Ontario

Issued Winter 2022

Mathematics

Grade 10, Applied, MFM2P (2005)

Addendum to Foundations of Mathematics

In September 2021, the ministry implemented a de-streamed Grade 9 mathematics course (MTH1W). Students who have earned a credit in this course are well prepared for success in Grade 10 mathematics.

To support students in their transition from MTH1W to MFM2P, the ministry is issuing this addendum to MFM2P, effective September 2022. It includes **one new specific expectation** under an existing overall expectation. As set out on page 38 of *Growing Success: Assessment, Evaluation, and Reporting in Ontario Schools* (2010), all specific expectations must be accounted for in instruction and assessment, but evaluation focuses on students' achievement of the overall expectation.

Measurement and Trigonometry

Existing Overall Expectation

By the end of this course, students will:

- solve problems involving the surface areas and volumes of three-dimensional figures, and use the imperial and metric systems of measurement.

New Specific Expectation

By the end of this course, students will:

- **develop the formula for the volume of a sphere, using concrete materials and the volume relationships between cylinders, cones, and spheres.**

Some Considerations for Program Planning for MFM2P

Students who have earned a credit in de-streamed Grade 9 Mathematics (MTH1W) will bring with them supplementary learning compared to Grade 9, Applied (MFM1P). The chart below highlights this learning as it relates to the strands in MFM2P.

Strands in MFM2P	Related Learning in MTH1W
Measurement and Trigonometry	**In MTH1W, students:** • solved problems involving different measurement systems; • solved problems involving real-life applications of proportions in various contexts, including geometry.
Modelling Linear Relations	**In MTH1W, students:** • solved linear systems using the algebraic method of comparison in addition to the graphical method; • analysed the effects that positive and negative signs have on the value of rates in various contexts, including rates of change; • identified lines defined by equations and regions defined by inequalities;
Quadratic Relations of the Form $y = ax^2 + bx + c$	**In MTH1W, students:** • represented and described characteristics of non-linear relations; • collected and analysed data involving non-linear relations; • translated, reflected, and rotated lines defined by $y = ax$; • evaluated powers involving integer exponents; • compared algebraic expressions using various methods, including simplification.