

FOUNDATIONS OF MATH 11 (ONLINE)

INSTRUCTOR: Marg Koetsier
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SCHEDULE: Monday/Wednesday/Friday 10:00am-2:00pm
Tuesday/Thursday 4:00pm-9:00pm
LEARNING CENTRE HOURS: Monday-Friday 10:00am-2:00pm
Monday-Thursday 4:00pm-9:00pm
The Learning Centre is closed all statutory and school holidays.

INTRODUCTION

Foundations of Math 11 is designed to prepare students for entry into post-secondary programs that do not require the study of calculus. The following **big ideas** are emphasized:

- *Similar shapes and objects have proportional relationships that can be described, measured, and compared.*
- *Optimization informs the decision-making process in situations involving extreme values.*
- *Logical reasoning helps us discover and describe mathematical truths.*
- *Statistical analysis allows us to notice, wonder about, and answer questions about variation.*

CURRICULAR COMPETENCIES

Students are expected to **do** the following:

Reasoning and Modelling

- *develop thinking strategies to solve puzzles and games*
- *explore, analyze, and apply mathematical ideas using reason, technology, and other tools*
- *estimate reasonably and demonstrate fluent, flexible, and strategic thinking about number*
- *model with mathematics in situational contexts*
- *think creatively and with curiosity and wonder when exploring problems*

Understanding and Solving

- *develop, demonstrate, and apply conceptual understanding of mathematical ideas through play, story, inquiry, and problem solving*
- *visualize to explore and illustrate mathematical concepts and relationships*
- *apply flexible and strategic approaches to solve problems*
- *solve problems with persistence and a positive disposition*
- *engage in problem-solving experiences connected with place, story, cultural practices, and perspectives relevant to local First Peoples communities, the local community, and other cultures*

Communicating and Representing

- *explain and justify mathematical ideas and decisions in many ways*
- *represent mathematical ideas in concrete, pictorial, and symbolic forms*
- *use mathematical vocabulary and language to contribute to discussions*
- *take risks when offering ideas in classroom discourse*

Connecting and Reflecting

- *reflect on mathematical thinking*
- *connect mathematical concepts with each other, with other areas, and with personal interests*
- *use mistakes as opportunities to advance learning*
- *incorporate First Peoples worldviews, perspectives, knowledge, and practices to make connections with mathematical concepts*

CONTENT

Students are expected *to know* the following:

- *forms of mathematical reasoning*
- *angle relationships*
- *graphical analysis: linear inequalities, quadratic functions, systems of equations, optimization*
- *applications of statistics*
- *scale models*
- *financial literacy: compound interest, investments, loans*

LEARNING RESOURCES

The self-paced online Foundations of Math 11 course does not require a textbook. All lessons and practice materials are provided online. Access information will be provided following registration.

FOUNDATIONS of MATH 11 at Coquitlam Learning Opportunity Centre

Foundations of Math 11 at CLOC is a self-paced, self-directed course. You will be expected to work independently and to manage your time productively. If needed, individual help is available online or face-to-face at CLOC. An important element for success in Foundations of Math 11 will be your study skills. Successful students establish a study schedule and stick to it.

EVALUATION

Evaluation in Foundations of Math 11 includes unit tests, a midterm test, and a final exam. All tests include both multiple-choice and written-response questions. To encourage mastery of course content, **one** rewrite will be available for each unit test. There are **no** rewrites for the midterm test or the final exam. The tests will be weighted as follows:

<u>TEST</u>	<u>CONTENT</u>	<u>PERCENT</u>
Unit 1	Properties of Angles and Triangles	8
Unit 2	Non Right Angled Trigonometry	8
Unit 3	Systems of Linear Inequalities	8
Unit 4	Inductive and Deductive Reasoning	6
Midterm	Units 1–4	15
Unit 5	Graphing Quadratic Functions	8
Unit 6	Graphical Solutions to Systems of Equations	8
Unit 7	Applications of Probabilities and Statistics	8
Unit 8	Financial Literacy	6
Final Exam	Units 1–8	25
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