**~** **Mathematics 9: Course Outline ~**

Musquodoboit Rural High School

Welcome to Mathematics 9. Please keep this outline in a safe place so you may refer back to it throughout the year.

**Teacher Contact:**

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**MRHS** ~ Web-page: [mrh.hrsb.ca/](http://mrh.hrsb.ca/)

**Room:** 1208

**Phone Number:** (902)-384-2320 EXT 780-1208

**Email:** bakerm@hrsb.ca

**Attendance:** Attendance is the most important aspect to understand content, completing assignments and meeting the course outcomes. If you miss a class, it is up to you to get caught up on the lesson / work either through myself, a classmate or the web-page. All assignments and class notes / resources will be listed under each course on the course web-page. All due dates will be posted in class.

**Assessment** is the process of gathering, from a variety of sources, information that accurately reflects how well a student is achieving the learning outcomes in a course.

* **Formative Assessment** is to show student and teacher where we are in the class, determine student needs / gaps and to plan next steps in instructions.
* **Summative Assessment** is to determine the extent to which learning has occurred for students.

**Evaluation** is the process of analyzing, reflecting upon and summarizing assessment information and making judgements . decisions based on the information gathered and learned.

**Learning & Assessment Strategies that may be used in Mathematics 9:**

* Tests / Quizzes / Unit Project
* Assignments / Worksheets / Activities
* Research / Posters / Presentations
* Homework Checks / Group Work / Class Participation
* Active Listening / Observations / Journals / Reflections
* Entrance / Exit Tickets

Students will receive multiple opportunities to demonstrate understanding of course outcomes throughout the year using a variety of assessment tools listed above. Assignments and marks will be entered into powerschool under each specific unit making up class grade.

**Missed Assignments:** It is important for all assignments to be completed and handed in by the due dates posted in class. If you think you are not going to meet a due date, it is up to the student to make contact (either email or direct conversation) with the teacher to request an extension before the due date has arrived. (Extensions will not be given without valid reason). Students who do not adhere to deadlines or extended deadlines as discussed by teacher and student will have missed the opportunity to hand in that assignment. If a due date for an assignment is missed and no contact has been made prior to the due date, it will be at the discretion of the teacher to extend the deadline and accept the work past the due date.

**The major units for this course are outlined below:**

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|  | **Topic** | **%** |
| **Unit 1** | **Square Roots and Surface Area** | **11%** |
|  | Determine the exact square root of positive rational numbers. |  |
|  | Determine an approximate square root of positive rational numbers.  |  |
|  | Determine the surface area of composite 3-D objects to solve problems.  |  |
| **Unit 2** | **Powers and Exponent Laws** | **11%** |
|  | Demonstrate an understanding of powers with integral bases and whole number exponents. |  |
|  | Operations with exponents and Power laws. |  |
|  | Apply order of operations with and without technology. |  |
| **Unit 3** | **Rational Numbers** | **11%** |
|  | What are Rational Numbers? |  |
|  | Comparing and ordering rational numbers. |  |
|  | Solving problems that involve arithmetic operations on rational numbers.  |  |
|  | Apply order of operations with and without technology to rational numbers.  |  |
| **Unit 4** | **Linear Relations** | **11%** |
|  | Use an equation to solve a pattern and predict future patterns. |  |
|  | Verifying our answers when using an equation. |  |
|  | Use linear equations to problem solve. |  |
|  | Relate one set of numbers to another using tables or graphs and understand how they may relate. |  |

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| **Unit 5** | **Polynomials** | **11%** |
|  | Modeling Polynomials |  |
|  | Like terms and unlike terms |  |
|  | Adding/subtracting polynomials |  |
|  | Multiplying and dividing a polynomial by a constant and by a monomial C.  |  |
| **Unit 6** | **Linear Equations and Inequalities** | **11%** |
|  | Modeling solving equations by using inverse operations. |  |
|  | Solving equations by using balance strategies. |  |
|  | Introduction to linear inequalities.  |  |
|  | Solving linear inequalities by using addition and subtraction. |  |
|  | Solving linear inequalities by using multiplication and division. |  |
| **Unit 7** | **Similarity and Transformations** | **11%** |
|  | Scale diagrams and enlargements / reductions.  |  |
|  | Similar polygons / triangles |  |
|  | Reflections and line symmetry |  |
|  | Rotations and rotational symmetry |  |
|  | Identifying types of symmetry on the cartesian plane.  |  |
| **Unit 8** | **Circle Geometry** | **11%** |
|  | Properties of tangents to a circle. |  |
|  | Properties of chords in a circle. |  |
|  | Properties of angels in a circle.  |  |

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| **Unit 9** | **Statistics and Probability** | **11%** |
|  | Probability in society. |  |
|  | Potential problems with collecting data. |  |
|  | Using samples and populations to collect data |  |
|  | Selecting a sample |  |
|  | Displaying data.  |  |

**Course Supplies:**

* 3-ringed binder / loose leaf
* Calculator / ruler / graph paper
* pencils
* You may at times want to have other supplies including colours and highlighters.

It is really important to keep all course material including notes and assignments organized in a class binder.

**Tests:** There will be a test at the end of each unit which will cover the whole unit material and outcomes. Review material will be assigned in class and posted to my webpage. There will also be a final year end exam in this course. The exam will be worth 10% of the final mark and each semester will be worth 30% of the final mark.

**To be successful in this class you must:**

1. Come to class on time.
2. Positive participation and cooperate in class activities.
3. Complete all course material and assessments by the due dates.
4. Show respect to all people in the class ~ staff, students, and yourself
5. Keep an organized binder, and bring it to every class.
6. Leave your electronic devices away ~ Cell phones will be held in a safe classroom box if they are distracting student learning.

**Communication:**

If you have any difficulties, please talk to me about the problem right away. Communication is a key part to success, so letting me know about an issue early can help solve the problem. Communication methods may include: course web-page, powerschool, phone calls, emails, communication logs, report cards, curriculum night **(September 15)** and parent-teacher interviews **(November 23, November 24, April 26 and April 27).**

**Website:**

The class website listed at the top of the outline will provide students and parents with a list of assignments and notes throughout the course. The website is update regularly.

**Extra help** sessions will always be made available at lunch or recess by requests.

Together, we will make this a very positive and productive year. Please feel free to contact me at your convenience with any questions or concerns. Thank you for taking the time to read through this outline, I look forward to a successful year!

**Mathematics 9**

**Student Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Student Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Parent Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**