



Bloor Collegiate Institute

Mathematics Department

Course: Principles of Mathematics Grade 10 Academic

Course Code: MPM2D1

Teacher: Mr. KelleyMaharaj, Mr. Mandelzys.

Course Description

This course enables students to broaden their understanding of relationships and extend their problem-solving and algebraic skills through investigation, the effective use of technology, and abstract reasoning. Students will explore quadratic relations and their applications; solve and apply linear systems; verify properties of geometric figures using analytic geometry; and investigate the trigonometry of right and acute triangles. Students will reason mathematically and communicate their thinking as they solve multi-step problems. Students will engage in abstract extensions of core learning that will deepen their mathematical understanding and enrich their knowledge.

TDSB Equity Statement

- a. The Curriculum of our schools accurately reflects and uses the variety of knowledge and ways of knowing of all peoples as the basis for instruction; students both see themselves and the Diversity and differences of others and the wider world reflected in their learning environments; it actively educates students to understand the causes and impacts of inequity in society, and to understand the similarities, differences, Intersectionality of multiple social identities and the connections between different forms of Discrimination and social Power Imbalances, systemic Oppression, Privileges and the Bias and Barriers that support them; and
- b. It helps students to acquire the skills and knowledge that enable them to challenge unjust practices, and to build a strong sense of self, positive and healthy human relationships among their fellow students, and among all members of society.

Academic Expectations

Students are expected to be on time each day, prepared with necessary materials and ready to work. Notes must be kept in an organized notebook/binder. Students are expected to submit their own original work on evaluations done in class or out of class. Academic dishonesty is using the ideas or writings of another as one's own. Cases of academic dishonesty will be dealt with on a case-by-case basis, but each case will involve an investigation, communication with the student and his/her parent/guardian, and a mark of zero for the plagiarized work. All incidences of academic dishonesty are reported to the Vice Principal who maintains a central record. Please see your school agenda for more details on Bloor Collegiate Institute's academic honesty policy.

Late and Missed Assignments

Students are responsible for providing evidence of their learning within established timelines. Teachers will make students aware of the consequences for not completing work and submitting work late. Where it is appropriate to do so, a number of strategies may be used to help prevent or address late and missed assignments* and the professional judgment of the teacher, acting within the policies and guidelines established by the ministry and board, will be critical in determining the strategy that will most benefit the student learning. Consequences addressing missing and late assignments may include deducting marks for late assignments, up to and including the full value of the assignment.

In the absence of prior, in-person communication with their teacher to establish a mutually agreed upon extended due date, senior students (grades 11 and 12) are expected to present assignments on the date and time indicated by their teacher. After this time assignments are considered late and will be subject to a 5% penalty up to and including the first 5 minutes of the next meeting of the class, after which a 10% penalty will stand for that assignment until the ultimate deadline. It should also be noted that once an evaluated assignment has been returned, or the ultimate deadline has passed, any outstanding assignments cannot be accepted for evaluation. The assignment may still be accepted to assess a student's achievement of the course expectations.

*In the paragraph above the word *assignment* may refer to **any** type of evaluation that has been assigned by the teacher for the course.

Note: Detailed information on Ministry of Education assessment, evaluation, and reporting policy is provided in [Growing Success: Assessment, Evaluation and Reporting in Ontario's Schools, First Edition Covering Grades 1 to 12, 2010.](#)

Missed Evaluation Policy

When a student is absent for an in-class assignment, quiz, test, or presentation they must provide a note from a parent or guardian when they return to the school. The note must include the date and reason for absence and an acknowledgement that the student has missed an evaluation. In extenuating circumstances a note from the school administration may be accepted. **If a student is absent for a unit test for a valid reason then the student will write a cumulative makeup test in December for any tests missed up to that point (date TBD). The makeup test(s) will be based on all work done up to that point and will replace the mark the student is missing. Until the student has demonstrated their level of achievement and understanding on the midterm make up test, a mark of zero will be maintained.** If a student does not have a valid reason for his/her absence, **a mark of zero will be recorded.** Missing tests in the second half of the semester will be evaluated at the professional discretion of the teacher through the level of achievement demonstrated by the student on the relevant sections of the final exam. Until the student's level achievement is demonstrated on the exam for missing test(s), a mark of zero will be maintained for missed test(s) in the second term of the semester.

Every effort will be made by the subject teacher to notify students well in advance of scheduled test/presentation dates.

Artificial Intelligence

Plagiarism and cheating includes the use of Artificial Intelligence (AI). Unless otherwise indicated by your classroom teacher for a specific assignment or activity, using AI to complete evaluations is prohibited. If you use AI to complete an evaluation, it will be considered a misrepresentation of your performance, and/or plagiarism. As such, its use will follow the general policy of academic dishonesty at Bloor CI, meaning it will be dealt with on a case-by-case basis, involving an investigation, communication with you and your parent/guardian/caregiver, and a mark of zero for the work in question. All incidents of academic dishonesty are reported to Bloor's Vice Principal who maintains a central record.

If your teacher gives you permission to use AI for a specific reason on a specific activity, you are expected to cite the output just as you would cite any other source, as part of your research, using the specific citation style guide indicated by your teacher.

While it can be tempting to use AI as a learning companion, it has several limitations and problems. Cornell University devised these key questions that to interrogate the integrity of any AI output:

*Is the AI-generated content accurate? How can you test or assess the accuracy?
Can other credible sources (outside of generative AI) validate the data or item produced?
How does the information generated impact or influence your thinking on this topic?
Who is represented in this data? Is the data inclusive in terms of the material's scope and the perspectives that it presents?*

Additionally, the following materials have been developed to support your understanding of AI and the consequences of its use:

<https://bit.ly/BCISAI>

Examples of AI includes, but is not limited to, the following:

- ☐ ChatGPT
- ☐ Grammarly
- ☐ Deep Seek

Note: The above policy is based on the TDSB's Academic Honesty Policy, PR. 613, and adapted in part from TMU's Artificial Intelligence FAQs.

Assessment, Evaluation and Reporting

Strategies

- Students will be evaluated on content and skills throughout the year, with a focus on all four categories of the Achievement Chart.
- Assessment and evaluation methods of student progress will vary with each unit, and over the course of the year may include: quizzes, tests, investigations, assignments, presentations, and projects, both in group and individual forms.

- Students will be assessed before engaging in unit culminating activities and will be given advance notice of timelines of specific expectations and method of evaluation.

Achievement Category Weightings

As required by the Ministry of Education, students will be assessed in the four areas of the achievement chart. The suggested breakdown for this course is as follows:

Category	Knowledge	Thinking/Inquiry	Communication	Application
Weight	30%	20%	20%	30%

Grades throughout the Semester

- The grade for each reporting period is based on evaluations that have been conducted to that point in the course, and will be *preliminary* and *tentative*. They will be based on the most consistent level of achievement to that point in time, with special consideration given to more recent evidence, but some of the overall expectations, strands, and units will not have been addressed. The student's grades will most likely change when their entire work is evaluated at the end of the course.
- Specific evaluation dates will vary from class to class, but all dates will be clearly communicated to the students.
- Missed or incomplete assignments will have an impact on the final grade when a significant number of curriculum expectations have not been evaluated.
- The breakdown for this course after the culminating activity will be as follows:

Coursework (70%)

Category	Knowledge	Thinking/ Inquiry	Communication	Application
Weight	21%	14%	14%	21%

Culminating Activity(30%)

The culminating activity consists of a culminating assignment (10%) and an exam(20%). The presentation is a mandatory activity. It must be presented on the day when it is scheduled and can't be postponed. Students must take part in the culminating activities, otherwise a mark of zero will be assigned.

Learning Skills

- Learning skills play a critical role in the achievement of curriculum expectations and student success.
- Students are expected to be academically honest by submitting original work. The marks they receive are intended to reflect personal academic achievement.
- Students are also expected to be punctual and to arrive prepared for class!
- Specific information regarding Learning Skills can be found in [Growing Success: Assessment, Evaluation and Reporting in Ontario's Schools, First Edition Covering Grades 1 to 12, 2010](#)

Units of Study

Quadratic Relations of the Form $y = ax^2 + bx + c$:

- basic properties of quadratic relations;
- relate transformations of the graph of $y = x^2$ to the algebraic representation of $y = a(x - h)^2 + k$;
- determine zeros and the maximum or minimum of a quadratic function, and solve problems involving quadratic functions
- solve quadratic equations and interpret the solutions
- solve problems involving quadratic relations;

Analytic Geometry

- model and solve problems involving intersection of two straight lines;
- solve problems using analytic geometry involving properties of lines and line segments;
- verify geometric properties of triangles and quadrilaterals, using analytic geometry.

Trigonometry

- investigate similar triangles and solve problems related to similarity;
- solve problems involving right triangles, using the primary trigonometric ratios and the Pythagorean Theorem;
- solve problems involving acute triangles, using the sine law and the cosine law.

Please refer to [Ontario Ministry of Education](#) curriculum document for details of Overall and Specific Expectations.