



ISS Course Syllabus

Grade 7 (Pre-Algebra)	Grade 8 (Algebra 1)	Grade 9 (Algebra 1)
<p>January</p> <hr/> <p>Sets and Numbers</p> <ul style="list-style-type: none"> . Set concept and operations . Early number systems . Decimal number systems . Factors and multiples 	<hr/> <p>Fractions and Per cents</p> <ul style="list-style-type: none"> . Multiplication of fractions . Division of fractions . Fraction as per cents . Per cent exercises 	<hr/> <p>Algebraic Factors</p> <ul style="list-style-type: none"> . Greatest common factor . Binomial factors . Complete factorization . Word problems
<p>February</p> <hr/> <p>Fractions</p> <ul style="list-style-type: none"> . Like denominators . Unlike denominators . Decimal fractions . Word problems 	<hr/> <p>Statistics & Graphs</p> <ul style="list-style-type: none"> . Statistical measures . Types of graphs . Simple probabilities . And -or statements 	<hr/> <p>Algebraic Fractions</p> <ul style="list-style-type: none"> . Operations with fractions . Solving equations . Solving inequalities . Solving word problems
<p>March</p> <hr/> <p>Fractions</p> <ul style="list-style-type: none"> . Common fractions . Decimal fractions . Per cents . Word problems 	<hr/> <p>Integers</p> <ul style="list-style-type: none"> . Basic concepts . Addition & subtraction . Multiplication & division . Expressions & sentences 	<hr/> <p>Radical Expressions</p> <ul style="list-style-type: none"> . Rational & irrational numbers . Operations with radicals . Irrational roots . Radical equations

<p>April</p> <hr/> <p>Formulas & Ratios</p> <ul style="list-style-type: none"> . Writing formulas . A function machine . Equations . Ratio & proportions 	<p>Formulas & Geometry</p> <ul style="list-style-type: none"> . Square roots . Perimeter, circumference & areas . Rectangular solids . Cylinder, cone & sphere 	<p>Graphing</p> <ul style="list-style-type: none"> . Equations of two variables . Graphing lines . Graphing inequalities . Equations of lines
<p>Grade 10 (Geometry)</p> <p>January</p> <hr/> <p>Similar Polygon</p> <ul style="list-style-type: none"> . Ratio & proportions . Definitions & similarity . Similar polygons & triangles . Right angle geometry 	<p>Grade11 (Algebra 2)</p> <hr/> <p>Radical Expressions</p> <ul style="list-style-type: none"> . Multiplying & dividing fractions . Adding & subtracting fractions . Equations with fractions . Applications of fractions 	<p>Grade12 (Pre-Calculus)</p> <hr/> <p>Identities & Functions</p> <ul style="list-style-type: none"> . Reciprocal relations . Pythagorean relations . Trigonometric identities . Sum and difference formulas
<p>February</p> <hr/> <p>Circles</p> <ul style="list-style-type: none"> . Circles and spheres . Tangents, arcs and chords . Special angles in circles . Special segments in circles 	<p>Real Numbers</p> <ul style="list-style-type: none"> . Rational & irrational numbers . Laws of radicals . Quadratic equations . Quadratic formulas 	<p>Trigonometric Functions</p> <ul style="list-style-type: none"> . Trigonometric functions . Law of cosines . Law of sines . Applied problems
<p>March</p> <hr/> <p>Construction & Locus</p> <ul style="list-style-type: none"> . Basic constructions . Triangles and circles . Polygons . Locus meaning and use 	<p>Quadratic Relations</p> <ul style="list-style-type: none"> . Distance formulas . Conic sections . Systems of equations . Application of conic sections 	<p>Trigonometric Functions</p> <ul style="list-style-type: none"> . Inverse functions . Graphing polar coordinates . Converting polar coordinates . Graphing polar equations

April

Area & Volumes

- . Area of polygons
- . Area of circles
- . Surface areas of solids
- . Volume of solids

Exponential Functions

- . Exponents
- . Exponential equations
- . Logarithmic functions
- . Matrices

Quadratic Equations

- . Conic sections
- . Circle and ellipse
- . Parabola and hyperbola
- . Transformations