



## **I. Key Message/Expectations**

Welcome! I am pleased to be your teacher and hope you enjoy learning about math as the year progresses. I am here to help you but it is my expectation that you come to class prepared and with a positive attitude and intention to learn.

I believe that every student can excel in mathematics. It is very important that you are using class time effectively and practicing each topic. Be sure to ask questions to clarify concepts. Please make sure you set an appointment with me as soon as possible to ensure you get the help you need!

The Mathematics 30–1 course contains topics and outcomes, as specified in the program of studies, that will provide students with the knowledge base, mathematical understandings, and critical-thinking skills identified for entry into post-secondary programs that require the study of calculus. Math 30-1 emphasizes the theoretical development and practical applications of topics from the areas of algebra, functions and graphing, trigonometry, and pre-calculus skills up to a level acceptable for entry into universities and other post-secondary institutions.

Attendance is one of the most important factors for academic success! It is expected that you come to class every day on time with the materials you require for class. If an absence is pre-planned please inform your teacher as early as possible so that materials can be provided. If unplanned, please inform the teacher either by email ([sinclairm@prsd.ab.ca](mailto:sinclairm@prsd.ab.ca)) or when back in school.

## II. Course Overview

The goal of the study of mathematics is for students to:

- Use mathematics confidently to solve problems
- Communicate and reason mathematically
- Appreciate and value mathematics
- Make connections between mathematics and its applications
- Commit themselves to lifelong learning
- Become mathematically literate adults, using mathematics to contribute to society.

As per the Alberta Mathematics 30-1 Program of Studies, the following learning outcomes will be covered in this course:

- 29% General Outcome 1: Develop trigonometric reasoning.
- 55% General Outcome 2: Develop algebraic and graphical reasoning through the study of relations.
- 16% General Outcome 3: Develop algebraic and numeric reasoning that involves combinatorics.

Math 30-1 is worth 5 credits towards graduation upon completion.

Please note: As of now, Alberta Education has made Diploma exams mandatory for the 2021-22 school year. Diploma exams are marked by teachers at a central location. Personal Identification, including the name of your school, is removed from each exam booklet before it is marked.

The Grade 12 Diploma Examinations Program has 3 main purposes:

- To certify the level of individual student achievement in selected Grade 12 courses
- To ensure that province-wide standards of achievement are maintained
- To report individual and group results

The Mathematics 30-1 Diploma exam has both a multiple choice, numerical response, and a written response section. Weighting of each section and specific information for the exam will be given to class when updated by Alberta Education.

***Math 30-1 Diploma Date and Time: Thursday, January 20th, 2022 from 9:00 am to 12:00 pm.***

### III. Scope and Sequence

*\*Please note this is an approximate timeline. Unit order and timeframe **may change** as needed\**

Unit and Textbook Chapter	Topics	General Time Frame	Weight of Coursework
Transformations	Stretches Reflections Translations Combining Transformations The Inverse of a Relation	September	20
Analyzing Radical and Rational Functions	Radical Functions Rational Functions Function Operations	September/October	11
Exponential and Logarithms	The Exponential Function The Logarithmic Function	November	16
Polynomials	Polynomial Functions Polynomial Equations	November	8
Trigonometry 1	Degree and Radian Measure for Angles The Unit Circle Solve Trig Equations	November/December	29
Trigonometry 2	Graphing Trig Functions	November/December	
Trigonometry 3	Trig Identities	November/December	
Permutations & Combinations	The Fundamental Counting Principle Linear Permutations Combinations The Binomial Theorem	December	16
Review		January	

Final Course Grade Weight:

- Coursework: 70%
- Diploma Examination: 30%

#### **IV. Teaching Methodology**

Students will be taught through a variety of different instructional methods and strategies including, but not limited to: direct teaching, cooperative learning, project-based learning, inquiry-based assignments, and technological means. Where appropriate, students may be allowed to use personal devices (see expectations in Student Handbook).

#### **V. Assessment**

There will be a number of small formative assignments and quizzes in class, as well as practice questions from the textbook. These assignments will not be taken for marks and are required to practice and develop the skills needed in each chapter and gain a deeper understanding of the course material. There will be several projects in this course. These projects are an opportunity for students to demonstrate a deep and meaningful understanding of the material.

Students should expect to be assessed for marks through the use of summative projects and unit tests. Assessment is based around the students' most recent demonstration of the course material. Opportunities for rewrites will be available. In the event a student does not hand-in an assignment, a NHI (not handed in) will be assigned on PowerSchool until it is and parents/guardians will be notified.

Students and parents are encouraged to use the school website and PowerSchool to keep informed of marks, attendance, etc. This site will be updated regularly to give an accurate representation of each student's achievement to date.

#### **VI. Resources**

- Pre-Calculus 12 Workbook: Absolute Value Publications (supplied by GPS)
- TI 83/84/TI-nspire Graphing Calculator (supplied by student)
- Pencils, highlighters, erasers, etc.