



Argyle Secondary School Math Department  
Foundations of Mathematics and Precalculus 10 Course Outline

Teacher: Mr. Damien Liu ([dliu@sd44.ca](mailto:dliu@sd44.ca))

Mathematics 10 (<https://curriculum.gov.bc.ca/curriculum/mathematics/10>)

## BIG IDEAS

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.
--------------------------------------------------------------------------	--------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------

## CURRICULAR COMPETENCIES:

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

### Reasoning and modeling

- Develop thinking strategies to solve puzzles and play 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 in the classroom
- 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:*

- operations on powers with integral exponents
- prime factorization
- functions and relations: connecting data, graphs, and situations
- linear functions: slope and equations of lines
- arithmetic sequences
- systems of linear equations
- multiplication of polynomial expressions
- polynomial factoring
- primary trigonometric ratios
- financial literacy: gross and net pay

## **RESOURCE MATERIALS:**

The teacher may provide an appropriate text, as well as providing locally developed supplemental packages. **Direct Entry Scientific calculator required.**

## **MARKS ASSIGNMENT:**

Students are assessed 60% on unit tests and 40% on classwork including assignments, problems and quizzes.

## **POLICIES AND PROCEDURES:**

### **1) PREPARATION FOR CLASS**

It is the student's responsibility to arrive for each class **on time** with their notebook, pencils, calculator, and textbook. Good work habits, effort, regular attendance, and completion of assignments contribute to successful achievement.

### **2) MS TEAM**

Some in person classes will be recorded on MS Teams for the benefit of review or for those absent from in person classes. Please make sure you have logged in and are actively participating in the online community.

### 3) ABSENCES

Missing classes for any reason will have an impact on learning, assessment, and evaluation. Students absent from class, whether excused or unexcused, are solely responsible for obtaining and completing any missed assignments, work, or homework. **Your teacher is not required to make special arrangements for unexcused absences.**

- a. Students absent for illness, medical appointments, and other emergencies **must** contact their teacher **on the day they return to school** to submit overdue assignments, schedule missed assessments, and to receive missed work.
- b. Students absent for school related activities (ex. field trips, work experience, sports trips, etc.), **must** inform their teacher of this absence **well in advance** of the activity, in order to receive specific instructions on work that will be missed and the rescheduling of missed assessments.
- c. Students absent for any other reason, including family vacations, are considered **unexcused**. Any work or assessments missed for these absences may result in receiving a **zero** for that activity.

---

(Student signature)

---

(Parent / Guardian signature)