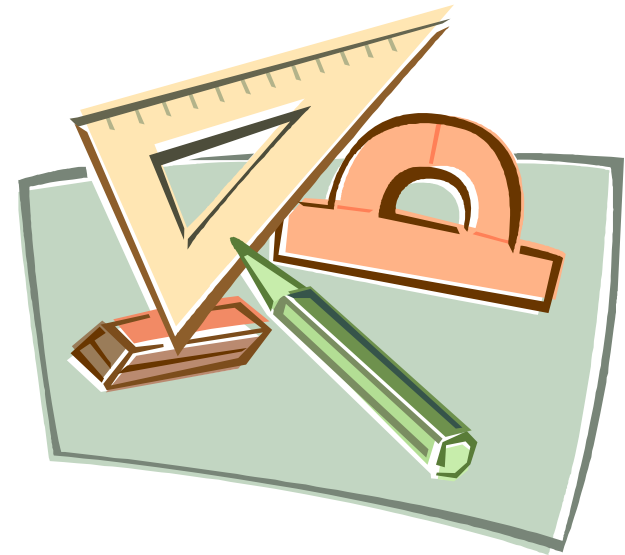
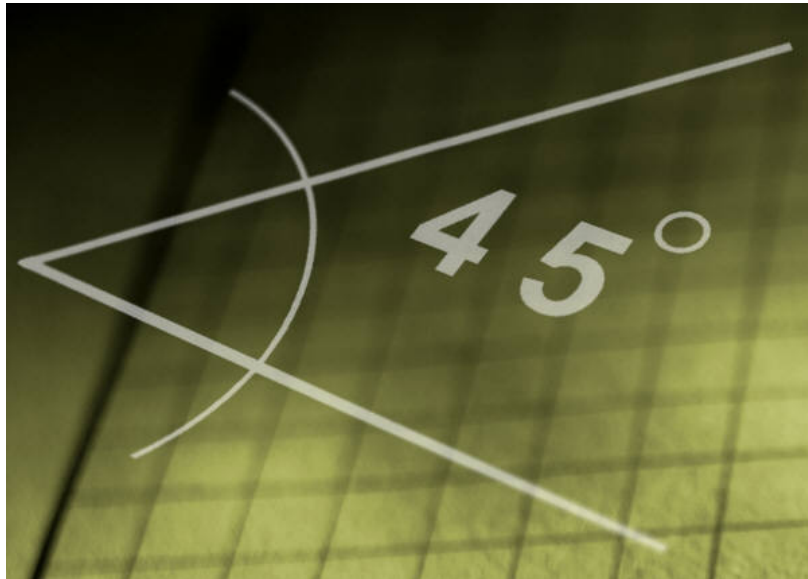
<b>1996 Curriculum</b>	<b>2008 Curriculum</b>
Uses estimation strategies for visualising or determining quantities up to a million (N-I.1.6)	6.N.1. Demonstrate an understanding of place value for numbers <ul style="list-style-type: none"> <li>• greater than one million</li> <li>• less than one thousandth</li> </ul> [C, CN, R, T]
Reads and writes numerals greater than a million (N-I.2.6)	6.N.1. Demonstrate an understanding of place value for numbers <ul style="list-style-type: none"> <li>• greater than one million</li> <li>• less than one thousandth</li> </ul> [C, CN, R, T]
Rounds numbers to the nearest 100 000 and unit, tenth, and hundredth (N-I.3.6)	
Distinguishes among, and finds, multiples, factors, composites, and primes, using numbers 1 to 100 Recognises, models, identifies, finds, and describes common multiples, common factors, lowest common multiple, greatest common factor, prime factorisation, using numbers 1-100 (N-I.4.6)	6.N 3. Demonstrate an understanding of factors and multiples by <ul style="list-style-type: none"> <li>• determining multiples and factors of numbers less than 100</li> <li>• identifying prime and composite numbers</li> <li>• solving problems involving multiples</li> </ul> [PS, R, V]
Demonstrates and explains the meaning of improper fractions and mixed numbers (positive), and decimals to thousandths, concretely, pictorially, and symbolically (N-II.1.6)	6.N 4. Relate improper fractions to mixed numbers. [CN, ME, R, V]
Explains the meaning of integers by extending counting numbers to less than zero Identifies practical applications of integers (N-III.1.6)	6.N 7. Demonstrate an understanding of integers, concretely, pictorially, and symbolically. [C, CN, R, V]
Demonstrates and explains the meaning of ratio and the meaning of percentage, concretely, pictorially, and symbolically (N-IV.1.6)	6.N 5. Demonstrate an understanding of ratio, concretely, pictorially, and symbolically. [C, CN, PS, R, V]  6.N 6. Demonstrate an understanding of percent (limited to whole numbers), concretely, pictorially, and symbolically. [C, CN, PS, R, V]

1996 Curriculum	2008 Curriculum
Estimates the solutions to calculations, and solves problems that involve addition and subtraction operations on decimals to thousandths (N-V.1.6)	
Estimates the solutions to calculations, and solves problems that involve multiplication and division operations on decimals to thousandths (for calculations involving 2-digit whole number multipliers and divisors, the use of appropriate technology is expected) (N-V.2.6)	6.N 8. Demonstrate an understanding of multiplication and division of decimals involving <ul style="list-style-type: none"> <li>• 1-digit whole-number multipliers</li> <li>• 1-digit natural number divisors</li> <li>• multipliers and divisors that are multiples of 10</li> </ul> [C, CN, ME, PS, R, V]
Uses a variety of methods to solve problems with multiple solutions (N-V.5.6)	
	6.N 2. Solve problems involving large numbers, using technology. [ME, PS, T]
	6.N 9. Explain and apply the order of operations, excluding exponents, (limited to whole numbers). [CN, ME, PS, T]



# Patterns and Relations

<b>1996 Curriculum</b>	<b>2008 Curriculum</b>
Represents a pattern visually to clarify relationships and to verify predictions. (PR-I.1.6)	
Summarizes relationships using everyday language, in spoken and written form. Creates expressions and rules to describe, complete, and extend patterns and relationships. Finds approximate number values from a given graph. (PR-I.3.6)	6.PR.1.Demonstrate an understanding of the relationship within tables of values to solve problems. [C, CN, PS, R]  6.PR.2.Represent and describe patterns and relationships using graphs and tables. [C, CN, ME, PS, R, V]
Demonstrates and explains the meaning and preservation of equality by balancing objects, or by using models and diagrams. (PR-II.1.6)	6.PR.4.Demonstrate and explain the meaning of preservation of equality, concretely, pictorially, and symbolically. [C, CN, PS, R, V]
Uses pre-algebra strategies to solve equations with one unknown and with whole number coefficients and solutions. (PR-II.2.6)	
	6.PR.3. Represent generalizations arising from number relationships using equations with letter variables. [C, CN, PS, R, V]



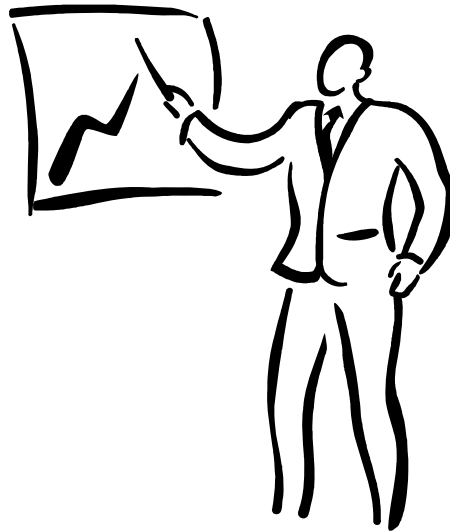
# Shape and Space

1996 Curriculum	2008 Curriculum
<p>Designs and constructs various rectangles of a given perimeter using natural numbers. Demonstrates concretely, pictorially and symbolically that many rectangles are possible for a given perimeter. (SS-I.2.6)</p>	
<p>Develops, verifies and uses rules or expressions for the perimeter of polygons. Uses conversions among commonly used SI units of length to solve problems. (SS-I.3.6)</p>	<p>6.SS.3. Develop and apply a formula for determining the</p> <ul style="list-style-type: none"> <li>• perimeter of polygons</li> <li>• area of rectangles</li> <li>• volume of right rectangular prisms</li> </ul> <p>[C, CN, PS, R, V]</p>
<p>Estimates and determines the surface area of a right rectangular prism without using a formula. (SS-II.1.6)</p>	
<p>Designs and constructs rectangles of a given area using natural numbers. Demonstrates concretely, pictorially and symbolically that many rectangles are possible for a given area. (SS-II.2.6)</p>	
<p>Demonstrates concretely, pictorially and symbolically that many rectangles are possible for a given area or a given perimeter. (SS-II.3.6)</p>	
<p>Develops, verifies and applies rules or expressions for the area of rectangles (<math>\text{mm}^2</math>, <math>\text{cm}^2</math>, ha, and <math>\text{km}^2</math>). (SS-II.4.6)</p>	<p>6.SS.3. Develop and apply a formula for determining the</p> <ul style="list-style-type: none"> <li>• perimeter of polygons</li> <li>• area of rectangles</li> <li>• volume of right rectangular prisms</li> </ul> <p>[C, CN, PS, R, V]</p>
<p>Determines the volume of an object by measuring the displacement of liquid by that object (<math>\text{cm}^3</math> or mL). (SS-III.1.6)</p>	
<p>Uses conversions among commonly used SI units of capacity and volume to solve problems. Discovers, generalizes and uses rules for determining the volume of right rectangular prisms. (SS-III.3.6)</p>	<p>6.SS.3. Develop and apply a formula for determining the</p> <ul style="list-style-type: none"> <li>• perimeter of polygons</li> <li>• area of rectangles</li> <li>• volume of right rectangular prisms</li> </ul> <p>[C, CN, PS, R, V]</p>

1996 Curriculum	2008 Curriculum
<p>Uses conversions among commonly used SI units of mass (weight) to solve problems. (SS-IV.3.6)</p>	
<p>Estimates and measures angles using a circular protractor. (SS-VI.1.6)</p>	<p>6.SS.1. Demonstrate an understanding of angles by</p> <ul style="list-style-type: none"> <li>• identifying examples of angles in the environment</li> <li>• classifying angles according to their measure</li> <li>• estimating the measure of angles using <math>45^\circ</math>, <math>90^\circ</math>, and <math>180^\circ</math> as reference angles</li> <li>• determining angle measures in degrees</li> <li>• drawing and labelling angles when the measure is specified</li> </ul> <p>[C, CN, ME, V]</p>
<p>Recognises angles as being more than 90 degrees, equal to 90 degrees, less than 90 degrees, equal to 180 degrees, or greater than 180 degrees. Sketches and draws an angle when the degree measure is specified. (SS-VI.2.6)</p>	<p>6.SS.1. Demonstrate an understanding of angles by</p> <ul style="list-style-type: none"> <li>• identifying examples of angles in the environment</li> <li>• classifying angles according to their measure</li> <li>• estimating the measure of angles using <math>45^\circ</math>, <math>90^\circ</math>, and <math>180^\circ</math> as reference angles</li> <li>• determining angle measures in degrees</li> <li>• drawing and labelling angles when the measure is specified</li> </ul> <p>[C, CN, ME, V]</p>
<p>Identifies and compares examples of angles in the environment. Classifies given angles as acute, right, obtuse, straight, or reflex. (SS-VI.3.6)</p>	<p>6.SS.1. Demonstrate an understanding of angles by</p> <ul style="list-style-type: none"> <li>• identifying examples of angles in the environment</li> <li>• classifying angles according to their measure</li> <li>• estimating the measure of angles using <math>45^\circ</math>, <math>90^\circ</math>, and <math>180^\circ</math> as reference angles</li> <li>• determining angle measures in degrees</li> <li>• drawing and labelling angles when the measure is specified</li> </ul> <p>[C, CN, ME, V]</p>
<p>Sketches 3-D solids and skeletons, with and without grids. Reproduces a given geometric drawing on grid paper. (SS-VII.2.6)</p>	
<p>Sorts quadrilaterals and regular polygons according to the number of lines of symmetry. (SS-VIII.2.6)</p>	

<b>1996 Curriculum</b>	<b>2008 Curriculum</b>
Classifies triangles according to the measures of their angles. Recognises and appreciates optical illusions. (SS-IX.2.6)	6.SS.4. Construct and compare triangles, including <ul style="list-style-type: none"> <li>• scalene</li> <li>• isosceles</li> <li>• equilateral</li> <li>• right</li> <li>• obtuse</li> <li>• acute</li> </ul> in different orientations. [C, PS, R, V]
Draws designs using ordered pairs in the first quadrant of the co-ordinate grid. (SS-X.1.6)	6.SS. 8. Identify and plot points in the first quadrant of a Cartesian plane using whole-number ordered pairs. [C, CN, V]
Creates, analyses and describes designs using translations (slides) and reflections (flips). (SS-X.2.6)	6.SS.6. Perform a combination of transformations (translations, rotations, or reflections) on a single 2-D shape, and draw and describe the image. [C, CN, PS, T, V]  6.SS.7. Perform a combination of successive transformations of 2-D shapes to create a design, and identify and describe the transformations. [C, CN, T, V]  6.SS.9. Perform and describe single transformations of a 2-D shape in the first quadrant of a Cartesian plane (limited to whole-number vertices). [C, CN, PS, T, V]
	6.SS.2. Demonstrate that the sum of interior angles is <ul style="list-style-type: none"> <li>• <math>180^\circ</math> in a triangle</li> <li>• <math>360^\circ</math> in a quadrilateral</li> </ul> [C, R]
	6.SS.5. Describe and compare the sides and angles of regular and irregular polygons. [C, PS, R, V]

# Statistics and Probability



<b>1996 Curriculum</b>	<b>2008 Curriculum</b>
Formulates questions for possible investigations, given a context, and predicts results. (SP-I.1.6)	
Identifies appropriate data sources: first-hand, second-hand, and combination. Selects and defends the choice of an appropriate sample or population from which data is collected to answer a question. (SP-I.2.6)	
Selects and uses appropriate methods for collecting data, such as <ul style="list-style-type: none"> <li>▪ designing and using structured questionnaires</li> <li>▪ conducting experiments</li> <li>▪ making observations</li> <li>▪ using electronic networks</li> </ul> (SP-II.1.6)	6.SP.2. Select, justify, and use appropriate methods of collecting data, including <ul style="list-style-type: none"> <li>• questionnaires</li> <li>• experiments</li> <li>• databases</li> <li>• electronic media</li> </ul> [C, PS, T]
Discusses how collected data are affected by the nature of the sample, the method of collection, the sample size, and biases. (SP-II.2.6)	
Analyzes sets of data to make comparisons. (SP-III.1.6)	
Displays data by hand or by computer in a variety of ways, including <ul style="list-style-type: none"> <li>▪ histograms</li> <li>▪ double bar graphs</li> <li>▪ stem and leaf plots</li> </ul> (SP-III.2.6)	
Reads and interprets graphs which are provided. Describes the general distribution of data, using <ul style="list-style-type: none"> <li>▪ smallest and largest value</li> <li>▪ frequency</li> <li>▪ value in the middle (median)</li> <li>▪ patterns</li> </ul> (SP-IV.1.6)	

<b>1996 Curriculum</b>	<b>2008 Curriculum</b>
<p>Makes the connection between the number of faces for various number cubes, and the probability of a single event; and demonstrates that different outcomes may occur when repeating the same experiment. (SP-V.2.6)</p>	
<p>Distinguishes between theoretical and experimental results. Calculates theoretical probability using numbers between 0 and 1. Compares theoretical results with experimental results. (SP-V.3.6)</p>	<p>6.SP.4. Demonstrate an understanding of probability by</p> <ul style="list-style-type: none"> <li>• identifying all possible outcomes of a probability experiment</li> <li>• differentiating between experimental and theoretical probability</li> <li>• determining the theoretical probability of outcomes in a probability experiment</li> <li>• determining the experimental probability of outcomes in a probability experiment</li> <li>• comparing experimental results with the theoretical probability for an experiment</li> </ul> <p>[C, ME, PS, T]</p>
	<p>6.SP.1. Create, label, and interpret line graphs to draw conclusions. [C, CN, PS, R, V]</p>
	<p>6.SP.3. Graph collected data and analyze the graph to solve problems. [C, CN, PS]</p>