

Course Information Sheet

Mathematics: MPM 1D

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.

MPM 1D focusses on these Key Expectations, based upon the Ministry of Education's curriculum:

- demonstrate an understanding of the exponent rules of multiplication and division, and apply them to simplify expressions;
- manipulate numerical and polynomial expressions, and solve first-degree equations;
- apply data-management techniques to investigate relationships between two variables;
- demonstrate an understanding of the characteristics of a linear relation;
- connect various representations of a linear relation;
- determine the relationship between the form of an equation and the shape of its graph with respect to linearity and non-linearity;
- determine, through investigation, the properties of the slope and y-intercept of a linear relation;
- solve problems involving linear relations;
- determine, through investigation, the optimal values of various measurements;
- solve problems involving the measurements of two-dimensional shapes and the surface areas and volumes of three-dimensional figures;
- verify, through investigation facilitated by dynamic geometry software, geometric properties and relationships involving two-dimensional shapes, and apply the results to solving problems.

Your final mark will be calculated based on the Ministry of Education's Achievement Chart for the course as follows: Knowledge/Understanding: 35%; Thinking: 15%; Communication: 15%; Application: 35%

70% of the final mark will be based on work completed throughout the course, including tests, assignments, performance tasks and investigations. 30% will be based on the final evaluation (see details below.)

*The Ontario Curriculum, Grades 9 and 10: Mathematics Revised in 2005 is available at
<http://www.edu.gov.on.ca/eng/curriculum/secondary/math910curr.pdf>*