# FOUNDATIONS OF MATHEMATICS 11

Bonar Law Memorial School
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## TEXTS and RESOURCES

- Foundations of Mathematics 11 (Nelson 2011)
- Mathematical Modeling Book 2 (Nelson 2004) and Book 3 (Nelson 2002)
- Mathematics: Principles and Process 11 (Nelson 1994)
- Pens, pencils, erasers, binder, loose leaf, scientific calculator and graph paper.

## SYLLABUS

**Unit 1 – Relations and Functions (RF): Develop algebraic and graphical reasoning through the study of relations.** (six weeks)

RF1 – Model and solve problems that involve systems of linear inequalities in two variables.
RF2 – Demonstrate an understanding of the characteristics of quadratic functions, including: vertex, intercepts, domain and range, axis of symmetry.

**Unit 2 – Geometry (G): Develop Spatial Sense.** (five weeks)

G1 – Derive proofs that involve the properties of angles and triangles.
G2 – Solve problems that involve the properties of angles and triangles.
G3 – Solve problems that involve the cosine law and the sine law, including the ambiguous case.

**Unit 3 – Number (N): Develop number sense in financial applications.** (three weeks)

N1 – Analyze costs and benefits of renting, leasing and buying.
N2 – Analyze an investment portfolio in terms of: interest rate, rate of return, total return.
N3 – Solve problems that involve personal budgets (optional).

**Unit 4 – Logical Reasoning (LR): Develop Logical Reasoning.** (two weeks)

LR1 – Analyze and prove conjectures using logical reasoning, to solve problems.
LR2 – Analyze puzzles and games that involve numerical reasoning, using problem–solving strategies.

## EVALUATION

Your **final grade** will be based on the following scheme:

- Semester mark                    70%
- Final Exam (January 2022)     30%

Students must obtain a minimum mark of 60% to receive credit for this course.

<u>Semester mark</u> will be calculated based on the following scheme:

- **Relations and Functions (RF) 60%** {Tests, Quizzes, & Assignments}
- **Geometry (G) 28%** {Tests, Quizzes, & Assignments}
- **Number (N) 7%** {Tests, Quizzes, & Assignments}
- **Logical Reasoning (LR) 5%** {Assignments}

<u>Please note:</u>  According to the BLMS Exam Incentive, if you have earned a Semester mark > 85% in Foundations of Mathematics 11, the final grade may also be computed by weighting the exam to be 15%, 30%, or 50%, and whichever scheme works in the student's favour will be recorded as the final grade.

### <u>Absenteeism and Marks</u>

A legitimate written excuse from a parent or guardian for illness or medical appointments will be required to circumvent the penalization of marks due to the lateness of an assignment or a test. See BLMS Assignment Tardiness Policy.

## EXPECTATIONS

- You are expected to be in class on time each day with all your materials.
  (*these include: pen, pencil, paper, worksheets and scientific calculator*)
- You are expected to treat others with respect and dignity.  You are expected to contribute to a positive learning environment.
- You are expected to work the entire period to the best of your ability.
- This course will include in–class assignments (open book) that will be completed individually only during class time.  Homework will also be assigned on a regular basis and students will be expected to have it completed at the beginning of each class.  THIS WILL BE VERIFIED ON RANDOM DAYS!
- When you miss a class it is **your** responsibility to get caught up on your own time.  This means you may have to call a classmate at home to receive the work missed or you may have to make arrangements to stay for extra help.
- If you miss a test or an in–class assignment you must write it when you return to school at a time arranged by the teacher.
- **ALL WORK** must be handed in and **ALL TESTS** must be written.
- If at **any** time a student is having difficulty, **extra help** is available upon request.  Students are **always** welcome for extra help. I am available during lunch hour and after school.

*~ If All You Do Is Watch Someone Else Do Mathematics, All You Will Become Good At Is Watching Someone Else Do Mathematics. ~*

*…..Old Math Proverb*