

**Curriculum Maps  
Mathematics**

<b>Grade 5</b>	<b>Grade 6</b>	<b>Grade 7</b>	<b>Grade 8</b>
<p style="text-align: center;"><u>PSSA ASSESSMENT ANCHORS</u></p> <p><u>M5.A Numbers and Operations</u>  <u>M5.A.1 Demonstrate an understanding of numbers, ways of representing numbers, relationships among numbers and number systems.</u>  M5.A.1.1. Express numbers in equivalent forms.  <u>Eligible Content</u>  M5.A.1.1.1 Use expanded notation to represent whole numbers or decimals (whole numbers less than 10,00,000 and decimals to hundredths).  M5.A.1.2 Demonstrate understanding of place value of whole numbers and decimals.  <u>Eligible Content</u>  M5.A.1.2.1 Read and write decimal numbers through the thousandths.  M5.A.1.2.2 Identify the number with its place value (from millions to thousandths).  M5.A.1.3 Compare quantities or magnitudes of numbers.  <u>Eligible Content</u>  M5.A.1.3.1 Compare whole numbers through 9 digits using the words: more, less, equal, least, most, greater than, less than, or the symbols &lt;, &gt;, =.  M5.A.1.3.2 Compare and/or order decimals through the thousandths.</p>	<p style="text-align: center;"><u>PSSA ASSESSMENT ANCHORS</u></p> <p><u>M6.A Numbers and Operations</u>  <u>M6.A.1 Demonstrate an understanding of numbers, ways of representing numbers, relationships among numbers and number systems.</u>  M6.A.1.1. Express numbers in equivalent forms.  <u>Eligible Content</u></p> <p>M6.A.1.2 Compare quantities and/or magnitudes of numbers.  <u>Eligible Content</u></p> <p>M6.A.1.3 Use or develop models to represent percents.  <u>Eligible Content</u></p>	<p style="text-align: center;"><u>PSSA ASSESSMENT ANCHORS</u></p> <p><u>M7.A Numbers and Operations</u>  <u>M7.A.1 Demonstrate an understanding of numbers, ways of representing numbers, relationships among numbers and number systems.</u>  M7.A.1.1 Express numbers in equivalent forms.  <u>Eligible Content</u></p> <p>M7.A.1.2 Compare quantities and/or magnitudes of numbers.  <u>Eligible Content</u></p> <p>M7.A.1.3 Apply number theory concepts.  <u>Eligible Content</u></p>	<p style="text-align: center;"><u>PSSA ASSESSMENT ANCHORS</u></p> <p><u>M8.A Numbers and Operations</u>  <u>M8.A.1 Demonstrate an understanding of numbers, ways of representing numbers, relationships among numbers and number systems.</u>  M8.A.1.1. Represent numbers in equivalent forms.  <u>Eligible Content</u>  M8.A.1.1.1 Convert fractions, decimals, and/or percents to equivalent forms (e.g., <math>1/3 = .33</math>; <math>1/3\% = .333</math>).  M8.A.1.1.2 Use scientific notation or exponential forms to express numbers.  M8.A.1.1.3 Find the square or cube of a whole number and/or the square root of a perfect square (without a calculator).  M8.A.1.2 Compare quantities or magnitudes of real numbers.  <u>Eligible Content</u>  M8.A.1.2.1 Locate or plot decimals, fractions, mixed numbers and/or integers on a number line (a mix of these number forms may be on the same number line).</p>



Grade 5	Grade 6	Grade 7	Grade 8
<p><i>M5.A.2.1 Solve problems involving decimals, fractions, and/or whole numbers (straight computation or word problems).</i> <u>Eligible Content</u></p> <p><i>M5.A.2.1.1 Solve problems involving addition, subtraction, multiplication and division of whole numbers (multipliers up to 2 digits – divisors of one digit) and decimals (answers to hundredths – whole number divisors).</i></p> <p><i>M5.A.2.1.2 Solve problems involving addition and subtraction of fractions (to 16ths – like and unlike denominators – for unlike denominators, the LCD must be one of the given denominators).</i></p> <p><i>M5.A.2.1.3 Choose the correct operation(s) to solve a problem (no more than 2 operations).</i></p> <p><i>M5.A.3 Compute accurately and fluently and make reasonable estimates.</i></p> <p><i>M5.A.3.1 Apply estimation strategies to a variety of problems.</i> <u>Eligible Content</u></p> <p><i>M5.A.3.1.1 Round whole numbers through millions and decimals through hundredths.</i></p>	<p><i>M6.A.2.1 Select and/or use operations to simplify or solve problems.</i> <u>Eligible Content</u></p> <p><i>M6.A.2.2 Use ratios to solve problems involving rates.</i> <u>Eligible Content</u></p> <p><i>M6.A.3 Compute accurately and fluently and make reasonable estimates.</i></p> <p><i>M6.A.3.1 Apply estimation strategies to a variety of problems.</i> <u>Eligible Content</u></p>	<p><i>M7.A.2.2 Solve problems using ratios, rates, proportions and/or percents.</i> <u>Eligible Content</u></p> <p><i>M7.A.3 Compute accurately and fluently and make reasonable estimates.</i></p> <p><i>M7.A.3.1 Compute accurately with and without a calculator.</i> <u>Eligible Content</u></p> <p><i>M7.A.3.2 Apply estimation strategies to a variety of problems.</i> <u>Eligible Content</u></p>	<p><u>Eligible Content</u></p> <p><i>M8.A.2.2.1 Select or use ratios, proportions and percents to solve problems (e.g., tax, discounts, etc. – straight computation or word problems)</i></p> <p><i>M8.A.2.2.2 Represent or solve rate problems (e.g., unit rates, simple interest, distance, etc.). Students may be asked to solve for any term (formulas provided on the reference sheet for distance and interest).</i></p> <p><i>M8.A.3 Compute accurately and fluently and make reasonable estimates.</i></p> <p><i>M8.A.3.1 Determine the appropriateness of overestimating, underestimating or calculating an exact answer in problem solving situations.</i> <u>Eligible Content</u></p> <p><i>M8.A.3.1.1 Identify, apply and/or explain when it is appropriate to round up or round down.</i></p> <p><i>M8.A.3.1.2 Identify, apply and/or explain when an exact answer is needed or when estimation is appropriate.</i></p> <p><i>M8.A.3.2 Use estimation strategies in problem solving situations.</i> <u>Eligible Content</u></p> <p><i>M8.A.3.2.1 Estimate answers to problems involving simple percents (1%, 10%, 15%, 20%, 25%, 50%, or 75%).</i></p>

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<p><i>M5.A.3.1.2 Use estimation to solve problems involving whole numbers and/or decimals (up to 2 digit multipliers, single-digit divisors or multiples of 10; whole numbers to thousands and decimals to hundredths).</i></p> <p><i>M5.A.3.2 Compute accurately, without the use of a calculator, (straight computation or 1 operation word problems).</i></p> <p><u>Eligible Content</u></p> <p><i>M5.A.3.2.1 Use addition, subtraction, multiplication and division to compute accurately without a calculator (multipliers up to 2 digits, single-digit whole number divisors or multiples of 10 – whole numbers to thousands and decimals to hundredths).</i></p> <p><u>M5.B Measurement</u></p> <p><i>M5.B.1 Demonstrate an understanding of measurable attributes of objects and figures, and the units, systems and processes of measurement.</i></p> <p><i>M5.B.1.1 Select appropriate units (customary or metric) to measure specific attributes of objects.</i></p> <p><u>Eligible Content</u></p> <p><i>M5.B.1.1.1 Select the appropriate unit for measuring weight (mass), capacity, length, perimeter and area.</i></p>	<p><i>M6.A.3.2 Solve problems with and without the use of a calculator.</i></p> <p><u>Eligible Content</u></p> <p><u>M6.B Measurement</u></p> <p><i>M6.B.1 Demonstrate an understanding of measurable attributes of objects and figures, and the units, systems and processes of measurement.</i></p> <p><i>M6.B.1.1 Compare and/or determine elapsed time.</i></p> <p><u>Eligible Content</u></p>	<p><u>M7.B Measurement</u></p> <p><i>M7.B.1 Demonstrate an understanding of measurable attributes of objects and figures, and the units, systems and processes of measurement.</i></p> <p><i>M7.B.1.1 Add or subtract measurements.</i></p> <p><u>Eligible Content</u></p>	<p><i>M8.3.3 Compute and/or explain operations with integers, fractions and/or decimals.</i></p> <p><u>Eligible Content</u></p> <p><i>M8A.3.3.1 Add, subtract, multiply and/or divide integers, fractions and/or decimals with and without a calculator (straight computation or word problems).</i></p> <p><u>M8.B Measurement</u></p> <p><i>M8.B.1 Demonstrate an understanding of measurable attributes of objects and figures, and the units, systems and processes of measurement.</i></p> <p><i>M8.B.1 Convert measurements.</i></p> <p><u>Eligible Content</u></p> <p><i>M8.B.1.1.1 Convert among all metric measurements (milli, centi, deci, deka, hector, kilo, using meter, liter and gram). Table of equivalency provided on reference sheet.</i></p> <p><i>M8.B.1.1.2 Convert customary measurements to 2 units above or below the given unit (e.g., inches to yards, pints to gallons). Table of equivalency provided on the reference sheet.</i></p> <p><i>M8.B.1.1.3 Convert time to 2 units above or below the given unit (e.g., seconds to hours).</i></p> <p><i>M8.B.1.1.4 Convert from Fahrenheit to Celcius or Celcius to Fahrenheit. Formulas provided on the reference sheet.</i></p>



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<p><u>Eligible Content</u>  M5.B.2.1.1 Use a ruler to measure to the nearest 1/8 inch or millimeter.  M5.B.2.2 Solve problems involving length, time, weight, mass, capacity, temperature, perimeter, area and/or money.</p> <p><u>Eligible Content</u>  M5.B.2.2.1 Find the perimeter or area of a square or rectangle (same system of measurement – whole numbers only).  M5.B.2.2.2 Solve problems involving weight, time, temperature, length, capacity, mass (limited to 3 digits) or money.</p> <p><u>M5.C Geometry</u>  M5.C.1 Analyze characteristics and properties of two and three dimensional geometric shapes and demonstrate understanding of geometric relationships.  M5.C.1.1 Define and/or use basic properties of quadrilaterals (parallelograms, squares, rectangles, trapezoids, rhombi), triangles, circles, pyramids, cubes, and/or prisms.</p> <p><u>Eligible Content</u>  M5.C.1.1.1 Identify/classify/compare cubes, rectangular prisms and pyramids using faces, vertices and edges.</p>	<p><u>Eligible Content</u></p> <p>M6.B.2.2 Solve problems involving length, perimeter, area and/or volume of geometric figures.</p> <p><u>Eligible Content</u></p> <p>M6.B.2.3 Identify, label, and/or list properties of angles.</p> <p><u>M6.C Geometry</u>  M6.C.1 Analyze characteristics and properties of two and three dimensional geometric shapes and demonstrate understanding of geometric relationships.  M6.C.1.1 Define and/or use basic properties of triangles, quadrilaterals, pentagons, hexagons, heptagons, octagons, nonagons, decagons, and circles.</p> <p><u>Eligible Content</u></p>	<p><u>Eligible Content</u></p> <p>M7.B.2.2 Measure angles and/or use properties of angles.</p> <p><u>Eligible Content</u></p> <p><u>M7.C Geometry</u>  M7.C.1 Analyze characteristics and properties of two and three dimensional geometric shapes and demonstrate understanding of geometric relationships.  M7.C.1.1 Define and/or apply basic properties of two and three dimensional geometric shapes.</p> <p><u>Eligible Content</u></p>	<p>M8.B.2.3 Use, describe and/or develop procedures to determine measures of perimeter, area, surface area, circumference, and/or volume.</p> <p><u>Eligible Content</u>  M8.B.2.3.1 Develop and/or use formulas and procedures to determine circumference, perimeter and area of simple figures (triangles, parallelograms, trapezoids, and circles) and complex figures (use consistent units).  M8.B.2.3.2 Determine surface area and/or volume of cubes and rectangular prisms. Formula provided on the reference sheet.  M8.B.2.3.3 Determine the appropriate type of measurement (circumference, perimeter, area, surface area, volume) for a given situation (e.g., which measurement is needed to determine the amount of carpeting for a room).  M8.B.2.4 Construct, interpret and/or use scale drawings to solve real world problems.</p> <p><u>Eligible Content</u>  M8.B.2.4.1 Interpret and/or apply scales shown on maps, blueprints, models, etc.  M8.B.2.4.2 Determine and/or apply an appropriate scale for reduction or enlargement.</p>

Grade 5	Grade 6	Grade 7	Grade 8
<p><i>M5.C.1.1.2 Identify/classify/compare triangles and quadrilaterals according to sides (length, parallel or perpendicular) and angles.</i></p> <p><i>M5.C.1.1.3 Identify and/or compare parts of right triangles, including right angles, acute angles, hypotenuse and legs.</i></p> <p><i>M5.C.1.1.4 Identify and/or determine the measure of the diameter and radii of a circle (when one or the other is given).</i></p> <p><i>M5.C.1.2 Represent and/or use properties of, lines, line segments, rays, points and planes.</i></p> <p><u>Eligible Content</u></p> <p><i>M5.C.1.2.1 Identify, draw and/or label points, lines, line segments, rays and planes.</i></p> <p><i>M5.C.2 Identify and/or apply concepts of transformations or symmetry.</i></p> <p><i>M5.C.2.1 Analyze transformations and/or use symmetry to analyze mathematical situations.</i></p> <p><u>Eligible Content</u></p> <p><i>M5.C.2.1.1 Draw or identify a translation (slide), reflection (flip) or rotation (turn) of a 2 dimensional shape.</i></p> <p><i>M5.C.2.1.2 Draw or identify a maximum of 2 lines of symmetry in a two-dimensional figure.</i></p> <p><i>M5.C.3 Locate points or describe relationships using the coordinate plane.</i></p>	<p><i>M6.C.1.2 Represent and/or use concepts and relationships of lines and line segments.</i></p> <p><u>Eligible Content</u></p> <p><i>M6.C.2 Identify and/or apply concepts of transformations or symmetry. (Not assessed at grade 6).</i></p> <p><i>M6.C.3 Locate points or describe relationships using the coordinate plane.</i></p>	<p><i>M7.C.2 Identify and/or apply concepts of transformations or symmetry. (Not assessed at grade 6.)</i></p> <p><i>M6.C.3 Locate points or describe relationships using the coordinate plane.</i></p>	<p><i>M8.B.2.5 Describe how a change in the linear dimension of a figure affects its perimeter, area or volume.</i></p> <p><u>Eligible Content</u></p> <p><i>M8.B.2.5.1 Determine the amount of change in the perimeter, area or volume of a figure when its length(s) is/are increased or decreased (triangles, parallelograms, trapezoids, circles, cubes, rectangular prisms)</i></p> <p><i>M8.C. Geometry</i></p> <p><i>M8.C.1 Analyze characteristics and properties of two and three dimensional geometric shapes and demonstrate understanding of geometric relationships.</i></p> <p><i>M8.C.1.1 Identify, name, and/or describe properties of quadrilaterals, triangles, circles, pyramids, cubes, prisms, spheres, cones and/or cylinders.</i></p> <p><u>Eligible Content</u></p> <p><i>M8.C.1.1.1 Identify and/or describe properties of all types of quadrilaterals (parallelograms, squares, rectangles, trapezoids, rhombi).</i></p> <p><i>M8.C.1.1.2 Identify and/or describe properties of all types of triangles (scalene, equilateral, isosceles, right, acute, obtuse).</i></p> <p><i>M8.C.1.1.3 Identify and/or describe properties of cubes, pyramids, spheres, prisms, cones and cylinders.</i></p>

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<p><i>M5.C.3.1 Identify, plot or match points given an ordered pair.</i> <u>Eligible Content</u></p> <p><i>M5.C.3.1.1 Locate, plot and/or identify points in quadrant I and on the x and y axes of a grid (intervals of 1 – up to 20 by 20 grid).</i> <u>M5.D Algebraic Concepts</u></p> <p><i>M5.D.1 Demonstrate an understanding of patterns, relations and functions.</i></p> <p><i>M5.D.1.1 Create or extend patterns.</i> <u>Eligible Content</u></p> <p><i>M5.D.1.1.1 Extend or find a missing element in a numerical or simple geometric pattern (pattern must show 3 repetitions).</i></p> <p><i>M5.D.1.1.2 Create a numerical or geometric pattern showing 3 repetitions of that pattern.</i></p> <p><i>M5.D.1.2 Analyze patterns.</i> <u>Eligible Content</u></p> <p><i>M5.D.1.2.1 Form a rule based on a given pattern, or illustrate a pattern based on a given rule (whole numbers up to 100- patterns must show 3 repetitions).</i></p> <p><i>M5.D.2 Represent and/or analyze mathematical situations using numbers, symbols, words, tables, and/or graphs.</i></p> <p><i>M5.D.2.1 Select and/or use appropriate strategies, including concrete materials, to solve number sentences.</i></p>	<p><i>M6.C.3.1 Identify points or match points to an ordered pair.</i> <u>Eligible Content</u></p> <p><u>M6.D Algebraic Concepts</u></p> <p><i>M6.D.1 Demonstrate an understanding of patterns, relations and functions.</i></p> <p><i>M6.D.1.1 Create or extend patterns.</i> <u>Eligible Content</u></p> <p><i>M5.D.1.2 Analyze patterns.</i> <u>Eligible Content</u></p> <p><i>M6.D.2 Represent and/or analyze mathematical situations using numbers, symbols, words, tables, and/or graphs.</i></p> <p><i>M6.D.2.1 Select and/or use appropriate strategies to solve number sentences.</i></p>	<p><i>M6.C.3.1 Locate, plot and/or describe points on a coordinate plane.</i> <u>Eligible Content</u></p> <p><u>M7.D Algebraic Concepts</u></p> <p><i>M7.D.1 Demonstrate an understanding of patterns, relations and functions.</i></p> <p><i>M7.D.1.1 Recognize, reproduce, extend and/or describe patterns.</i> <u>Eligible Content</u></p> <p><i>M7.D.2 Represent and/or analyze mathematical situations using numbers, symbols, words, tables, and/or graphs.</i></p> <p><i>M7.D.2.1 Select and/or use appropriate strategies to solve number sentences.</i></p>	<p><i>M8.C.1.2 Compute measures of sides of right triangles using the Pythagorean Theorem.</i></p> <p><i>M8.C.1.2.1 Use the Pythagorean Theorem to find the measure of a missing side of a right triangle (formula provided on the reference sheet – whole numbers only).</i></p> <p><i>M8.C.2.1 Describe, analyze and/or draw translations, rotations (90, 180 and 360 degrees) and reflections.</i> <u>Eligible Content</u></p> <p><i>M8.C.2.1.1 Draw or identify a rotation (turn) about the origin of a 2 dimensional shape on a grid.</i></p> <p><i>M8.C.2.1.2 Draw or identify a reflection (flip) over the axis of a 2 dimensional shape on a grid.</i></p> <p><i>M8.C.2.1.3 Draw or identify a translation (slide) of a 2 dimensional shape on a grid.</i></p> <p><i>M8.C.3 Locate points or describe relationships using the coordinate plane.</i></p> <p><i>M8.C.3.1 Plot and/or identify ordered pairs on a coordinate plane.</i> <u>Eligible Content</u></p> <p><i>M8.C.3.1.1 Plot, locate or identify ordered pairs on a coordinate plane (the point may be a vertex of a polygon).</i></p> <p><u>M8.D Algebraic Concepts</u></p> <p><i>M8.D.1 Demonstrate an understanding of patterns, relations and functions.</i></p>

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<p><u>Eligible Content</u>  M5.D.2.1.1 Solve for a missing number (blank, question mark, variable) in an equation involving a single operation.  M5.D.2.1.2 Choose the operation needed to solve for the variable in a one-step equation.  M5.D.2.1.3 Match a realistic situation to an equation, expression, inequality (&lt;, &gt;, =), table or graph (variable must be isolated, e.g., <math>17 + 39 = n</math>).  M5.D.3 Analyze change in various contexts.  M5.D.3.1 Describe the relationship between rate of change and another variable (e.g., time, temperature).  <u>Eligible Content</u>  M5.D.3.1.1 Solve problems involving a constant rate of change (e.g., word problems, graphs or data tables).  <u>M6.E Data Analysis and Probability</u>  M5.E.1 Formulate or answer questions that can be addressed with data and/or organize, display, interpret or analyze data.  M5.E.1.1 Organize, display and/or interpret data using pictographs, tallies, tables, charts, line, bar and circle graphs and Venn diagrams.</p>	<p><u>Eligible Content</u>  M6.D.2.2 Create and/or interpret expressions or equations that model problem situations.  <u>Eligible Content</u>  M6.D.3 Analyze change in various contexts.  M6.D.3.1 Interpret relationships between variables in a graph.  <u>Eligible Content</u>  <u>M6.E Data Analysis and Probability</u>  M6.E.1 Formulate or answer questions that can be addressed with data and/or organize, display, interpret or analyze data.  M6.E.1.1 Interpret data shown in frequency tables, histograms, circle graphs, bar or double bar graphs, line or double line graphs or line plots.</p>	<p><u>Eligible Content</u>  M7.D.2.2 Create and/or interpret expressions or equations that model problem situations.  <u>Eligible Content</u>  <u>M7.E Data Analysis and Probability</u>  M7.E.1 Formulate or answer questions that can be addressed with data and/or organize, display, interpret or analyze data.  M7.E.1.1 Interpret data shown in complex data displays.  <u>Eligible Content</u></p>	<p>M8.D.1 Demonstrate an understanding of patterns, relations and functions.  M8D.1.1 Analyze, extend or develop descriptions of patterns or functions.  <u>Eligible Content</u>  M8.D.1.1.1 Continue a numeric or algebraic pattern that could be extended infinitely (pattern must show 3 repetitions – may include up to 2 operations, squares and square roots).  M8.D.1.1.2 Find missing elements in numeric, geometric or graphic patterns and/or functions (may be given a table or rule – pattern must show 3 repetitions).  M8.D.1.1.3 Write/state the rule of a function (given elements in an input-output table, chart or list).  M8.D.2 Select and/or use a strategy to simplify an expression, solve an equation or inequality and/or check the solution for accuracy.  <u>Eligible Content</u>  M8.D.2.1.1 Solve one or two step equations and inequalities (should not include absolute values – one variable only).  M8.D.2.1.2 Use substitution to check the accuracy of a given value for an equation or inequality (simple inequalities with one variable)</p>

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<p><u>Eligible Content</u>  M5.E.1.1.1 Display and/or interpret data shown in tallies, tables, charts, pictographs, bar graphs, line graphs and circle graphs using a title, appropriate scale, and labels. Circle graphs for open-ended items must show a center point and tic marks (circle graph data must be based on 100 – percents are given). Venn diagram – <b>interpret</b> data with a maximum of 3 overlapping categories. Venn diagram – <b>display</b> data with a maximum of 10 elements and 2 overlapping categories (diagram of circles provided for open-ended items). A grid will be provided to display data on bar graphs or line graphs. M5.E.2. Select and/or use appropriate statistical methods to analyze data. M5.E.2.1 Describe data sets using mean, median, mode and/or range. <u>Eligible Content</u>  M5.E.2.1.1 Determine the mean/average (answer is a whole number), median (answer is a whole number or average of 2 numbers) and range of data (up to 10 numbers). M5.E.2.1.2 Identify the mode in a set of data (up to 10 numbers).</p>	<p><u>Eligible Content</u></p> <p>M6.E.2. Select and/or use appropriate statistical methods to analyze data.  M6.E.2.1 Describe data sets using mean, median, mode and/or range. <u>Eligible Content</u></p>	<p>M7.E.2. Select and/or use appropriate statistical methods to analyze data.  M7.E.2.1 Describe data described in box and whisker plots. <u>Eligible Content</u></p> <p>M7.E.2.2 Describe, compare and/or contrast data using measures of central tendency. <u>Eligible Content</u></p>	<p>M8.D.2.1.3 Determine the value of an algebraic expression by simplifying and/or substituting a value for the variable.  M8.D.2.2 Create and/or interpret expressions, equations or inequalities that model problem situations. <u>Eligible Content</u>  M8.D.2.1.1 Match a written situation to its numeric and/or algebraic expression, equation or inequality (up to 2 variables in equations or expressions – one variable with inequalities).  M8.D.2.1.2 Write and solve an equation for a given problem situation (one variable only).  M8.D.3 Analyze change in various contexts. (Not assessed in grade 8).  M8.D.4 Describe or use models to represent quantitative relationships. M8.D.4.1 Represent relationships with tables or graphs on the coordinate plane. <u>Eligible Content</u>  M8.D.4.1.1 Graph a linear function based on an x/y table (integers only).  M8.D.4.1.2 Match the graph of a linear function to its x/y table (integers only).  M8.D.4.1.3 Match an inequality to its graph on a number line (integers only).</p>

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<p><i>M5.E.3 Understand and/or apply basic concepts of probability or outcomes.</i></p> <p><i>M5.E.3.1 Predict or determine all possible combinations, outcomes and/or calculate the probability of a simple event.</i></p>			<p><i>M8.D.4.1.4 Match the linear equation (<math>y = mx + b</math>) form to the x/y table (integers only in the table).</i></p> <p><i>M8.E Data Analysis and Probability</i></p> <p><i>M8.E.1 Formulate or answer questions that can be addressed with data and/or organize, display, interpret or analyze data.</i></p> <p><i>M8.E.1.1 Choose, display or interpret data (tables, charts, graphs, etc.)</i></p> <p><u><i>Eligible Content</i></u></p> <p><i>M8.E.1.1.1 Choose the correct representation for a set of data.</i></p> <p><i>M8.E.1.1.2 Display and/or interpret data shown in bar/double bar graphs, line/double line graphs, circle graphs and histograms.</i></p> <p><i>Use a title, appropriate scale, labels and keys where appropriate.</i></p> <p><i>Circle graphs for open ended items must show a center point and tic marks (protractor not necessary to display data in a circle graph).</i></p> <p><i>M8.E.1.1.3 Interpret data shown in stem and leaf or box and whisker plots.</i></p> <p><i>M8.E. Select and/or use appropriate statistical methods to analyze data.</i></p> <p><i>M8.E.2.1 Describe, compare and/or contrast different plots of data using measures of central tendency.</i></p>

Grade 5	Grade 6	Grade 7	Grade 8
		<p><i>M7.E.3 Understand and/or apply basic concepts of probability or outcomes.</i></p> <p><i>M7.E.3.1 Determine theoretical or experimental probability.</i></p> <p><u>Eligible Content</u></p> <p><i>M7.E.4 Develop and/or evaluate inferences and predictions or draw conclusions based on data or data displays.</i></p> <p><i>M7.E.4.1 Draw conclusions or develop predictions based on data displays.</i></p> <p><u>Eligible Content</u></p>	<p><u>Eligible Content</u></p> <p><i>M8.E.2.1.1 Determine the mean (average), median, mode, range, and/or quartiles of a set of data.</i></p> <p><i>M8.E.2.1.2 Choose which measure of central tendency is appropriate for a given situation.</i></p> <p><i>M8.E.3 Understand and/or apply basic concepts of probability or outcomes.</i></p> <p><i>M8.E.3.1 Calculate the probability of an event.</i></p> <p><u>Eligible Content</u></p> <p><i>M8.E.3.1.1 Compute probabilities for mutually exclusive and independent events (written as a fraction in simplest form).</i></p> <p><i>M8.E.3.2 Determine the number of combinations and/or permutations for an event.</i></p> <p><u>Eligible Content</u></p> <p><i>M8.E.3.2.1 Calculate/show the number of permutations and/or combinations for an event using up to 4 choices (e.g., organized list, etc.)</i></p> <p><i>M8.E.4 Develop and/or evaluate inferences and predictions or draw conclusions based on data or data displays.</i></p> <p><i>M8.E.4.1 Draw conclusions, make inferences and/or evaluate hypotheses based on statistical and data displays.</i></p>

Grade 5	Grade 6	Grade 7	Grade 8
			<p><u>Eligible Content</u>  M8.E.4.1.1 Fit a line to a scatter plot and/or describe any correlation between the two variables (positive, negative, strong, weak or none).  M8.E.4.1.2 Make predictions based on survey results or graphs (bar, line, circle, scatter plots, etc.).</p>

Grade 5	Grade 6	Grade 7	Grade 8
<p>2.1 <u>Numbers, Number Systems and Number Relationships</u></p> <ul style="list-style-type: none"> <li>• Use expanded notation to represent whole numbers or decimals;</li> <li>• Apply number theory concepts to rename a number quantity (six, <math>3 \times 2</math>, <math>10^{-4}</math>);</li> <li>• Demonstrate that mathematical operations can represent a variety of problem situations;</li> <li>• Use models to represent fractions and decimals;</li> <li>• Explain the concepts of prime and composite numbers;</li> <li>• Use simple concepts of negative numbers (on a number line, in counting, in temperature);</li> <li>• Develop and apply number theory concepts (primes, factors, multiples, composites) to represent numbers in various ways;</li> <li>• Round decimals to thousandths;</li> <li>• Read and write numbers up to 9 digits;</li> <li>• Represent simple fractions and mixed numbers on the calculator (i.e., changing fractions to decimals);</li> </ul>	<p>2.1 <u>Numbers, Number Systems and Number Relationships</u></p> <ul style="list-style-type: none"> <li>• Read, write, compare, order and represent rational numbers in a variety of formats: determine place of numbers from millions to ten-thousandths; write numbers in words and digits from millions to ten-thousandths; compare and order whole numbers and decimals; round numbers to the nearest given unit; use estimation strategies (compatible numbers, front end, compensation); determine the squares and cubes for numbers less than 100 using calculators; express numbers in exponential form; use written and oral skills to describe numerical concepts.</li> <li>• Use numeration skills to solve interdisciplinary and real world problems: use written and oral skills to describe numerical concepts.</li> <li>• Describe and apply number relationships using concrete and abstract materials;</li> </ul>	<p>2.1 <u>Numbers, Number Systems and Number Relationships</u></p> <ul style="list-style-type: none"> <li>• Identify, order, compare and use whole numbers, fractions, decimals, and percents;</li> <li>• Identify rules that apply to divisibility of a given number;</li> <li>• List multiples of a given number;</li> <li>• List common multiples and the least common multiple of numbers;</li> <li>• List the factors of a number and identify it as prime or composite;</li> <li>• Illustrate prime factorization and exponents through the use of factor trees;</li> <li>• Illustrate whole numbers and decimals on a number line;</li> <li>• Write a decimal as a fraction and a fraction as a decimal;</li> <li>• Write and solve an equation for a real-life situation;</li> <li>• Model solutions to one-step equations using algebra tiles or block manipulatives;</li> <li>• Express decimals using expanded form;</li> <li>• Determine equivalent forms of rational numbers expressed as fractions, decimals, percents, and ratios;</li> <li>• Compare, order and describe rational numbers with or without relational symbols;</li> </ul>	<p>2.1 <u>Numbers, Number Systems and Number Relationships</u></p> <ul style="list-style-type: none"> <li>• Identify, order, compare and use whole numbers, fractions, decimals, and percents;</li> <li>• Identify rules that apply to divisibility of a given number;</li> <li>• List multiples of a given number;</li> <li>• List common multiples and the least common multiple of numbers;</li> <li>• List the factors of a number and identify it as prime or composite;</li> <li>• Illustrate prime factorization and exponents through the use of factor trees;</li> <li>• Illustrate whole numbers and decimals on a number line;</li> <li>• Write a decimal as a fraction and a fraction as a decimal;</li> <li>• Write and solve an equation for a real-life situation;</li> <li>• Model solutions to one-step equations using algebra tiles or block manipulatives;</li> <li>• Compare, order and describe rational numbers with and without relational symbols (&lt;, &gt;, =).</li> </ul>

Grade 5	Grade 6	Grade 7	Grade 8
<ul style="list-style-type: none"> <li>• Use models to add and subtract fractions with like and unlike denominators; add mixed numbers with and without renaming.</li> <li>• Count by 10,000 for any 10 sequential numbers between 100,000 and 1,000,000.</li> <li>• Identify multiples of a one-digit number, and at least 2 pairs of factors for composite numbers <math>\geq</math> M50.</li> <li>• Find fractional parts of a number.</li> <li>• Use models to write whole or mixed numbers for fractions greater than one.</li> <li>• Read, write and order decimals through thousandths; including money.</li> <li>• Write equivalent fractions for halves, thirds, fourths, sixths, and eighths; discuss why a given set of fractions are or are not equivalent.</li> <li>• Identify a mixed number on a number line; order rationals on a number line.</li> <li>• Use the calculator to order fractions by converting them to decimals.</li> <li>• Use the calculator to do multiplication and division with decimals.</li> </ul>	<ul style="list-style-type: none"> <li>• Choose appropriate operations and describe effects of operations on numbers: define, describe, and apply the concept of factors; identify factors of numbers; use divisibility rules to determine factors of numbers; identify and define prime and composite numbers; find the prime factorization of numbers <math>\geq</math> 50; find the greatest common factor of two or more numbers; identify the concept of multiples; list the multiples of a number; recognize and extend sequences.</li> <li>• Recognize and extend sequences.</li> <li>• Find the least common multiple of two or more numbers by: using sets of prime factorization; finding the intersection of lists of multiples;</li> <li>• Use properties of operations: define given examples of the distributive properties.</li> <li>• Represent a fraction: by using a variety of manipulatives, graphic models and pictures; as a decimal equivalent; as a ratio; as a quotient (1/2);</li> <li>• Estimate, round, compare and order fractions and mixed numbers;</li> </ul>	<ul style="list-style-type: none"> <li>• Express whole numbers and decimals in scientific notation.</li> </ul>	

Grade 5	Grade 6	Grade 7	Grade 8
<ul style="list-style-type: none"> <li>• Calculate powers using repeated multiplication or a multiplication constant;</li> <li>• Read, write and represent whole numbers using symbols, words and models;</li> <li>• Express whole numbers in expanded form;</li> <li>• Identify the place value of a digit in a number;</li> <li>• Compare, order and describe whole numbers;</li> <li>• Read, write or represent fractions of a single region using symbols, words or models;</li> <li>• Read, write or represent proper fractions of a set which has the same number of items as the denominator using symbols, word or models;</li> <li>• Read, write or represent decimals using symbols, words or models;</li> <li>• Express decimals in expanded form;</li> <li>• Compare fractions or mixed numbers with or without using the symbols (&lt;, &gt;, or =);</li> <li>• Compare, order or describe decimals with or without using the symbols (&lt;, &gt;, or =);</li> <li>• Compare the value of sets of mixed currency;</li> <li>• Determine the change from \$100;</li> <li>• Identify and use divisibility rules;</li> </ul>	<ul style="list-style-type: none"> <li>• Read and write fractions in a variety of formats (as decimals, percent, and ratio);</li> <li>• Write fractions (proper and improper) as equivalent fractions;</li> <li>• Write whole numbers and mixed numbers (proper and improper) as equivalent fractions or mixed numbers;</li> <li>• Locate and plot whole numbers, fractions, and mixed numbers on a number line or ruler;</li> <li>• Perform calculations with fractions and mixed numbers;</li> <li>• Use manipulatives to develop equations;</li> <li>• Add and subtract fractions and mixed numbers (like and unlike denominators);</li> <li>• Multiply/divide any combination of whole numbers, fractions and mixed numbers;</li> <li>• Write fractions as terminating or repeating decimals;</li> <li>• Write terminating decimals as fractions in simplest form.</li> <li>• Use written and oral skills to describe steps in performing operations with rational numbers;</li> <li>• Determine and use the most appropriate method of calculation to solve problems: paper and pencil; mental arithmetic; calculator/computer.</li> </ul>		

Grade 5	Grade 6	Grade 7	Grade 8
<ul style="list-style-type: none"> <li>• Identify factors;</li> <li>• Identify multiples;</li> <li>• Write number to 10,000, using expanded notation;</li> <li>• Read and write numbers to 1 million using whole numbers;</li> <li>• Apply place value to counting, comparing, ordering and grouping;</li> <li>• Use whole numbers, decimals and fractions to represent quantities;</li> <li>• Represent equivalent forms of the same number through the use of concrete objects, drawings, diagrams, symbols and models;</li> <li>• Count, compare and make change using money;</li> <li>• Identify and compare fractions and decimals to the thousandths place using money and base ten models;</li> <li>• Develop and apply number theory concepts to represent numbers in various ways;</li> <li>• Estimate, approximate, round or use exact numbers as appropriate;</li> <li>• Describe the inverse relationship between multiplication and division;</li> <li>• Demonstrate knowledge of basic facts in the M5 basic operations;</li> </ul>	<ul style="list-style-type: none"> <li>• Read, write, compare and represent rational numbers in a variety of formats: describe and apply relationships as ratios or rates; determine equivalent relationships among ratios, fractions and decimals; identify a proportion; express a relationship as a ratio or a proportion.</li> <li>• Apply ratios and proportions to solve problems: rate problems; distance problems; unit pricing; read a map; determine actual distance from a map distance; determine actual length from a scale model; make and use a scale drawing.</li> <li>• Identify and determine equivalent forms of fractions as decimals, as percents, and as ratios;</li> <li>• Compare and order fractions, decimals alone or mixed together, with and without relational symbols;</li> <li>• Compare and order integers;</li> <li>• Identify, order, compare and use whole numbers, fractions, decimals, and percents;</li> <li>• Identify rules that apply to divisibility of a given number;</li> <li>• List multiples of a given number;</li> <li>• List common multiples and the least common multiple of numbers;</li> </ul>		

Grade 5	Grade 6	Grade 7	Grade 8
<ul style="list-style-type: none"> <li>• Read, write or represent fractions or mixed numbers using symbols, models and words;</li> <li>• Read, write or represent decimals using symbols, words and models;</li> <li>• Identify or determine equivalent forms of proper fractions;</li> <li>• Compare or order fractions with or without using the symbols (&lt;, &gt;, =);</li> <li>• Compare, order or describe decimals with or without using the symbols (&lt;, &gt;, =);</li> <li>• Identify or describe numbers as prime or composite;</li> <li>• Identify and use rules of divisibility;</li> <li>• Identify the GCF;</li> <li>• Identify a common multiple and the LCM;</li> <li>• Read and write numbers up to 9 digits;</li> <li>• Model and identify prime and composite numbers;</li> <li>• Describe or model relationships between fractions and decimals;</li> <li>• Model the square and the cube of a number;</li> <li>• Name the factors or multiples of a given number;</li> <li>• Write the prime factorization of any number using a factor tree;</li> </ul>	<ul style="list-style-type: none"> <li>• List the factors of a number and identify it as prime or composite;</li> <li>• Illustrate prime factorization and exponents through the use of factor trees;</li> <li>• Illustrate whole numbers and decimals on a number line;</li> <li>• Write a decimal as a fraction and a fraction as a decimal;</li> <li>• Write and solve an equation for a real-life situation;</li> <li>• Model solutions to one-step equations using algebra tiles or block manipulatives.</li> </ul>		

Grade 5	Grade 6	Grade 7	Grade 8
<ul style="list-style-type: none"> <li>• Write numbers using exponential notation given the numbers in standard form;</li> <li>• Write the standard form for numbers expressed in exponential notation;</li> <li>• Model the GCF and the LCM of two numbers;</li> <li>• Use models to find equal ratios and identify proportions;</li> <li>• Use models to write percents as fractions and decimals, and fractions and decimals as percents;</li> <li>• Determine if two rational numbers are equal;</li> <li>• Use the calculator to aid in exploration of number properties such as divisibility and primeness.</li> </ul>			

Grade 5	Grade 6	Grade 7	Grade 8
<p>2.2 <u>Computation and Estimation</u></p> <ul style="list-style-type: none"> <li>• Create and solve word problems involving addition, subtraction, multiplication and division of whole numbers;</li> <li>• Develop and apply algorithms to solve word problems that involve addition, subtraction, and/or multiplication with decimals, with and without regrouping;</li> <li>• Develop and apply algorithms to solve word problems that involve addition, subtraction, and/or multiplication with decimals with or without regrouping;</li> <li>• Develop and apply algorithms to solve word problems that involve addition, subtraction, and/or multiplication with fractions and mixed numbers that include like and unlike denominators;</li> <li>• Demonstrate the ability to round numbers;</li> <li>• Determine, through estimations, the reasonableness of answers to problems involving addition, subtraction, multiplication and division of whole numbers;</li> <li>• Demonstrate skills for using fraction calculators to verify conjectures, confirm computations and explore complex problem solving situations;</li> </ul>	<p>2.2 <u>Computation and Estimation</u></p> <ul style="list-style-type: none"> <li>• Compute with whole numbers and decimals: add, subtract and multiply with whole numbers; divide whole numbers (up to three-digit divisors); divide numbers with zeros in the quotient; add, subtract, multiply and divide decimals and mixed decimals; divide a mixed decimal when the divisor is a whole number and/or a decimal number; find the average (mean) of a set of numbers; apply order of operations.</li> <li>• Add and subtract fractions and mixed numbers and express answers in simplest form;</li> <li>• Multiply fractions and mixed numbers and express in simplest form;</li> <li>• Multiply and divide decimals;</li> <li>• Determine a percent of a whole number;</li> <li>• Simplify numeric expressions using the properties of addition and multiplication;</li> <li>• Determine the approximate products and quotients of decimals;</li> <li>• Represent ratios in a variety of forms;</li> </ul>	<p>2.2 <u>Computation and Estimation</u></p> <ul style="list-style-type: none"> <li>• Know and use order of operations;</li> <li>• Solve problems involving mixed operations with and without parentheses, exponents, or fraction bars;</li> <li>• Compute sums, differences, products and quotients with whole numbers, fractions and decimals;</li> <li>• Create and solve word problems involving decimals, fractions and integers</li> <li>• Choose the correct operations to solve multi-step problems;</li> <li>• Solve various word problems involving rational numbers and/or percents;</li> <li>• Add, subtract and multiply positive fractions and mixed numbers;</li> <li>• Divide fractions and mixed numbers;</li> <li>• Use the laws of exponents to simplify expressions;</li> <li>• Identify and use the properties of addition and multiplication to simplify expressions;</li> <li>• Determine percent of a number;</li> <li>• Determine approximate sums, differences, products and quotients;</li> <li>• Determine equivalent ratios;</li> </ul>	<p>2.2 <u>Computation and Estimation</u></p> <ul style="list-style-type: none"> <li>• Know and use order of operations;</li> <li>• Solve problems involving mixed operations with and without parentheses, exponents, or fraction bars;</li> <li>• Compute sums, differences, products and quotients with whole numbers, fractions and decimals;</li> <li>• Create and solve word problems involving decimals, fractions and integers;</li> <li>• Choose the correct operations to solve multi-step problems;</li> <li>• Solve various word problems involving rational numbers and/or percents;</li> <li>• Calculate powers of integers and square roots of perfect square whole numbers;</li> <li>• Identify and use the laws of exponents to simplify expressions;</li> <li>• Use properties of addition and multiplication to simplify expressions;</li> <li>• Estimate the square roots of whole numbers;</li> <li>• Determine and use unit rates;</li> </ul>

Grade 5	Grade 6	Grade 7	Grade 8
<ul style="list-style-type: none"> <li>• Apply estimation strategies to a variety of problems, including time and money;</li> <li>• Explain multiplication and division algorithms;</li> <li>• Select a method for computation and explain why it is appropriate;</li> <li>• Given a number with up to 8 digits, round the number to the nearest million;</li> <li>• Find products of a two digit whole number and multiples of 10, 100 and 1000.</li> <li>• Using at least 2 different algorithms, multiply factors with up to 3 digits, by two digit factors;</li> <li>• Using at least 2 different algorithms, divide by one and two-digit divisors to find up to 3 digit quotients.</li> <li>• Complete, create and discuss number patterns involving combinations of the M5 basic operations, describe and model relationships between and among arithmetic operations;</li> <li>• Determine products where one factor is 10, 100, 1000;</li> <li>• Convert time dimensions (minutes, seconds, hours, days, weeks, months, years, decades, centuries, millennium);</li> </ul>	<ul style="list-style-type: none"> <li>• Use ratios and unit rates to solve problems;</li> <li>• Know and use order of operations;</li> <li>• Solve problems involving mixed operations with and without parentheses, exponents, or fraction bars;</li> <li>• Compute sums, differences, products and quotients with whole numbers, fractions and decimals;</li> <li>• Create and solve word problems involving decimals, fractions and integers;</li> <li>• Choose the correct operations to solve multi-step problems;</li> <li>• Solve various word problems involving rational numbers and/or percents;</li> <li>• Define percent and estimate solutions to percent problems;</li> <li>• Recognize ratios;</li> <li>• Compare ratios;</li> <li>• Use a calculator to solve word problems involving rational numbers and/or percents;</li> <li>• Use fractions and decimals in time and money word problems;</li> <li>• Explain whether rounding or exact numbers are needed in real-life problems.</li> </ul>	<ul style="list-style-type: none"> <li>• Determine or use ratios, unit rates, and percents in the context of a problem;</li> <li>• Determine rate of increase and decrease, discounts, simple interest, commission, and sales tax;</li> <li>• Determine percent of a number.</li> </ul>	<ul style="list-style-type: none"> <li>• Solve problems using percents, rates of increases and decreases, discount, commission, sales and simple interest in the context of a problem.</li> </ul>

Grade 5	Grade 6	Grade 7	Grade 8
<ul style="list-style-type: none"> <li>• Calculate powers using repeated multiplication or a multiplication constant.</li> <li>• Determine the value of coins and bills <math>\geq</math> \$20, given \$20, make change for purchases <math>\leq</math> \$20.</li> <li>• Compute elapsed time.</li> <li>• Estimate and find sums and differences of decimals through hundredths and money values <math>&lt;</math> \$1000; describe estimation strategies;</li> <li>• Add, subtract, multiply and divide whole numbers;</li> <li>• Add and subtract proper fractions and mixed numbers;</li> <li>• Add 2 decimals;</li> <li>• Subtract decimals;</li> <li>• Determine the approximate sum and difference of 2 numbers;</li> <li>• Determine the approximate product or quotient of 2 numbers;</li> <li>• Solve word problems involving addition, subtraction, multiplication and division of whole numbers;</li> <li>• Solve addition and subtraction problems of numbers up to five digits with and without regrouping;</li> </ul>			

Grade 5	Grade 6	Grade 7	Grade 8
<ul style="list-style-type: none"> <li>• Develop and apply algorithms to solve word problems that involve addition, subtraction, multiplication and division with decimals with or without regrouping fractions and mixed numbers;</li> <li>• Demonstrate the ability to round numbers;</li> <li>• Determine, through estimation, the reasonableness of answers to problems involving addition, subtraction, multiplication and division of whole numbers;</li> <li>• Demonstrate the ability to solve multiplication and division problems with regrouping and remainders;</li> <li>• Apply estimation strategies to a variety of problems involving time and money;</li> <li>• Select a method for computation and explain why it is appropriate;</li> <li>• Explain multiplication and division algorithms;</li> <li>• Multiply and divide whole numbers;</li> <li>• Interpret quotients and remainders mathematically and in the context of a problem;</li> <li>• Add and subtract proper fractions and mixed numbers with answers in simplest form;</li> </ul>			

Grade 5	Grade 6	Grade 7	Grade 8
<ul style="list-style-type: none"> <li>• Add and subtract decimals including money;</li> <li>• Multiply decimals;</li> <li>• Determine the approximate sum and difference of decimals;</li> <li>• Determine the approximate product and quotient of whole numbers;</li> <li>• Determine the approximate product of decimals;</li> <li>• Mentally apply divisibility rules for 2, 3, 5, 6, and 10;</li> <li>• Estimate before calculating;</li> <li>• Add and subtract whole numbers, fractions and decimals;</li> <li>• Multiply and divide whole numbers (quotient need not be a whole number, interpret remainder properly);</li> <li>• Round decimals to the nearest whole number, tenth or hundredth;</li> <li>• Compute the unit price and discuss other factors involved in determining better buys;</li> <li>• Use the memory function of the calculator;</li> <li>• Compute elapsed time.</li> </ul>			

Grade 5	Grade 6	Grade 7	Grade 8
<p>2.3 <u>Measurement and Estimation</u></p> <ul style="list-style-type: none"> <li>• Select and use appropriate instruments and units for measuring quantities (perimeter, area, volume, weight, time temperature);</li> <li>• Select and use standard tools to measure the size of figures with specific accuracy, including length, width, perimeter and area;</li> <li>• Estimate, refine and verify specified measurements of objects;</li> <li>• Convert linear measurements within the same system;</li> <li>• Add and subtract measurements;</li> <li>• Estimate and verify: length (cm, dm, m, km, inch, foot, yard, mile); capacity (liter, milliliter, cup, pint, quart, gallon); weight (grams, kilograms); temperature (F, C).</li> <li>• Using models, estimate and verify the area and perimeter of regular and irregular shapes; use appropriate units.</li> <li>• Measure lengths to the nearest <math>\frac{1}{4}</math> inch or <math>\frac{1}{2}</math> cm; mass to the nearest <math>\frac{1}{2}</math> pound or <math>\frac{1}{2}</math> gram;</li> <li>• Given several alternatives, choose the best unit of measure, provide an explanation for the choice;</li> </ul>	<p>2.3 <u>Measurement and Estimation</u></p> <ul style="list-style-type: none"> <li>• Apply concepts of measurement using standard, non-standard, metric and customary units: estimate and verify measures of length to the nearest <math>16^{\text{th}}</math> inch and to the nearest millimeter; round measurements to the nearest identified unit; estimate and measure capacity; read scales on measuring instruments; determine a time, given elapsed time; determine elapsed time, given the starting and ending times; determine elapsed time for intervals before and after noon or midnight; determine elapsed time in a problem situation; make a schedule.</li> <li>• Operate with denominate number (adding, subtracting, time, measurements, money, etc.);</li> <li>• Determine equivalent measures within the same measurement system: change units within the metric system; change units within the English system;</li> <li>• Choose an appropriate unit of measure;</li> <li>• Use measurement skills to solve interdisciplinary and real world problems;</li> </ul>	<p>2.3 <u>Measurement and Estimation</u></p> <ul style="list-style-type: none"> <li>• Select the appropriate unit of measurement (standard or metric);</li> <li>• Draw, label, name and calculate perimeter and area of rectangles, triangles, and parallelograms;</li> <li>• Use a protractor to draw, label and name angles as acute, right, obtuse and straight;</li> <li>• Identify and compare units of distance, time and rate;</li> <li>• Apply appropriate conversions to measurement in real-life situations;</li> <li>• Estimate and determine the area of quadrilaterals;</li> <li>• Determine the surface area of geometric solids;</li> <li>• Estimate pi using physical models;</li> <li>• Determine a missing dimension for a figure, using a scale;</li> <li>• Determine the distance between 2 points using a drawing and a scale.</li> </ul>	<p>2.3 <u>Measurement and Estimation</u></p> <ul style="list-style-type: none"> <li>• Select the appropriate unit of measurement (standard or metric);</li> <li>• Draw label, name and calculate perimeter and area of rectangles, triangles, and parallelograms;</li> <li>• Use a protractor to draw, label and name angles as acute, right, obtuse and straight;</li> <li>• Identify and compare units of distance, time and rate;</li> <li>• Apply appropriate conversions to measurement in real-life situations;</li> <li>• Estimate and determine the circumference or area of a circle;</li> <li>• Estimate and determine the area of a composite figure;</li> <li>• Estimate and determine the volume of a cylinder;</li> <li>• Determine the volume of cones, pyramids and spheres;</li> <li>• Determine the surface area of cylinders, prisms and pyramids</li> <li>• Use proportional reasoning to solve measurement problems.</li> </ul>

Grade 5	Grade 6	Grade 7	Grade 8
<ul style="list-style-type: none"> <li>• Estimate and determine length and height;</li> <li>• Estimate and determine weight and mass;</li> <li>• Estimate and determine capacity;</li> <li>• Select and use appropriate tools and units;</li> <li>• Determine perimeter;</li> <li>• Determine area;</li> <li>• Determine elapsed time and end time;</li> <li>• Determine equivalent units of length;</li> <li>• Determine equivalent units of time;</li> <li>• Determine equivalent units of capacity and weight within the same system;</li> <li>• Select and use appropriate instruments and units for measuring quantities, such as: perimeter, volume, area, weight, time and temperature;</li> <li>• Determine the measurement of objects with non standard and standard (US customary and metric) units;</li> <li>• Determine and compare elapsed time;</li> <li>• Estimate, refine, and verify measurement of objects;</li> <li>• Convert linear measurements with the same system;</li> <li>• Add and subtract measurement;</li> </ul>	<ul style="list-style-type: none"> <li>• Use written and oral skills to describe concepts of measurement;</li> <li>• Select and apply estimation strategies;</li> <li>• Choose an appropriate operation to solve a problem;</li> <li>• Determine if a solution is reasonable;</li> <li>• Use computational skills with whole numbers and decimals to solve interdisciplinary and real world problems: solve best buy consumer problems (best buy, sales tax, etc.); graph data using whole and decimal numbers;</li> <li>• Use written and oral skills to describe steps in performing operations with whole numbers and decimals;</li> <li>• Determine and use the most appropriate method of calculation to solve problems:</li> <li>• Paper and pencil; mental arithmetic; calculator/computer.</li> <li>• Use operational skills involving fractions, mixed numbers, to solve interdisciplinary real world problems, including area and perimeter problems;</li> <li>• Select and use appropriate tools and units;</li> </ul>		

Grade 5	Grade 6	Grade 7	Grade 8
<ul style="list-style-type: none"> <li>• Estimate a determine weight;</li> <li>• Estimate and determine capacity;</li> <li>• Select and use appropriate tools and units;</li> <li>• Use the nearest degree and acute, right or obtuse angles;</li> <li>• Determine perimeter;</li> <li>• Determine area;</li> <li>• Estimate and determine volume by counting;</li> <li>• Determine start, elapsed and end time;</li> <li>• Determine equivalent units of measurement;</li> <li>• Use models to describe the development of area, perimeter and volume formulas;</li> <li>• Describe the difference between area and perimeter and know which to use;</li> <li>• Estimate and verify the area and perimeter of a regular and irregular shape;</li> <li>• Apply measurements to interdisciplinary and real world problem solving situations, such as temperature changes;</li> <li>• Convert units of measurement.</li> </ul>	<ul style="list-style-type: none"> <li>• Estimate and determine the area of a polygon;</li> <li>• Estimate and determine the volume of a rectangular prism;</li> <li>• Estimate and determine the area of a composite figure;</li> <li>• Determine the missing dimension of a quadrilateral given the perimeter length;</li> <li>• Determine the missing dimension of rectangles;</li> <li>• Select the appropriate unit of measurement (standard or metric);</li> <li>• Draw, label, name and calculate perimeter and area of rectangles, triangles, and parallelograms;</li> <li>• Use a protractor to draw, label and name angles as acute, right, obtuse and straight;</li> <li>• Identify and compare units of distance, time and rate;</li> <li>• Apply appropriate conversions to measurement in real-life situations.</li> </ul>		

Grade 5	Grade 6	Grade 7	Grade 8
<p><u>2.4 Mathematical Reasoning and Connections</u></p> <ul style="list-style-type: none"> <li>• Compare quantities and magnitude of numbers;</li> <li>• Use models, number facts, properties and relationships to check and verify predictions and explain reasoning;</li> <li>• Draw inductive and deductive conclusions within mathematical contexts;</li> <li>• Distinguish between relevant and irrelevant information in a mathematical problem;</li> <li>• Interpret statements made with precise language of logic (all, or, every, none, some, many);</li> <li>• Use statistics to quantify issues (social studies in science);</li> <li>• Use inductive or deductive reasoning;</li> <li>• Make or test generalizations;</li> <li>• Support or refute mathematical statements or solutions;</li> <li>• Use methods of proof, i.e., direct, indirect, paragraph or contradiction;</li> <li>• Identify mathematical concepts in relationship to other mathematical concepts;</li> <li>• Identify mathematical concepts in relationship to other disciplines;</li> <li>• Identify mathematical concepts in relationship to life;</li> </ul>	<p><u>2.4 Mathematical Reasoning and Connections</u></p> <ul style="list-style-type: none"> <li>• Use inductive or deductive reasoning;</li> <li>• Make or test generalizations;</li> <li>• Support or refute mathematical statements or solutions;</li> <li>• Use methods of proof, i.e. direct, indirect, paragraph, or contradiction;</li> <li>• Identify mathematical concepts in relationship to other mathematical concepts, to other disciplines, and to life;</li> <li>• Use the relationship among mathematical concepts to learn other mathematical concepts;</li> <li>• Analyze the data collected to make informed decisions;</li> <li>• Write statements believed to be true but not proven based on reasoning;</li> <li>• Write logical and equivalent statements and their negations to test conjectures;</li> <li>• Recognize rules that apply to various equations;</li> <li>• Write statements with precise language of logic.</li> </ul>	<p><u>2.4 Mathematical Reasoning and Connections</u></p> <ul style="list-style-type: none"> <li>• Analyze the data collected to make informed decisions;</li> <li>• Write statements believed to be true but not proven based on reasoning;</li> <li>• Write logical and equivalent statements and their negations to test conjectures;</li> <li>• Recognize rules that apply to various equations;</li> <li>• Write statements with precise language of logic;</li> <li>• Use inductive or deductive reasoning;</li> <li>• Make or test generalizations;</li> <li>• Support or refute mathematical statements or solutions;</li> <li>• Use methods of proof, i.e., direct, indirect, paragraph or contradiction;</li> <li>• Identify mathematical concepts in relationship to other mathematical concepts, to other disciplines and to real life;</li> <li>• Use the relationship among mathematical concepts to learn other mathematical concepts.</li> </ul>	<p><u>2.4 Mathematical Reasoning and Connections</u></p> <ul style="list-style-type: none"> <li>• Analyze the data collected to make informed decisions;</li> <li>• Write statements believed to be true but not proven based on reasoning;</li> <li>• Write logical and equivalent statements and their negations to test conjectures;</li> <li>• Recognize rules that apply to various equations;</li> <li>• Write statements with precise language of logic;</li> <li>• Solve problems using proportional reasoning;</li> <li>• Use inductive or deductive reasoning;</li> <li>• Make or test generalizations;</li> <li>• Support or refute mathematical statements or solutions;</li> <li>• Use methods of proof, i.e., direct, indirect, paragraph or contradiction;</li> <li>• Identify mathematical concepts in relationship to other mathematical concepts, to other disciplines and to real life;</li> <li>• Use the relationship among mathematical concepts to learn other mathematical concepts.</li> </ul>

Grade 5	Grade 6	Grade 7	Grade 8
<ul style="list-style-type: none"> <li>• Use the relationship among mathematical concepts to learn other mathematical concepts;</li> <li>• Use models, number facts, properties and relationships to check and verify predictions and explain reasoning;</li> <li>• Distinguish between relevant and irrelevant information in a mathematical problem;</li> <li>• Interpret and use statistics to quantify issues in all subject areas.</li> </ul>			

Grade 5	Grade 6	Grade 7	Grade 8
<p><b>2.5 <u>Mathematical Problem Solving and Communication</u></b></p> <ul style="list-style-type: none"> <li>• Develop a plan to analyze a problem, identify the information needed to solve the problem, carry out the plan, check whether an answer makes sense and explain how the problem was solved;</li> <li>• Use appropriate mathematical terms, vocabulary, language symbols and graphs to explain clear and logical solutions to problems;</li> <li>• Show ideas in a variety of ways, including words, numbers, symbols, diagrams and models;</li> <li>• Identify the question in the problem;</li> <li>• Decide if enough information is present to solve the problem;</li> <li>• Make a plan to solve a problem;</li> <li>• Apply a strategy, i.e., draw a picture, guess and check, find a pattern, write an equation;</li> <li>• Select a strategy, i.e., draw a picture, guess and check, find a pattern, write an equation;</li> <li>• Identify alternative ways to solve a problem;</li> <li>• Show that a problem might have multiple solutions or no solution;</li> <li>• Extend the solution of a problem to a new problem situation;</li> </ul>	<p><b>2.5 <u>Mathematical Problem Solving and Communication</u></b></p> <ul style="list-style-type: none"> <li>• Identify the question in the problem;</li> <li>• Decide if enough information is present to solve the problem;</li> <li>• Make a plan to solve a problem;</li> <li>• Apply and select a strategy (draw a picture, guess and check, find a pattern, write an equation);</li> <li>• Identify alternate ways to solve a problem;</li> <li>• Show that a problem might have multiple solutions or no solution;</li> <li>• Extend the solution of a problem to a new problem situation;</li> <li>• Use multiple representations to express concepts or solutions;</li> <li>• Express mathematical ideas orally;</li> <li>• Explain mathematical ideas in written form;</li> <li>• Express solutions using concrete materials;</li> <li>• Express solutions using pictorial, tabular, graphical or algebraic methods;</li> <li>• Explain solutions in written form;</li> <li>• Ask questions about mathematical ideas or problems;</li> <li>• Give or use feedback to revise mathematical thinking;</li> <li>• Make an organized list to solve a problem;</li> </ul>	<p><b><u>2.5 Mathematical Problem Solving and Communication</u></b></p> <ul style="list-style-type: none"> <li>• Make an organized list to solve a problem;</li> <li>• Verify solutions using written and verbal communication;</li> <li>• List steps and write equations to solve word problems;</li> <li>• Analyze word problems to identify needed or extra information in a problem, then solve;</li> <li>• Identify the question in the problem;</li> <li>• Decide if enough information is present to solve the problem;</li> <li>• Make a plan to solve the problem;</li> <li>• Apply a strategy (draw a picture, guess and check, find a pattern, write an equation);</li> <li>• Select a strategy (draw a picture, guess and check, find a pattern, write an equation);</li> <li>• Identify alternate ways to solve a problem;</li> <li>• Show that a problem might have multiple solutions or no solution;</li> <li>• Extend the solution of a problem to a new problem situation;</li> <li>• Use multiple representations to express concepts or solutions;</li> <li>• Express mathematical ideas orally and in written form;</li> </ul>	<p><b><u>2.5 Mathematical Problem Solving and Communication</u></b></p> <ul style="list-style-type: none"> <li>• Make an organized list to solve a problem;</li> <li>• Verify solutions using written and verbal communication;</li> <li>• List steps and write equations to solve word problems;</li> <li>• Analyze word problems to identify needed or extra information in a problem, then solve;</li> <li>• Identify the question in the problem;</li> <li>• Decide if enough information is present to solve the problem;</li> <li>• Make a plan to solve the problem;</li> <li>• Apply a strategy (draw a picture, guess and check, find a pattern, write an equation);</li> <li>• Select a strategy (draw a picture, guess and check, find a pattern, write an equation);</li> <li>• Identify alternate ways to solve a problem;</li> <li>• Show that a problem might have multiple solutions or no solution;</li> <li>• Extend the solution of a problem to a new problem situation;</li> <li>• Use multiple representations to express concepts or solutions;</li> <li>• Express mathematical ideas orally</li> </ul>

Grade 5	Grade 6	Grade 7	Grade 8
<ul style="list-style-type: none"> <li>• Use multiple representations to express concepts or solutions;</li> <li>• Express mathematical ideas orally;</li> <li>• Explain mathematical ideas in written form;</li> <li>• Express solutions using concrete materials;</li> <li>• Express solutions using pictorial, tabular, graphical, or algebraic methods;</li> <li>• Explain solutions in written form;</li> <li>• Ask questions about mathematical ideas or problems;</li> <li>• Give or use feedback to revise mathematical thinking;</li> <li>• Develop a plan to analyze a problem, identify the information needed to solve the problem, carry out the plan, check whether an answer makes sense, and explain how the problem was solved;</li> <li>• Use appropriate mathematical terms, vocabulary, language, symbols and graphs to explain solutions to problems;</li> <li>• Identify the question in the problem;</li> <li>• Decide if enough information is present to solve the problem;</li> <li>• Make a plan to solve a problem;</li> </ul>	<ul style="list-style-type: none"> <li>• Verify solutions using written and verbal communication;</li> <li>• List steps and write equations to solve word problems;</li> <li>• Analyze word problems to identify needed or extra information in a problem, then solve.</li> </ul>	<ul style="list-style-type: none"> <li>• Express solutions using concrete materials;</li> <li>• Express solutions using pictorial, tabular, graphical or algebraic methods;</li> <li>• Explain solutions in written form;</li> <li>• Ask questions about mathematical ideas or problems;</li> <li>• Give or use feedback to revise mathematical thinking.</li> </ul>	<ul style="list-style-type: none"> <li>• Explain mathematical ideas in written form;</li> <li>• Express solutions using concrete materials;</li> <li>• Express solutions using pictorial, tabular, graphical or algebraic methods;</li> <li>• Explain solutions in written form;</li> <li>• Ask questions about mathematical ideas or problems;</li> <li>• Give or use feedback to revise mathematical thinking.</li> </ul>

Grade 5	Grade 6	Grade 7	Grade 8
<ul style="list-style-type: none"> <li>• Apply a strategy, i.e., draw a picture, guess and check, find a pattern, write an equation;</li> <li>• Select a strategy, i.e., draw a picture, guess and check, find a pattern, write an equation;</li> <li>• Identify alternative ways to solve a problem;</li> <li>• Show that a problem might have multiple solutions or no solution;</li> <li>• Extend the solution of a problem to a new problem situation;</li> <li>• Use inductive or deductive reasoning;</li> <li>• Make or test generalizations;</li> <li>• Support or refute mathematical statements or solutions;</li> <li>• Use methods of proof, i.e., direct, indirect, paragraph or contradiction;</li> <li>• Use multiple representations to express concepts or solutions;</li> <li>• Express mathematical ideas orally;</li> <li>• Explain mathematical ideas in written form;</li> <li>• Express solutions using concrete materials;</li> <li>• Express solutions using pictorial, tabular, graphical, or algebraic methods;</li> <li>• Explain solutions in written form;</li> <li>• Ask questions about mathematical ideas or problems;</li> </ul>			

Grade 5	Grade 6	Grade 7	Grade 8
<ul style="list-style-type: none"> <li>• Give or use feedback to revise mathematical thinking;</li> <li>• Identify mathematical concepts in relationship to other mathematical concepts;</li> <li>• Identify mathematical concepts in relationship to other disciplines;</li> <li>• Identify mathematical concepts in relationship to life;</li> <li>• Use the relationships among mathematical concepts to learn other mathematical concepts.</li> </ul>			

Grade 5	Grade 6	Grade 7	Grade 8
<p>2.6 <u>Statistics and Data Analysis</u></p> <ul style="list-style-type: none"> <li>• Connect, extend and generalize problems solutions to other concepts, problems and circumstances in mathematics;</li> <li>• Select, use and justify the methods, materials and strategies used to solve problems;</li> <li>• Use appropriate problem solving strategies (solving a simpler problem, drawing a picture or diagram);</li> <li>• Organize and display data using pictures, tallies, tables, charts, bar graphs and circle graphs;</li> <li>• Describe data sets using mean, median, mode and range;</li> <li>• Sort data using Venn diagrams;</li> <li>• Predict the likely number of times a condition will occur based on analyzed data;</li> <li>• Construct and defend simple conclusions based on data;</li> <li>• Select and use appropriate strategies; include concrete materials to solve number sentences and explain the method of solution;</li> <li>• Locate and identify points on a coordinate system;</li> <li>• Generate functions from tables of data and relate data to corresponding graphs and functions;</li> </ul>	<p>2.6 <u>Statistics and Data Analysis</u></p> <ul style="list-style-type: none"> <li>• Make and interpret frequency tables, bar graphs, line graphs, circle graphs, box and whisker, and stem and leaf plots;</li> <li>• Choose appropriate scales and intervals;</li> <li>• Find the four measures of central tendency (mean, median, mode, range);</li> <li>• Recognize when statistics and graphs are misleading;</li> <li>• Use ordered pairs to locate points and organize data;</li> <li>• Solve problems by using a graph;</li> <li>• Make predictions based on upon tables and graphs;</li> <li>• Use written and oral skills to describe statistics and data analysis;</li> <li>• Use statistics and data analysis to solve interdisciplinary and real world problems;</li> <li>• Organize and display data to make frequency tables;</li> <li>• Organize and display data to make stem and leaf plots;</li> <li>• Organize and display data using a back to back stem and leaf plot;</li> <li>• Interpret frequency tables;</li> <li>• Interpret circle graphs;</li> <li>• Interpret data from a stem and leaf plot;</li> </ul>	<p><u>2.6 Statistics and Data Analysis</u></p> <ul style="list-style-type: none"> <li>• Find the mean, median, mode, range and quartiles;</li> <li>• Make a stem and leaf plot to find the mode and median</li> <li>• Collect and record data by making tables, pictures, tallies, broken-line graphs, and line plots;</li> <li>• Draw Venn Diagrams to solve logical reasoning solutions;</li> <li>• Solve problems using information on tables, bar graphs, etc.;</li> <li>• Organize and display data using back-to-back stem and leaf plots;</li> <li>• Organize and display data to make circle graphs;</li> <li>• Recognize misuse of data;</li> <li>• Analyze misleading data representation;</li> <li>• Compare measures of central tendency (mean, median, mode) to determine which is most appropriate.</li> </ul>	<p><u>2.6 Statistics and Data Analysis</u></p> <ul style="list-style-type: none"> <li>• Find the mean, median, mode, range and quartiles;</li> <li>• Make a stem and leaf plot to find the mode and median;</li> <li>• Collect and record data by making tables, pictures, tallies, broken-line graphs, and line plots;</li> <li>• Draw Venn Diagrams to solve logical reasoning solutions;</li> <li>• Solve problems using information on tables, bar graphs, etc.;</li> <li>• Organize and display data to make circle graphs, box and whisker plots, and a scatter plot;</li> <li>• Interpret tables, box and whisker plots and scatter plots;</li> <li>• Interpret circle graphs;</li> <li>• Analyze multiple box and whisker plots using the same scale;</li> </ul>

Grade 5	Grade 6	Grade 7	Grade 8
<ul style="list-style-type: none"> <li>• Model and find the measure of central tendencies (mean, median, mode and range);</li> <li>• Collect, organize, display and interpret data using: scaled picture graphs; bar graphs; line graphs; tables; coordinate graphs; glyphs; stem and leaf plots; line plots.</li> <li>• Observe patterns in collected data and make predictions.</li> <li>• Write a descriptive paragraph that interprets data;</li> <li>• Collect data by conducting surveys to answer a question;</li> <li>• Organize and display data in line plots and frequency tables using a variety of categories and sets of data;</li> <li>• Interpret line plots;</li> <li>• Interpret line graphs;</li> <li>• Determine mean, median, mode and range;</li> <li>• Model the mean of a set of data;</li> <li>• Gather, organize and display data using pictures, tallies, charts and graphs;</li> <li>• Use the data to form and justify an opinion;</li> </ul>	<ul style="list-style-type: none"> <li>• Apply measures of central tendency (mean, median, mode);</li> <li>• Express the probability of an event as a fraction;</li> <li>• Express the probability of an event as a decimal;</li> <li>• Express the probability of an event as a percent;</li> <li>• Express the experimental probability as a fraction, a decimal or a percent;</li> <li>• Find the mean, median, mode, range and quartiles;</li> <li>• Make a stem and leaf plot to find the mode and median;</li> <li>• Collect and record data by making tables, pictures, tallies, broken-line graphs, and line plots;</li> <li>• Draw Venn Diagrams to solve logical reasoning solutions;</li> <li>• Solve problems using information on tables, bar graphs, etc.</li> </ul>		

Grade 5	Grade 6	Grade 7	Grade 8
<ul style="list-style-type: none"> <li>• Collect data by conducting surveys to answer a question;</li> <li>• Organize and display data in stem leaf plots; in line plots; in double bar graphs; in line graphs;</li> <li>• Interpret and compare data in stem and leaf plots; in line plots; in double bar graphs; in line graphs;</li> <li>• Read circle graphs;</li> <li>• Determine the mean of a given data set or data display;</li> <li>• Apply the range and measures of central tendency to solve a problem or answer a question;</li> <li>• Model and find the measures of central tendencies: mean, mode, median and range;</li> <li>• Collect, organize, display and interpret data, using: scaled picture graphs; bar graphs; circle graphs; line graphs; tables; coordinate graphs; glyphs; stem and leaf plots; line plots;</li> <li>• Observe patterns in collected data and make predictions;</li> <li>• Write a descriptive paragraph that interprets data.</li> </ul>			

Grade 5	Grade 6	Grade 7	Grade 8
<p><u>2.7 Probability and Prediction</u></p> <ul style="list-style-type: none"> <li>• Perform simulations with concrete devices (dice, spinners) to predict the chance of an event occurring;</li> <li>• Determine the fairness of the design of the spinner;</li> <li>• Express probability as fractions and decimals;</li> <li>• Compare predictions based on theoretical probability and experimental results;</li> <li>• Calculate the probability of a single event;</li> <li>• Determine patterns generated as a result of an experiment;</li> <li>• Determine the probability of an event involving “and”, “or”, or “not”;</li> <li>• Predict and determine why some outcomes are certain, more likely, less likely, equally likely or impossible;</li> <li>• Find all possible combinations and arrangements involving a limited number of variables;</li> <li>• Develop a tree diagram and list elements;</li> <li>• With exploration and experimentation find the probability of a single event listing possible outcomes: equal/unequal chances, more likely/less likely; certain/impossible.</li> </ul>	<p><u>2.7 Probability and Prediction</u></p> <ul style="list-style-type: none"> <li>• Find the probability of a single event and express it as a ratio, decimal or percent;</li> </ul> <p>Perform experiments, such as tossing a die to determine probabilities; Use a computer/calculator to simulate an experiment to determine a probability.</p> <ul style="list-style-type: none"> <li>• Find the probability of an independent event and express it as a ratio, decimal or percent;</li> <li>• Represent the number of ways an event can occur using a diagram:</li> </ul> <p>Use a tree diagram; Use a table.</p> <ul style="list-style-type: none"> <li>• Use probability to make predictions;</li> <li>• Predict probabilities using a sample;</li> <li>• Use fair and unfair games;</li> <li>• Choose combinations from a field of possible choices for a given situation;</li> <li>• Interpret what predictions were made for various problems;</li> <li>• Solve problems involving probability using experimental results and mathematical calculations;</li> <li>• Write the probability of an event as a percent;</li> <li>• Solve real-life situations that involve probability;</li> </ul>	<p><u>2.7 Probability and Prediction</u></p> <ul style="list-style-type: none"> <li>• Choose combinations from a field of possible choices for a given situation;</li> <li>• Interpret what predictions were made for various problems;</li> <li>• Solve problems involving probability using experimental results and mathematical calculations;</li> <li>• Write the probability of an event as a percent;</li> <li>• Solve real-life situations that involve probability;</li> <li>• Find the validity of probability outcome;</li> <li>• Determine the number of outcomes;</li> <li>• Express the probability of an event as a fraction, a decimal or a percent;</li> <li>• Make predictions and express the probability of the results as a fraction, a decimal, and a percent with no more than 2 decimal places, or a percent.</li> </ul>	<p><u>2.7 Probability and Prediction</u></p> <ul style="list-style-type: none"> <li>• Choose combinations from a field of possible choices for a given situation;</li> <li>• Interpret what predictions were made for various problems;</li> <li>• Solve problems involving probability using experimental results and mathematical calculations;</li> <li>• Write the probability of an event as a percent;</li> <li>• Solve real-life situations that involve probability;</li> <li>• Find the validity of probability outcome;</li> <li>• Describe the difference between independent and dependent events;</li> <li>• Determine the number of outcomes;</li> <li>• Express the probability of an event as a fraction, a decimal or a percent;</li> <li>• Make predictions and express the probability of the results as a fraction, a decimal and a percent with no more than 2 decimal places.</li> </ul>

Grade 5	Grade 6	Grade 7	Grade 8
<ul style="list-style-type: none"> <li>• List all possible outcomes using a tree diagram, table or an organized list.</li> <li>• Predict and measure the likelihood of events and recognize that the results of an experiment may not match the predicted outcomes;</li> <li>• Determine the fairness of the design of a spinner;</li> <li>• Express probabilities as fractions and decimals;</li> <li>• Calculate the probability of a simple event;</li> <li>• Predict and determine why some outcomes are certain, more likely, less likely or impossible;</li> <li>• Find all possible combinations and arrangements involving a limited number of variables;</li> <li>• Determine possible outcomes of independent events;</li> <li>• Make predictions and express the probability as a fraction;</li> <li>• Write a descriptive paragraph to interpret data gathered through experimentation;</li> <li>• List all possible outcomes of an event (tree diagram);</li> <li>• Through exploration and experimentation, find the probability of a single event listing possible outcomes, such as certain, expected and impossible.</li> </ul>	<ul style="list-style-type: none"> <li>• Find the validity of probability outcome.</li> </ul>		

Grade 5	Grade 6	Grade 7	Grade 8
<p>2.8 <u>Algebra and Functions</u></p> <ul style="list-style-type: none"> <li>Recognize, reproduce, extend, create, and describe patterns, sequences and relationships verbally, numerically, symbolically and graphically, using a variety of materials;</li> <li>Connect patterns to geometric relations and basic number skills;</li> <li>Form rules based on patterns (an equation that relates pairs in a sequence);</li> <li>Use concrete objects and combinations of symbols and numbers to create expressions that model mathematical situations;</li> <li>Explain the use of combinations of symbols and numbers in expressions, equations and inequalities;</li> <li>Describe realistic situations using information given in equations, inequalities, tables or graphs;</li> <li>Illustrate a problem with physical objects, representational drawings, models, etc.</li> <li>Generalize the rule for a pattern;</li> <li>Given a one-step equation or inequality, write a story and interpret the solution within the context of the story; use the concept of variable.</li> </ul>	<p>2.8 <u>Algebra and Functions</u></p> <ul style="list-style-type: none"> <li>Generalize a relation from a pattern and represent it in a table, graph or rule: complete arithmetic or geometric sequences.</li> <li>Simplify numeric and algebraic expressions using order of operations: identify, compare and/or order integers; add, subtract, multiply and divide integers; evaluate expressions with exponents and grouping symbols.</li> <li>Identify properties of numbers as they relate to algebra (commutative, associative, distributive);</li> <li>Use a variable to represent: a set of numbers which follow a pattern; an unknown value in an equation.</li> <li>Develop understanding of balanced expressions (equations);</li> <li>Evaluate algebraic expressions, use formulas and solve linear equations: write and interpret expressions using variables; solve one-step equations (one variable); verify solutions to equations by using substitution.</li> </ul>	<p>2.8 <u>Algebra and Functions</u></p> <ul style="list-style-type: none"> <li>Create, describe and extend patterns;</li> <li>Write and solve simple algebraic expressions;</li> <li>Solve simple mathematical equations;</li> <li>Perform mathematical operations using manipulatives;</li> <li>Use an ordered pair to plot, describe and interpret a location on a coordinate plane;</li> <li>List function rules and create given data labels;</li> <li>Identify and extend an arithmetic sequence represented as a function table;</li> <li>Identify and extend a geometric sequence;</li> <li>Write an algebraic expression to represent unknown quantities;</li> <li>Evaluate algebraic expressions;</li> <li>Evaluate numeric expressions using the order of operations;</li> <li>Write equations and inequalities to represent relationships;</li> </ul>	<p>2.8 <u>Algebra and Functions</u></p> <ul style="list-style-type: none"> <li>Create, describe and extend patterns;</li> <li>Write and solve simple algebraic expressions;</li> <li>Solve simple mathematical equations;</li> <li>Perform mathematical operations using manipulatives;</li> <li>Use an ordered pair to plot, describe and interpret a location on a coordinate plane;</li> <li>List function rules and create given data labels;</li> <li>Determine the recursive relationship of arithmetic sequences represented in words, in a table or in a graph;</li> <li>Determine the recursive relationship of geometric sequences represented in words, in a table, or in a graph;</li> <li>Determine whether functions are linear or non linear when represented in words, in a table, symbolically or in a graph;</li> <li>Write an algebraic expression to represent unknown quantities;</li> <li>Evaluate an algebraic expression;</li> <li>Evaluate numeric expressions using the order of operations;</li> <li>Simplify algebraic expressions by combining like terms;</li> </ul>

Grade 5	Grade 6	Grade 7	Grade 8
<ul style="list-style-type: none"> <li>• Evaluate expressions which include parentheses for grouping numbers.</li> <li>• Solve for missing number in a number sentence;</li> <li>• Represent or analyze numeric patterns using skip counting;</li> <li>• Create a one operation (+ or -) function table to solve a real world problem;</li> <li>• Complete a function table using a one operation (+, -, x, / with no remainders) rule;</li> <li>• Describe the relationship that generates a one operation rule;</li> <li>• Generate a rule for the next level of the growing pattern;</li> <li>• Generate a rule for a repeating pattern;</li> <li>• Create a non numeric growing or repeating pattern;</li> <li>• Represent numeric quantities using operational symbols (+, -, x, / with no remainders);</li> <li>• Determine equivalent expressions;</li> <li>• Represent relationships by using relational symbols (&gt;, &lt;, =) and operational symbols (+, -, x, /) on either side;</li> <li>• Find the unknown in an equation with one operation;</li> </ul>	<ul style="list-style-type: none"> <li>• Graph points and equations on a rectangular coordinate system; Graph points on a number line; Identify and plot ordered pairs on a coordinate axis;</li> <li>Use a table to graph points. <ul style="list-style-type: none"> <li>• Solve and communicate solutions to interdisciplinary and real-world problems using patterns and functions;</li> </ul> </li> <li>• Use written and oral skills to describe probability;</li> <li>• Identify and describe sequences represented by a physical model or in a function table;</li> <li>• Interpret and write a rule for a one-operation (+, -, x, /) function table;</li> <li>• Complete a function table with a two operation rule;</li> <li>• Write an algebraic expression to represent unknown quantities;</li> <li>• Evaluate an algebraic expression;</li> <li>• Evaluate numeric expressions using the order of operations and whole numbers;</li> <li>• Represent algebraic expressions using physical models, manipulatives, and drawings;</li> <li>• Write equations and inequalities to represent relationships;</li> <li>• Determine the unknown in a linear equation;</li> </ul>	<ul style="list-style-type: none"> <li>• Determine the unknown in a linear equation;</li> <li>• Solve for the unknown in an inequality;</li> <li>• Identify or graph solutions of inequalities on a number line;</li> <li>• Identify equivalent equations;</li> <li>• Graph rational numbers on a number line;</li> <li>• Graph ordered pairs on a coordinate plane;</li> <li>• Graph linear equations with one operation in a coordinate plane;</li> <li>• Identify and describe the change represented in a table of values;</li> <li>• Describe the rate of change of a linear relationship by a table of values and a graph.</li> </ul>	<ul style="list-style-type: none"> <li>• Describe a real world situation represented by an algebraic expression;</li> <li>• Write equations or inequalities to represent relationships;</li> <li>• Solve for the unknown in a linear equation;</li> <li>• Solve for the unknown in an inequality;</li> <li>• Identify or graph solutions of inequalities on a number line;</li> <li>• Identify equivalent equations;</li> <li>• Apply given formulas to problem solving situations;</li> <li>• Locate points on a number line and in a coordinate graph;</li> <li>• Graph linear equations in a coordinate plane;</li> <li>• Determine the slope of a graph in a linear equation;</li> <li>• Determine the slope of a graph in a linear relationship.</li> </ul>

Grade 5	Grade 6	Grade 7	Grade 8
<ul style="list-style-type: none"> <li>• Represent mixed numbers and proper fractions on a number line;</li> <li>• Identify positions in a coordinate plane;</li> <li>• Represent decimals on a number line;</li> <li>• Identify properties of angles using manipulatives and pictures;</li> <li>• Identify and describe angles in relationship to another angle;</li> <li>• Identify parallel and intersecting line segments;</li> <li>• Compare and classify angles in geometric figures and pictures;</li> <li>• Identify cones, cylinders, prisms and pyramids;</li> <li>• Describe solid geometric figures by the number of edges, faces or vertices;</li> <li>• Compare a plane figure to surfaces of solid geometric figures;</li> <li>• Identify and describe the results of translations, reflections, and rotations;</li> <li>• Express the probability as a fraction;</li> <li>• Recognize, reproduce, extend, create and describe patterns, sequences and relationships verbally, numerically, symbolically, and graphically using a variety of materials;</li> </ul>	<ul style="list-style-type: none"> <li>• Solve for the unknown in a one step inequality;</li> <li>• Identify or graph solutions of a one step inequality on a number line;</li> <li>• Apply given formulas to problem solving function tables;</li> <li>• Graph rational numbers on a number line;</li> <li>• Graph ordered pairs in a coordinate plane;</li> <li>• Graph linear data from a function table;</li> <li>• Identify and describe the change represented in a graph;</li> <li>• Translate the graph of a linear relationship onto a table of values that illustrates the type of change;</li> <li>• Create, describe and extend patterns;</li> <li>• Write and solve simple algebraic expressions;</li> <li>• Solve simple mathematical equations;</li> <li>• Perform mathematical operations using manipulatives;</li> <li>• Use an ordered pair to plot, describe and interpret a location on a coordinate plane;</li> <li>• List function rules and create given data labels.</li> </ul>		

Grade 5	Grade 6	Grade 7	Grade 8
<ul style="list-style-type: none"> <li>• Connect patterns to geometric relations and basic number skills;</li> <li>• Substitute missing addend or factor in a number sentence;</li> <li>• Use concrete objects and combinations of symbols and numbers to create expressions that model mathematical situations;</li> <li>• Explain the use of combinations of symbols and expressions, equations and inequalities;</li> <li>• Describe realistic situations using information given in equations, inequalities, tables or graphs;</li> <li>• Use parentheses to evaluate a numeric expression;</li> <li>• Gather information and display it in the form of a table or chart;</li> <li>• Locate and identify points on a coordinate system;</li> <li>• Interpret and write a rule for a one operation (+, -, x, / with no remainders) table;</li> <li>• Determine approximate product and quotient of whole numbers;</li> <li>• Complete a one operation (+, -, x, / with no remainders) function table;</li> <li>• Apply a given two operation rule for a pattern;</li> <li>• problem-solving strategy used.</li> </ul>			

Grade 5	Grade 6	Grade 7	Grade 8
<ul style="list-style-type: none"> <li>• Represent unknown quantities with one unknown and one operation (+, -, x, / with no remainders);</li> <li>• Evaluate algebraic expressions with one unknown, one operation and whole numbers;</li> <li>• Represent relationships by using the appropriate relational symbols (&lt;, &gt;, =) and one operational symbol (+, -, x, / with no remainders) on either side;</li> <li>• Find the unknown in an equation with one operation (+, -, x, / with no remainders);</li> <li>• Represent decimals and mixed numbers on a number line;</li> <li>• Create a graph in a coordinate plane;</li> <li>• Compare numerical and non-numerical patterns, generalize the rule for the pattern using both a verbal description and mathematical symbols;</li> <li>• Given a functional relationship, describe how a change in one variable results in a change in the other variable; generalize the pattern;</li> <li>• Given a function table, write a rule using both a verbal description and mathematical symbols;</li> </ul>			

<b>Grade 5</b>	<b>Grade 6</b>	<b>Grade 7</b>	<b>Grade 8</b>
<ul style="list-style-type: none"><li>Given a story, write a two-step equation of inequality and solve it; interpret the solution within the context of the story; describe the problem solving strategy used.</li></ul>			

Grade 5	Grade 6	Grade 7	Grade 8
<p>2.9 <u>Geometry</u></p> <ul style="list-style-type: none"> <li>Classify and compare triangles and quadrilaterals according to size or angles;</li> <li>Identify and measure circles, their diameters and their radii;</li> <li>Describe in words how geometric shapes are constructed;</li> <li>Construct two and three dimensional shapes and figures using manipulatives, geoboards and computer software;</li> <li>Find familiar solids in the environment and describe them;</li> <li>Create an original tessellation;</li> <li>Describe the relationship between the perimeter and the area of triangles, quadrilaterals and circles;</li> <li>Represent and use concepts of line, point and plane;</li> <li>Define the basic properties of squares, pyramids, parallelograms, trapezoids, polygons, rectangles, rhombi, circles, triangles, cubes, prisms, spheres and cylinders;</li> <li>Analyze simple transformations of geometric figures and rotations of line segments;</li> <li>Identify properties of geometric figures (parallel, perpendicular, similar, congruent, symmetrical);</li> </ul>	<p>2.9 <u>Geometry</u></p> <ul style="list-style-type: none"> <li>Estimate and determine the perimeter of polygons and the circumference of circles: find the perimeter of polygons; use manipulatives and tools of geometry to determine the circumference of a circle; determine the circumference of a circle using Pi on the calculator.</li> <li>Estimate and determine the area of polygons: use manipulatives, measuring, partitioning, and formulas to find the area of regular and irregular polygons; calculate the area of triangles, rectangles, squares and circles.</li> <li>Estimate and determine the volume and surface area of solids: use manipulatives, graph paper, etc., to illustrate the concepts of volume and surface area of solids; calculate the volume and surface area of a rectangular solid.</li> <li>Describe and classify two and three dimensional figures by their properties: describe and classify angles, triangles, circles, quadrilaterals, and rectangular solids.</li> <li>Determine angle measure, using direct and indirect measurements;</li> </ul>	<p>2.9 <u>Geometry</u></p> <ul style="list-style-type: none"> <li>Construct, label, name and describe points, lines and planes and their relationships;</li> <li>Draw lines, line segments and angles;</li> <li>Make a distinction between supplementary and complementary angles;</li> <li>Distinguish between the various polygons with their various shapes and angles;</li> <li>Show the relationship between 2D and 3D figures;</li> <li>Recognize and locate triangles, quadrilaterals, circles, prisms, cylinders, and cones;</li> <li>Identify and describe angles formed by intersecting lines, line segments, and rays;</li> <li>Identify angles formed when two parallel lines are cut by a transversal;</li> <li>Identify the parts of right triangles;</li> <li>Determine a missing angle measure using the sum of the interior angles of polygons;</li> <li>Determine the measures of angles formed by intersecting lines, line segments, and rays;</li> </ul>	<p>2.9 <u>Geometry</u></p> <ul style="list-style-type: none"> <li>Construct, label, name and describe points, lines and planes and their relationships;</li> <li>Draw lines, line segments and angles;</li> <li>Make a distinction between supplementary and complementary angles;</li> <li>Distinguish between the various polygons with their various shapes and angles;</li> <li>Show the relationship between 2D and 3D figures;</li> <li>Recognize and locate triangles, quadrilaterals, circles, prisms, cylinders, and cones;</li> <li>Identify and describe relationships between angles formed when parallel lines are cut by a transversal;</li> <li>Identify and describe the relationship among the parts of a right triangle;</li> <li>Determine the measures of angles formed by parallel lines cut by a transversal;</li> <li>Apply right angle concepts to solve real world problems;</li> <li>Determine whether three given side lengths form a right triangle;</li> <li>Draw quadrilaterals;</li> </ul>

Grade 5	Grade 6	Grade 7	Grade 8
<ul style="list-style-type: none"> <li>• Draw a polygon, given its name and dimensions;</li> <li>• Complete geometric analogies;</li> <li>• Identify and create tessellations and other geometric patterns;</li> <li>• Describe the characteristics of a rectangular prism, pyramid, cube, sphere, cylinder, and cone.</li> <li>• Plot points on a grid and connect to determine if resultant figures are congruent, similar, or symmetric (angles and polygons).</li> <li>• Describe the relationship between points, lines, line segments, rays, intersecting lines, parallel lines, perpendicular lines, and diagonal lines.</li> <li>• Distinguish among angles: acute, obtuse, and right.</li> <li>• Distinguish among triangles: isosceles, right, scalene, and equilateral.</li> <li>• Distinguish among equilaterals.</li> <li>• Identify a radius and diameter of a circle, and find the length of one given the other.</li> <li>• Construct a circle, given its radius;</li> <li>• Identify and draw lines of symmetry in geometric figures;</li> <li>• Identify and distinguish between 1, 2 and 3 dimensional figures and their properties;</li> </ul>	<ul style="list-style-type: none"> <li>• Draw and construct basic geometric figures using tools and/or technology:</li> <li>Construct line segments, parallel lines and angles;</li> <li>Bisect a line segment, angle;</li> <li>Draw a triangle, circle, quadrilateral and rectangular solid.</li> <li>• Apply properties of similarity, parallelism, and perpendicularity to problem situations:</li> <li>Identify congruent and similar figures;</li> <li>Identify corresponding parts of congruent and similar figures.</li> <li>• Communicate orally and in writing the characteristics of two and three dimensional figures;</li> <li>• Identify, describe and label points, lines, rays, line segments, vertices, angles and planes using correct symbolic notation;</li> <li>• Identify and describe line segments;</li> <li>• Identify and describe the parts of a circle;</li> <li>• Compare and classify triangles by sides;</li> <li>• Compare and classify triangles by angle measure;</li> <li>• Determine a third angle measure of a triangle given two angle measures;</li> </ul>	<ul style="list-style-type: none"> <li>• Describe the relationship between the legs and hypotenuse of right triangles;</li> <li>• Construct geometric figures using a variety of construction tools;</li> <li>• Determine the congruent parts of polygons;</li> <li>• Identify and describe similar polygons and their corresponding parts;</li> <li>• Identify, describe and plot the results of one transformation on a coordinate plane;</li> <li>• Identify and describe transformations that result in rotational and reflectional symmetry.</li> </ul>	<ul style="list-style-type: none"> <li>• Construct perpendicular line segments;</li> <li>• Construct triangles;</li> <li>• Determine similar parts of polygons;</li> <li>• Identify, describe, and plot the results of multiple transformations on a coordinate plane.</li> </ul>

Grade 5	Grade 6	Grade 7	Grade 8
<ul style="list-style-type: none"> <li>• Name and label triangles and quadrilaterals according to sides or angles;</li> <li>• Construct 2 and 3 dimensional shapes and figures using manipulatives, geo-boards, and computer software;</li> <li>• Identify and measure circles, their diameters and radii;</li> <li>• Identify familiar geometric figures in the environment;</li> <li>• Create an original tessellation;</li> <li>• Identify and draw lines of symmetry in geometric figures;</li> <li>• Describe the relationship between the perimeter and area of triangles, quadrilaterals, and circles;</li> <li>• Define the basic properties of squares, pyramids, parallelograms, quadrilaterals, trapezoids, polygons, rectangles, rhombi, circles, triangles, cubes, prisms, spheres, and cylinders;</li> <li>• Identify and describe relationships of lines and line segments in geometric figures or pictures;</li> <li>• Identify and describe the radius and diameter of a circle;</li> <li>• Identify polygons within a composite figure;</li> </ul>	<ul style="list-style-type: none"> <li>• Identify and compare the relationship between parts of a circle;</li> <li>• Draw geometric figures using a variety of tools;</li> <li>• Identify, describe or draw a polygon;</li> <li>• Identify or describe angle relationships;</li> <li>• Identify and describe congruent polygons and their corresponding parts;</li> <li>• Plot the result of one transformation (translation, reflection, rotation) on a coordinate plane;</li> <li>• Construct, label, name and describe points, lines and planes and their relationships;</li> <li>• Draw lines, line segments and angles</li> <li>• Make a distinction between supplementary and complementary angles;</li> <li>• Distinguish the difference between the various polygons with their various shapes and angles;</li> <li>• Show the relationship between 2D and 3D figures;</li> <li>• Recognize and locate triangles, quadrilaterals, circles, prisms, cylinders, and cones.</li> </ul>		

Grade 5	Grade 6	Grade 7	Grade 8
<ul style="list-style-type: none"> <li>• Compare or classify quadrilaterals by length of sides and measures of angles (include the angle symbol <math>\angle ABC</math>)</li> <li>• Compare triangles by sides;</li> <li>• Identify and classify pyramids and prisms by the number of edges, faces or vertices;</li> <li>• Identify and classify pyramids and prisms by the base;</li> <li>• Compare a plane figure to surfaces of a solid geometric figure;</li> <li>• Identify, describe, and draw angles, parallel line segments, and perpendicular line segments;</li> <li>• Identify or describe geometric figures as similar;</li> <li>• Analyze translations, reflections, and rotations of geometric figures;</li> <li>• Perform transformations on a plane figure (rotations, translations, reflections, expansions/contractions using a coordinate system);</li> <li>• Discuss congruency and symmetry as they apply to angles and polygons;</li> <li>• Define, measure to the nearest degree, and classify right angles, obtuse angles, straight angles and acute angles;</li> </ul>			

Grade 5	Grade 6	Grade 7	Grade 8
<ul style="list-style-type: none"> <li>• Construct a circle, given its radius or diameter;</li> <li>• Identify and describe characteristics of solid and plane figures;</li> <li>• Distinguish among kinds of angles, triangles and quadrilaterals.</li> </ul>			

<b>Grade 5</b>	<b>Grade 6</b>	<b>Grade 7</b>	<b>Grade 8</b>
<u>2.10 Trigonometry</u> <ul style="list-style-type: none"> <li>• Identify right angles in the environment;</li> <li>• Create right triangles on a geoboard;</li> <li>• Identify and compare parts of right triangles, including right angles, acute angles, hypotenuses and legs.</li> </ul>	<u>2.10 Trigonometry</u> <ul style="list-style-type: none"> <li>• Select right triangles from an assortment of triangles using real and scale models.</li> </ul>	<u>2.10 Trigonometry</u> <ul style="list-style-type: none"> <li>• Select right triangles from an assortment of triangles using real and scale models.</li> </ul>	<u>2.10 Trigonometry</u> <ul style="list-style-type: none"> <li>• Select right triangles from an assortment of triangles using real and scale models.</li> </ul>

<b>Grade 5</b>	<b>Grade 6</b>	<b>Grade 7</b>	<b>Grade 8</b>
<p><u>2.11 Concepts of Calculus</u></p> <ul style="list-style-type: none"> <li>• Make comparisons of numbers, such as more, less, same as, least, most, greater than, and less than;</li> <li>• Identify least and greatest values represented in bar and circle graphs;</li> <li>• Identify maximum and minimum;</li> <li>• Continue pattern of numbers or objects that could be extended infinitely;</li> <li>• Describe the relationship between rates of change and time;</li> <li>• Estimate areas and volumes as the sums of areas of tiles and volumes of cubes;</li> <li>• Describe the relationship between the size of the unit of measurement and the estimate of the areas and volumes.</li> </ul>	<p><u>2.11 Concepts of Calculus</u></p> <ul style="list-style-type: none"> <li>• Recognize least and greatest values shown in a variety of graphs;</li> <li>• Compare numbers and real-life quantities using ordering symbols which include <math>&gt;</math>, <math>&lt;</math>, <math>\geq</math>, <math>\leq</math>;</li> <li>• Compare rates of change.</li> </ul>	<p><u>2.11 Concepts of Calculus</u></p> <ul style="list-style-type: none"> <li>• Recognize least and greatest values shown in a variety of graphs;</li> <li>• Compare numbers and real-life quantities using ordering symbols which include <math>&gt;</math>, <math>&lt;</math>, <math>\geq</math>, <math>\leq</math>;</li> <li>• Compare rates of change.</li> </ul>	<p><u>2.11 Concepts of Calculus</u></p> <ul style="list-style-type: none"> <li>• Recognize least and greatest values shown in a variety of graphs;</li> <li>• Compare numbers and real-life quantities using ordering symbols which include <math>&gt;</math>, <math>&lt;</math>, <math>\geq</math>, <math>\leq</math>;</li> <li>• Compare rates of change.</li> </ul>