

Welcome to Foundations of Mathematics and Pre-calculus 10!

Throughout this course, you will explore five Big Ideas, Content and Curricular Competencies as set by the BC Curriculum [<https://curriculum.gov.bc.ca/curriculum/mathematics/10/foundations-of-mathematics-and-pre-calculus>]. The five Big Ideas are:

- Algebra allows us to **generalize** relationships through abstract thinking.
- The meanings of, and **connections** between, each operation extend to powers and polynomials.
- Constant rate of change is an essential attribute of linear **relations** and has meaning in different representations and contexts.
- Trigonometry involves using **proportional reasoning** to solve **indirect measurement** problems.
- Representing and analyzing **situations** allows us to notice and wonder about relationships.

Course Overview

Practice Assignments: Each unit is broken down into lessons and each lesson has a practice assignment accompanying it which includes an answer key and video solutions. You are required to complete and mark at least three quarters of each practice assignment (show your work). These assignments will be graded on completeness.

Send-In Assignments: The send-in assignments are a way for you to demonstrate what you have learned throughout the unit. No answer key is provided. They will be marked by your teacher and are worth 45% of your final grade. However, if you wish to complete corrections you may do so to improve your grade (grade will be calculated based on higher mark). Note: you may hand in each send-in assignment only once for corrections, and the corrections must be done on your own.

Tests: At the end of each unit there is a test, which is to be written in the classroom under supervision. You may bring in a cheat sheet on a single sided 8.5" by 11" piece of paper. You may have no help on your test. If you wish to improve your grade on a test, you may do corrections. If you do the corrections on your own you will receive up to an additional 10% on that test.

How To Be Successful

1. Take good, organized notes for your own reference as you learn new concepts.
2. Make sure that you understand and can do the problems presented in lessons.
3. Complete practice assignments after each lesson and compare your answers to the answer key.
4. Correct your mistakes!
5. Write a Unit test only after your send-in assignment has been marked, returned and corrected. That way you can use your send-in assignment as a review.
6. One-on-One Help is available! If you need assistance, please don't hesitate to contact me via email or phone to ask a question or to set up a one-on-one appointment. We can do this in person or we can meet online using Zoom. Remember, I am your teacher and I'm here to help.

Resources

- Content Connections online lessons: <https://apps.contentconnections.ca/ccltiprocess/>

Substantive Activity (Exponents)

In order to be officially activated in this course you must first complete a substantive activity. For this activity you will complete the send-in assignment for unit 1: "Exponents". In this unit, you will multiply and divide terms with exponents; evaluate and simplify expressions with positive and negative exponents; and apply exponent laws to solve problems. The substantive activity covers a number of curriculum outcomes such as:

Big Ideas

- Representing and analyzing **situations** allows us to notice and wonder about relationships.
- The meanings of, and **connections** between, each operation extend to powers and polynomials.

Content

- operations on **powers** with integral exponents (positive and negative exponents; exponent laws; evaluation using order of operations; numerical and variable bases)

Curricular Competencies

- 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**
- Apply **flexible and strategic approaches** to **solve problems**
- Solve problems with **persistence and a positive disposition**
- **Represent** mathematical ideas in concrete, pictorial, and symbolic forms
- **Connect mathematical concepts** with each other, other areas, and personal interests

Course evaluation:

Final Grade Course Calculator

Practice Assignments 10%	X 0.10 =
Send-in Assignments (including Substantive Activity 5.63%) 45%	X 0.45 =
Tests 45%	X 0.45 =
Final Grade	<input type="text"/>

Course Organization

The course content is divided into 8 Units as shown below with suggested times. Note that once the substantive activity is complete, the time allotted for the remainder of the course is 16 weeks.

Unit	Suggested time (1 week ~ 6.25 hours)	Assessments	Weight	Mark
1. Exponents	13 hours (2 weeks)	Practice Assignments 1,2,3 (4 is optional)	1.25%	
		Send-in Assignment (Substantive Activity)	5.63%	
		Test	5.63%	
2. Relations and Functions	15 hours (2.5 weeks)	Practice Assignments 1,2,3,4 (5 is optional)	1.25%	
		Send-in Assignment	5.63%	
		Test	5.63%	
3. Linear Relations	15 hours (2.5 weeks)	Practice Assignments 1,2,3,4,5,6	1.25%	
		Send-in Assignment	5.63%	
		Test	5.63%	
4. Linear Systems	13 hours (2 weeks)	Practice Assignments 1,2,3	1.25%	
		Send-in Assignment	5.63%	
		Test	5.63%	
5. Multiplication of Polynomials	13 hours (2 weeks)	Practice Assignments 1,2,3	1.25%	
		Send-in Assignment	5.63%	
		Test	5.63%	
6. Factoring	15 hours (2.5 weeks)	Practice Assignments 1,2,3,4	1.25%	
		Send-in Assignment	5.63%	
		Test	5.63%	
7. Right-Angled Trigonometry	15 hours (2.5 weeks)	Practice Assignments 1,2,3,4	1.25%	
		Send-in Assignment	5.63%	
		Test	5.63%	
8. Financial Literacy	13 hours (2 weeks)	Practice Assignments 1,2,3	1.25%	
		Send-in Assignment	5.63%	
		Test	5.63%	
		Final Grade	100%	