



Prerequisite: Level 2 or greater in Grade 8 Math

Text Book: Pearson Math 9

Unit 1 – Numbers and Operations (Pearson 4.3, Supplement)

- Integers and Rational Numbers
- Number forms: Percents, Fractions, Decimals
- Natural Number Exponents
- Squaring and Square Rooting
- Order of Operations
- Ratios and Unit Rates

Unit 2 – Algebra (Pearson 7.1 – 7.6)

- Substitution and Evaluating for variables in the 1st degree and 3rd degree
- Simplify Expressions (3rd degree of 1 variable)
- Simplify Expressions (3rd degree, 1 variable multiplication of monomials with polynomials)

Unit 3 – Equations (Pearson 6.7, 7.7, 4.1, 4.2, 4.4 – 4.6)

- Solve Simple Equations
- Solve Equations with Brackets
- Proportion Problems
- Percentage Problems

Unit 4 – Angle Geometry (Pearson 1.2, 3.1 – 3.5)

- Pythagoras and Applications
- Properties of Relationships of Interior and Exterior Angles of a Triangles, Quads, and Polys
- Angles Formed by Parallel Lines with Transversal Lines

Unit 5 – Relationships (Pearson 5.1 – 5.3, 5.5, 5.6)

- Construct Scatter Plots and Lines of Best Fits
- Interpret the meaning of points on a scatter plot
- Relationships between two variables
- Make Inferences in Data and Explain Differences in Data and Outliers
- Describe Trends and Relationships in Data
- Describe a Situation Given a Graph

Unit 6– Linear Relationships (Pearson 5.4, 6.1 -6.6, 6.8 - 6.10)

- Co-ordinate Plane
- Defining Linear through graphs, tables, first differences and Eqn
- Compare Properties of Direct and Partial Variation (Initial Values)
- Properties of Linear Relations: Rate of Change and Constant
- Calculating Rates of Change
- Representations of Constant of Change (50 +5p)
- Determine Values for Linear Relations Using a Table of Values, an Equation, a Graph
- Express a Linear Relation as an Equation in Two Variables (Rate of Change + Initial Value)
- Solve by Graphing and Applications
- Describe Effects on a Linear Graph by Changing Conditions of the Question

Unit 7 – Measurement of Plane and Solid Figures (Pearson 1.3 – 1.8, 2.1 – 2.5)

- Areas and Perimeters of 2D Composite Figures
 - Determine Maximum Area of rectangle for Fixed Perimeter and Applications
 - Determine Minimum Perimeter of rectangle Given Fixed Area and Applications
 - Develop Formulas For Volume of Pyramid, Cone, Sphere (Relate V_{cone} to $1/3 V_{\text{Prism}}$)
 - Applications of Volumes of Prisms, Pyramids, Cylinders, Cones and Spheres
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Evaluation:

Assessment Method	Achievement Categories				Total
	Knowledge/ Understanding	Thinking/Inquiry/ Problem Solving	Communication	Application	
Unit Tests	20.0%	10.0%	5.0%	10.0%	45.0%
Assignments	8.0%	5.0%	5.0%	7.0%	25.0%
Alternate Summative	2.0%	3.0%			5.0%
Exam - EQAO			2.0%	3.0%	5.0%
Exam	10.0%	2.0%	3.0%	5.0%	20.0%
Total	40.0%	20.0%	15.0%	25.0%	100.0%

Test Policy: Refer to the Banting Memorial High School Mathematics Department Test Policy
