



MPM 1D – Grade 9 Academic Mathematics

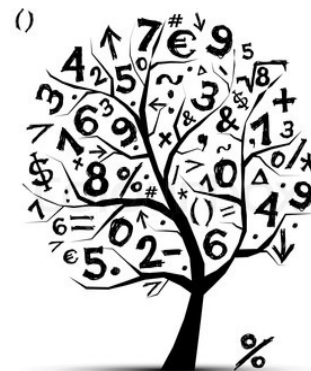
Teacher: Ms. B. McElroy

Prerequisite: None

Textbook: Principles of Mathematics 9, (Nelson, 2008)

Replacement Cost: \$85

MINISTRY DOCUMENT: The Ontario Curriculum, Grades 9 and 10 Mathematics (revised), 2005.
<http://www.edu.gov.on.ca/eng/curriculum/secondary/math910curr.pdf>



Course Description

This course enables students to develop an understanding of mathematical concepts related to algebra, analytic geometry, and measurement and geometry through investigation, the effective use of technology, and abstract reasoning.

Students will:

- investigate relationships, which they will then generalize as equations of lines, and will determine the connections between different representations of a linear relation
- explore relationships that emerge from the measurement of three-dimensional figures and two-dimensional shapes
- reason mathematically and communicate their thinking as they solve multi-step problems

Overall Expectation

The *Ontario Curriculum Grades 9 and 10: Mathematics* identifies overall expectations, which describe in general terms the knowledge and skills that students are expected to demonstrate by the end of this course. This course is broken down into four different strands: **Number Sense and Algebra, Linear Relations, Analytic Geometry, and Measurement and Geometry.**

How This Course Supports the Ontario Catholic School Graduate Expectations

Students will apply Christian values to pose and solve problems, to make logical decisions, and to become critical thinkers who share their abilities for the benefit of all in their classroom and school community. A supportive mathematics classroom provides a caring and sensitive environment where the dignity and value of all students is respected and affirmed, as they grow in confidence in their mathematical abilities. Mathematical investigations will promote a respect for God's Creation and an understanding of the need to use resources wisely.

Units of Study

Unit #	Title	Approx. Time
1	Numeracy Review	7 classes
2	Powers and Polynomials	10 classes
3	Solving Equations	9 classes
4	Equation of a Line	13 classes
5	Analytic Geometry	7 classes
6	Linear Relations	9 classes
7	Geometry	7 classes
8	Measurement	11 classes

Your Report Card Grade will be determined as follows:

<p>Term work: 70% of your grade will be based on all of the evidence you have provided. It will reflect your most consistent level of achievement with special consideration given to more recent evidence.</p>	<p>Knowledge & Understanding: Knowledge of content and the understanding of mathematical concepts.</p> <p>Application: the application of knowledge and skills in familiar contexts; transfer of knowledge and skills to new contexts; making connections within and between various contexts.</p> <p>Thinking: use of planning and processing skills; use of critical and creative thinking processes.</p> <p>Communication: Expression and organization of ideas and mathematical thinking, communication for different audiences/purposes and use of conventions, vocabulary and terminology of the discipline ... all using oral, visual and written forms.</p>
<p>Final Evaluation: 30% of your grade will be determined at the end of the course.</p>	<p>10% Culminating Performance Task (EQA0 Provincial Assessment 2 days in June)</p> <p>20% Exam: Consisting of a variety of question types (e.g. short answer, multiple choice, extended tasks) sampling all strands and categories of 2.5 hours duration or less.</p>
<p>Your final grade will be calculated by combining your Term (70%) grade and your Exam and Culminating Performance Task Evaluations (30%).</p>	

Learning Skills & Work Habits

These learning skills and work habits will be evaluated several times during the semester. Please see below on what you will be evaluated on.

Learning Skills and Work Habits		E – Excellent	G – Good	S – Satisfactory	N – Needs Improvement
Responsibility					
<ul style="list-style-type: none"> ▪ Fulfils responsibilities and commitments within the learning environment. ▪ Completes and submits class work, homework, and assignments according to agreed-upon timelines. ▪ Takes responsibility for and manages own behaviour. 					
Organization					
	<ul style="list-style-type: none"> ▪ Devises and follows a plan and process for completing work and tasks. ▪ Establishes priorities and manages time to complete tasks and achieve goals. ▪ Identifies, gathers, evaluates, and uses information, technology, and resources to complete tasks. 				
Independent Work					
<ul style="list-style-type: none"> ▪ Independently monitors, assesses, and revises plans to complete tasks and meet goals. ▪ Uses class time appropriately to complete tasks. ▪ Follows instructions with minimal supervision. 					
Collaboration					
	<ul style="list-style-type: none"> ▪ Accepts various roles and an equitable share of work in a group. ▪ Responds positively to the ideas, opinions, values, and traditions of others. ▪ Builds healthy peer-to-peer relationships through personal and media-assisted interactions. ▪ Works with others to resolve conflicts and build consensus to achieve group goals. ▪ Shares information, resources, and expertise, and promotes critical thinking to solve problems and make decisions. 				
Initiative					
<ul style="list-style-type: none"> ▪ Looks for and acts on new ideas and opportunities for learning. ▪ Demonstrates the capacity for innovation and a willingness to take risks. ▪ Demonstrates curiosity and interest in learning. ▪ Approaches new tasks with a positive attitude. ▪ Recognizes and advocates appropriately for the rights of self and others. 					
Self-Regulation					
	<ul style="list-style-type: none"> ▪ Sets own individual goals and monitors progress towards achieving them. ▪ Seeks clarification or assistance when needed. ▪ Assesses and reflects critically on own strengths, needs, and interests. ▪ Identifies learning opportunities, choices, and strategies to meet personal needs and achieve goals. ▪ Perseveres and makes an effort when responding to challenges. 				

Keys to a Successful Semester



- Be on time and have all necessary materials.
- Use class time efficiently. THINK. LISTEN. PARTICIPATE.
- Place cellphones, ipod, or other electronic devices in class safe keeping basket at the beginning of class.
- Copy all notes and keep your notebook organized.
- Ask questions to clarify concepts. Participate in discussions.
- Complete homework and *hand in assignments on time*.
- If you are absent, check unit outline, call a classmate, or look over the work you have missed.

Class Expectations/Policies:

1. Notebook expectations

- You must have a 3-ring binder with graph paper or lined paper
- You must have a title and date on all notes as well as a page reference for homework assignments; these will help to keep your notebook organized
- Your notebook should be kept neat and up to date in order to be prepared for homework checks.

2. Scientific Calculator Required

Students must bring all necessary supplies to class daily (binder, textbook, pencil, ruler, and a calculator). A **SCIENTIFIC CALCULATOR** is necessary to cover the curriculum expectations of this course. Graphing calculators will be used in class for this course and will be provided by the school.

3. Attendance is essential and will be monitored. It is the responsibility of the student to catch up on missed work after an absence.

Missed test/quiz

- Expect to write the missed assessment on the day of your return from being absent during lunch
- It is your responsibility to make sure the test/quiz is completed
- If prior knowledge of the absence is known (i.e. appointments, school activities), please have the courtesy to inform me and make alternate arrangements to write the test

4. Regular Homework – daily practice is essential in Mathematics because:

- *it reinforces skills and material learned in class*
- *it prepares students for upcoming class topics*
- *it teaches students to work independently*
- *it aids in evaluating student progress*
- *it teaches students to assume responsibility for their own work*
- *it teaches students organizational and time-management skills*
- **Unit outlines** will be provided at the beginning of each unit listing the homework and tentative unit test date.
- Homework will be assigned daily and should be completed before the next class

Students in this course MPM 1D Principles of Mathematics (Academic) should be doing approximately 20-30 minutes of homework each evening. If they have finished their homework assignment they should be reviewing past topics and/or previewing the topic for the next day.

Online Assistance

If student is experiencing difficulties with topic he/she could watch videos online related to topic.

<http://www.khanacademy.org> or <https://homeworkhelp.ilc.org/>

“Each problem that I solved became a rule which serves afterwards to solve other problems.” ~Rene Decartes~

5. Chapter Tests, Quizzes, & Assignments

You will be given reasonable notice (about a week) for all unit tests. You will have two or three days notice for quizzes. Exit cards may be given without notice during each chapter's work but these **DO NOT** count for formal evaluation (*formative assessment only*). Performance tasks will be completed in class to demonstrate the level of learning that has occurred. These tasks provide you with a unique opportunity to demonstrate your communication and creative skills as well as the depth of your understanding of concepts. You are expected to complete projects and assignments neatly, accurately and promptly. Extensions will not be granted unless you have spoken to me before the due date and have a legitimate reason. No assignments will be accepted once the assignments for the class have been marked and returned. It is important that you complete all assigned homework and seek extra help as soon as difficulties arise. Parent signatures are required for all tests or major assignments.

6. Cheating and plagiarism

Cheating includes things like copying homework, projects, looking at someone else's test, using cheat notes or opening texts during tests. Plagiarism includes copying someone else's words and using them for your own. This includes cutting and pasting from the Internet. Work will be checked for plagiarism. Copying someone's work, then citing a reference is STILL plagiarism. Refer to your school agenda for the consequences (a mark of zero will be received).

7. Seek extra help early if you are struggling with the course expectations.

Extra help is available during lunch from **11:00 to 11:40 Monday to Thursday** in room 219.



Course: Principles of Mathematics
Course Code: MPM 1D
Teacher: Ms. B. McElroy
Contact Info: 613-445-0810

*Math is like the ocean waters.
 Sometimes it's rough, sometimes it's
 calm, but no matter what the weather,
 with the right determination you get
 to your destination.*

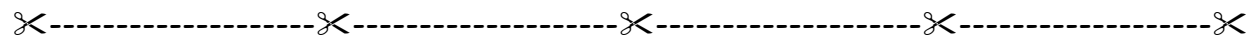
If you have any questions please do not hesitate to contact me at school (613) 445-0810 or leave a message. I will return your call as soon as possible. **Thank you for your support.**
 Please sign the bottom portion indicating that you've read the course outline. Keep this part so you will have my contact information. Feel free to call me if you have any concerns to be addressed.

Yours in Education,

Ms. B. McElroy

Acknowledgement

<p style="text-align: center;">Students are expected to:</p> <ul style="list-style-type: none"> ◆ attend and be punctual for all classes. ◆ come to class prepared to work. ◆ complete all assignments, readings and homework on time. ◆ catch up on all notes and work missed when absent. ◆ be present for all tests and evaluations (in the case of illness, a Doctor's note may be required). ◆ respect the learning environment. ◆ adhere to the School Computer User Policies and the Board Student Internet Access Agreement. ◆ adhere to the school rules with regard to plagiarism. ◆ adhere to the school dress code (as stated in the St. Thomas Aquinas Catholic High School student handbook) <p style="text-align: center;"><i>Success in secondary school is directly related to the effort that YOU put into IT.</i></p>	<p style="text-align: center;">Parents/Guardians are asked to:</p> <ul style="list-style-type: none"> ▪ encourage your son/daughter to take an active part in the life of the school. ▪ regularly ask to see notebooks and school planner. ▪ encourage him/her to take advantage of opportunities for extra help. ▪ become familiar with the curriculum. ▪ attend school functions and talk to us. <i>Teachers work best when we know the story behind the desk.</i> ▪ encourage your son/daughter to take an active interest in current events and issues. Offer him/her opportunities to question and reflect on what is happening in the world. <p style="text-align: center;"><i>"Parents have an important role to play in supporting student learning. Studies show that students perform better in school if their parents or guardians are involved in their education."</i></p> <p style="text-align: center;"><i>~Ministry of Education~</i></p>
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Student's Acknowledgement

I, _____ (Student Name) have read, understood and accept my responsibility in observing the expectations for classroom behaviour presented in this course outline. I will strive to meet the required expectations.

Student Signature: _____ **Date:** _____

Parents/Guardians Acknowledgment:

I acknowledge that I have read and discussed the content of this MPM 1D course outline with my son/daughter and understand what is expected of our child to be successful in this course

Parent/Guardian Signature: _____

Daytime Contact Number(s): _____

I am aware that my child needs his/her own scientific calculator for the work in this course in order to assist with his/her success. I will ensure that one is provided.