****

2018 – 2019

### Grade 9, Academic

### Principles of Mathematics

## MPM1D1

**Evaluation Profile & Outline**

## Earl Haig

SecondarySchool

**Course Description/Rationale/Overview:**

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. They will also explore relationships that emerge from the measurement of three-dimensional figures and two-dimensional shapes. Students will reason mathematically and communicate their thinking as they solve multi-step problems.

**Course Requirements/Department Policies**

Late Assignments

Late assignments must be accompanied with a note signed by a parent or guardian stating the reason for late submission. The note must list the due date of the assignment and the actual date of submission.

**Marks will be deducted for late assignments, up to and including the full value of the assignment.** [Growing Success: Assessment, Evaluation, and Reporting in Ontario Schools, Ministry of Ontario, 2010, pg. 43.]

Missed Tests

If a student misses a due to illness, the teacher must be contacted on the day of the test by phone at 395-3210 ext. 20080. The student must bring a note signed by a parent or guardian and be prepared to write the test immediately upon return to school. In case of absence due to field trips, athletics competitions, rehearsals, etc., arrangements for missed test should be made in advance.

**Class Requirements:**

Materials/textbooks/equipment

Textbook (supplied)

Principles of Mathematics 9

Nelson

Replacement textbook cost: $90.00

Calculator

Notebook

Materials for note-taking

#### Assessment Strategies

Diagnostic Quizzes Homework Check

Diagnostic Tests Group Work

In-class Assignments Technology Based Tasks

Peer Assessments Observations

Class Participation/Interaction

Conferences/Interviews

#### Extra Help Availability

Monday to Thursday after school through Peer Tutoring program.

All extra help sessions are held in room 248.

Students should make appointments with their teachers to get extra help.

**Learning Skills:**

Responsibility; Initiative; Organization;

Independent Work;

Collaboration;

Self-regulation

**Curriculum strands:**

Number Sense and Algebra

Linear Relations

Analytic Geometry

Measurement and Geometry

**FINAL MARK**

Year’s Work: 70%

Final Summative Evaluation 30 %

(EQAO – 10%)

(Final Exam – 20%)

Achievement Categories and Weighting

Knowledge & Understanding 25%

Application 20%

Thinking 10%

Communication 15%

2018 – 2019

### Grade 9, Academic

### Principles of Mathematics

## MPM1D1

## Earl Haig

SecondarySchool

****

1. Numeracy

* Operations and applications with integers
* Operations and applications with rational numbers
* Applications of percent

1. Exponents

* Intro to Exponents
* Multiplication and division laws
* Power Law

1. Algebra

* Introduction
* Operations with polynomials
* Common factoring

1. Equations

* Solving first degree equations
* Solving problems using equations

1. Analytic Geometry (Part 1)

* Slope
* Graphing Linear Relations
* Standard form and slope, y-intercept form
* Intersection of two lines by graphing

1. Analytic Geometry (Part 2)

* Writing the equation of a line
* Parallel and perpendicular lines
* Applications with lines

1. Relationship

* Graphing linear relationships
* Applications of linear relations
* Partial versus Direct variation
* Applications of direct variation (ratio and proportion)
* Scatter plot diagram, line of best fit
* Distance-time graph (CBR)

1. Measurement and solid geometry

* Optimum area and perimeter
* Composite figures
* Square roots and Pythagoras
* Surface area and volume of cylinder, cone, sphere, prisms and pyramids
* Problem solving with volume and surface area

1. Plane Geometry

* Angle and triangle theorems
* Parallel Lines
* Polygons and quadrilaterals
* Further investigations using Geometer’s Sketchpad (optional)

**Outline**