

MATHEMATICS 9
COURSE OUTLINE: 2023- 2024



TEACHERS: D. Harding & C. Sheasgreen

TEXT: *Math Makes Sense 9* (available in TEAMS)

TECHNOLOGY:

- Microsoft Teams
 - All copies of lessons, homework and assignments will be posted here daily.
- School Website (www.mvhs.nbed.nb.ca) under “Teacher Pages” click on your teacher’s name
 - Updates on course work & upcoming assessments will be provided here weekly.

MATERIALS:

- a scientific calculator (**MUST** have your own, **NO cell phones or tablets during class**)
- a binder with loose-leaf and graph paper for notes, homework, evaluations, etc.
- pencils, erasers and a ruler

ATTENDANCE:

- Students will be expected to maintain excellent attendance. If a student is absent from class, they are expected to log into TEAMS, PRIOR to returning to class, and ATTEMPT all lessons and assignments posted for corresponding days missed.
- If a student misses a test, it will be the responsibility of the student to present a satisfactory written excuse and to arrange to write the test on their own time.
- To be eligible for academic incentives, students must miss 7 or fewer classes & have a passing grade going into the exam. 3 lates = 1 absence

TOPICS:

UNIT 1: Rational Numbers (Chapter 3)	UNIT 6: Linear Relations (Chapter 4)
UNIT 2: Square Roots and Surface Area (Chapter 1)	UNIT 7: Similarity & Transformations (Chapter 7)
UNIT 3: Powers and Exponents Laws (Chapter 2)	UNIT 8: Circle Geometry (Chapter 8)
UNIT 4: Polynomials (Chapter 5)	UNIT 9: Probability & Statistics (Chapter 9)
UNIT 5: Linear Equations and Inequalities (Chapter 6)	

****See Page 2 for the “Required Curriculum Outcomes” for the 2023-2024 school year****

EVALUATION:		ACADEMIC INCENTIVE EVALUATION:	
Summative Assessments	70%	Summative Assessments	85% OR 50%
Final Assessment	30%	Final Assessment	15% OR 50%
A mark of <u>60%</u> is required to receive a passing grade.			

MATH HELP CENTRE:

This year, extra help will be offered to all grade 9 and 10 math students in room 4142.

- **Hours of operation**
 - *Monday, Tuesday, Wednesday & Thursday* **12: 25 – 12:55**

Mathematics 9

The curriculum document can be accessed [here](#) / Le programme d'études est accessible [ici](#).

Required Outcomes	Remaining Outcomes
<p>N1: Demonstrate an understanding of powers with integral bases (excluding base 0) and whole number exponents by: representing repeated multiplication using powers; using patterns to show that a power with an exponent of zero is equal to one; solving problems involving powers.</p> <p>N2: Demonstrate an understanding of operations on powers with integral bases (excluding base 0) and whole number exponents.</p> <p>N3: Demonstrate an understanding of rational numbers by: comparing and ordering rational numbers; solving problems that involve arithmetic operations on rational numbers.</p> <p>N5: Determine the square root of positive rational numbers that are perfect squares.</p> <p>PR1: Generalize a pattern arising from a problem-solving context using linear equations and verify by substitution.</p> <p>PR2: Graph linear relations, analyze the graph and interpolate or extrapolate to solve problems.</p> <p>PR3: Model and solve problems using linear equations, pictorially and symbolically.</p> <p>PR6: Model, record and explain the operations of addition and subtraction of polynomial expressions, pictorially and symbolically (limited to polynomials of degree less than or equal to 2).</p> <p>PR7: Model, record and explain the operations of multiplication and division of polynomial expressions (limited to polynomials of degree less than or equal to 2) by monomials, pictorially and symbolically.</p> <p>SS2: Determine the surface area of composite 3-D objects to solve problems.</p> <p>SS3: Demonstrate an understanding of similarity of polygons.</p> <p>SS4: Draw and interpret scale diagrams of 2-D shapes.</p>	<p>N4: Explain and apply the order of operations, including exponents, with and without technology.</p> <p>N6: Determine an approximate square root of positive rational numbers that are non-perfect squares.</p> <p>PR4: Explain and illustrate strategies to solve single variable linear inequalities with rational coefficients within a problem-solving context.</p> <p>PR5: Demonstrate an understanding of polynomials (limited to polynomials of degree less than or equal to 2).</p> <p>SS1: Solve problems and justify the solution strategy using circle properties, including: the perpendicular from the centre of a circle to a chord bisects the chord; the measure of the central angle is equal to twice the measure of the inscribed angle subtended by the same arc; the inscribed angles subtended by the same arc are congruent; a tangent to a circle is perpendicular to the radius at the point of tangency.</p> <p>SS5: Demonstrate an understanding of line and rotation symmetry.</p> <p>SP1: Describe the effect of: bias; use of language; ethics; cost; time and timing; privacy; cultural sensitivity on the collection of data.</p> <p>SP2: Select and defend the choice of using either a population or a sample of a population to answer a question.</p> <p>SP3: Construct, label, and interpret histograms to solve problems.</p> <p>SP4: Develop and implement a project plan for the collection, display and analysis of data by: formulating a question for investigation; choosing a data collection method that includes social considerations; selecting a population or a sample; collecting the data; displaying the collected data in an appropriate manner drawing conclusions to answer the question.</p> <p>SP5: Demonstrate an understanding of the role of probability in society.</p>