



York Region District School Board
BUR OAK SECONDARY SCHOOL
Mathematics Department
Course Outline

Course:	Grade 9 Mathematics
Code:	MTH1W1
Credit value:	1.0
Department head:	B. Merchant
Course teachers:	S. Damji (stacey.damji@yrdsb.ca), D. Hackshaw (derek.hackshaw@yrdsb.ca), S. McCombes (susan.mccombes@yrdsb.ca), A. Paik (alyssa.paik@yrdsb.ca), I. Tam (ian.tam@yrdsb.ca), G. Teng(gwen.teng@yrdsb.ca), J. Wong (jane.wong@yrdsb.ca)

Course Description/Rationale

This course enables students to consolidate, and continue to develop, an understanding of mathematical concepts related to number sense and operations, algebra, measurement, geometry, data, probability, and financial literacy. Students will use mathematical processes, mathematical modelling, and coding to make sense of the mathematics they are learning and to apply their understanding to culturally responsive and relevant real-world situations. Students will continue to enhance their mathematical reasoning skills, including proportional reasoning, spatial reasoning, and algebraic reasoning, as they solve problems and communicate their thinking.

Course Expectations

This course is based on curriculum expectations found in The Ontario Curriculum, Grade 9: Mathematics, 2021. A copy of this document is available at

<https://www.dcp.edu.gov.on.ca/en/curriculum/secondary-mathematics/courses/mth1w>

Course Units

- | | |
|---------------------------------------|--------------------------|
| 1. Non-curricular tasks & number sets | 5. Linear relations |
| 2. Rational numbers | 6. Consolidation algebra |
| 3. Powers | 7. Data |
| 4. Patterning to algebra | 8. Measurement |

Learning Skills

Students will also be assessed on the following learning skills and work habits:

- | | | |
|------------------|----------------|--------------------|
| ❖ Responsibility | ❖ Organization | ❖ Independent Work |
| ❖ Collaboration | ❖ Initiative | ❖ Self-Regulation |

“The development of learning skills and work habits is an integral part of a student’s learning.” (Growing Success, M.O.E, 2010, p. 10). The evaluation of learning skills will be tracked throughout the course. Students will find concentrating on these skills will result in a high level of success in meeting the course expectations.

Assessment and Evaluation

Students will be assessed based on their understanding of the Overall Expectations as described in the Ontario Curriculum, Grade 9: Mathematics, 2021.

The overall expectations for the course are:

- A1. apply the mathematical processes to develop a conceptual understanding of, and procedural fluency with, the mathematics they are learning
- A2. make connections between mathematics and various knowledge systems, their lived experiences, and various real-life applications of mathematics, including careers
- B1. demonstrate an understanding of the development and use of numbers, and make connections between sets of numbers
- B2. represent numbers in various ways, evaluate powers, and simplify expressions by using the relationships between powers and their exponents
- B3. apply an understanding of rational numbers, ratios, rates, percentages, and proportions, in various mathematical contexts, and to solve problems
- C1. demonstrate an understanding of the development and use of algebraic concepts and of their connection to numbers, using various tools and representations
- C2. apply coding skills to represent mathematical concepts and relationships dynamically, and to solve problems, in algebra and across the other strands
- C3. represent and compare linear and non-linear relations that model real-life situations, and use these representations to make predictions
- C4. demonstrate an understanding of the characteristics of various representations of linear and non-linear relations, using tools, including coding when appropriate
- D1. describe the collection and use of data, and represent and analyse data involving one and two variables
- D2. apply the process of mathematical modelling, using data and mathematical concepts from other strands, to represent, analyse, make predictions, and provide insight into real-life situations
- E1. demonstrate an understanding of the development and use of geometric and measurement relationships, and apply these relationships to solve problems, including problems involving real-life situations
- F1. demonstrate the knowledge and skills needed to make informed financial decisions

Students will be able to access their achievement data using TeachAssist (ta.yrdsb.ca). Throughout the course, students will be given multiple opportunities to demonstrate their knowledge of curriculum expectations. As students demonstrate their learning, their level of achievement will be updated.

A student's term mark will be calculated using evidence collected from quizzes, assignments, tests, journals, conversations, and observations. The final grade will be calculated using the following weighings:

Term Mark 70% + Exam/EQAO/Culminating Assessments 30% = 100%

(Exam/EQAO/Culminating Assessments to be determined by YRDSB)