Principles of Mathematics
Grade 10, Academic (MPM2D)

Credit value: 1.0 Credit

Prerequisite: Principles of Mathematics, Grade 9, Academic (MPM1D)

Teacher: Mr. S. Kinnear and Miss K. Turck

Email: skinnear@torontoprepschool.com or kturck@torontoprepschool.com

Textbook: *Principles of Mathematics 10*, McGraw – Hill Ryerson, 2007

Class Wiki: Mr. Kinnear: http://tps10math10student.wikispaces.com
Miss Turck: http://tpsmath10academicstudentb.wikispaces.com

Required Materials: Textbook, binder with lined paper and grid paper, pencils, coloured pencils, ruler, eraser, and calculator (TPS recommendation: Sharp D.A.L. 500 Series).

Extra Help: Extra help is available Monday to Friday from 9:00 to 9:55 AM and after school by appointment.

Course Description:

This course enables students to broaden their understanding of relationships, 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.

Units of Study and Overall Course Expectations:

Unit	Time
Powers and Polynomials • Solve quadratic equations and interpret the solutions with respect to the corresponding relations;	12 hr
The Quadratic Relation • Determine the basic properties of quadratic relations; • Relate transformations of the graph of $y=x^2$ to the algebraic representation $y = a(x-h)^2 + k$; • Solve quadratic equations and interpret the solutions with respect to the corresponding relations; • Solve problems involving quadratic relations.	14 hr
Factoring • Solve quadratic equations and interpret the solutions with respect to the corresponding relations;	14 hr
The Quadratic Equation and Optimization • Solve quadratic equations and interpret the solutions with respect to the corresponding relations; • Solve problems involving quadratic relations.	18 hr
Trigonometry • Use their knowledge of ratio and proportion to 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.	18 hr

Linear Systems • Model and solve problems involving the intersection of two straight lines;	12 hr
Analytic Geometry • Solve problems using analytic geometry involving properties of lines and line segments; • Verify geometric properties of triangles and quadrilaterals, using analytic geometry.	12 hr
Exam Review and Final Exam • Students will complete an activity demonstrating their cumulative knowledge from the course. • Students will review important concepts from the course and complete practice problems in preparation of the final written exam. • Students will write a final exam during the final week of the semester demonstrating their understanding of the course material.	10 hr
Total	**110 h**

Evaluation:

Your Final Mark will include:	70%	Course Work (assignments, quizzes, tests, etc.)
	30%	Final Written Exam
Your Course Work will reflect four categories:	35%	Knowledge/Understanding
	30%	Application
	15%	Communication
	20%	Thinking

Class Expectations:

1. Be on time and attend regularly!
2. Make sure you bring ALL of your supplies to class daily; you will not be allowed to leave to retrieve them from your locker once the bell has gone.
3. All homework, tests and assignments should be completed in pencil.
4. You are responsible for taking lecture notes and all examples off the board.
5. Homework will be checked daily and taken up in class. It is in your best interest to complete all the assigned homework!
6. If a test is missed, the student must bring a note from the parent stating the reason for the absence; otherwise the student will receive a zero.
7. There will be surprise quizzes, so keep up with the work.
8. It is your responsibility to catch up on all missed classes/assignments. Please check the class Wiki to learn what you missed.

Academic due dates:

All assignments and projects will have a due date.

The due date is the ***beginning*** of the period for that given class. For example if a project is due for the period one class it must be submitted at 10:00 AM, if it is due for the period four class on a Wednesday, then it is due at 2:49 PM.

The due date represents the date in which the assignment/project is due. Students should submit the assignment/project to their subject teacher on the due date. If a student does not submit the task on the due date the subject teacher will contact the parents/guardian to notify them of the outstanding work that day. The subject teacher will not provide support after the due date has passed.

Late marks will be deducted on late assignments. This strategy is in keeping with the Ministry's policy document "Growing Success". Late projects/assignments will be assessed at a reduction of ***5% per day*** for the first two days and ***10% per day*** after that to a maximum of ***50%***. Each project will be assessed for the 100% of its original value, and late marks will be clearly stated on the final evaluation. After 6 school days, a student will receive a zero. Students are strongly encouraged to still hand in late projects for assessment and written feedback. A Saturday Club inclusion will be made within the 6 days.

Projects/assignments turned into the teacher after they have been marked and returned to students, will not be awarded a grade if the project/assignment is one the teacher believes can be copied from peers (at teacher's discretion), however, written feedback on the assignment will be given. (For example: journals, reflection pieces, etc.)

Extension Request Form

There is a procedure for students to seek relief from a due date and extend a deadline without academic penalty. In extraordinary circumstances, ***extensions may be granted, if an Extension Request Form is filled out by the student and signed by a parent and approved by the teacher at least one day before the due date***. It is up to the discretion of the teacher and the school administration whether or not to accept the Extension Request. A student may request an extension to the ***maximum of 2 times in each course and for no more than 3 days.*** After the allotted time has passed and the assignment has not been submitted then late marks will be assigned. Our policy recognizes that extenuating circumstances may legitimately prevent a student from meeting a due date. The Extension Request Form may be garnered from the principal or vice-principal.

Illness/Doctor's Notes

If a student is absent on the due date, a doctor's note (or parental note in case of a family emergency) must be provided to the subject teacher in order for the student to submit the assignment. The assignment must be submitted upon the ***first day*** the student returns.

Parental Communication

Parents will be contacted if the assignment/project is not submitted on the due date.

Email receipt of Assignments

Since weekend days will be included in the late policy, the submitted time and date will be based on the time that the assignment arrives in the teacher's email in-box.

"The only way to learn mathematics is to do mathematics."

- Paul Halmos