



GRIMSHAW PUBLIC SCHOOL

Inspiring students today for tomorrow's future

Course Outline

2021 - 2022



Mrs. A. O'Donnell

VC Suite

odonnella@prsd.ab.ca

Welcome to Mathematics 20-1!

The aim of mathematics education is to prepare 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

Course General Objectives

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

Algebra & Functions 30%

- Demonstrate an understanding of the absolute value of real numbers
- Solve problems that involve operations on radicals and radical expressions with numerical and variable radicands
- Solve problems that involve radical equations
- Determine equivalent forms of rational expressions
- Perform operations on rational expressions
- Solve problems that involve rational equations
- Solve algebraically and graphically, problems that involve systems of linear-quadratic and quadratic-quadratic equations in two variables
- Solve problems that involve linear and quadratic inequalities in two variables
- Solve problems that involve quadratic inequalities in one variable
- Graph and analyze reciprocal functions

Quadratic Functions 40%

- Factor polynomial expressions in various forms
- Graph and analyze absolute value functions to solve problems
- Analyze quadratic functions in vertex form and determine attributes of the function
- Analyze quadratic functions in general form to identify attributes of the corresponding graph
- Solve problems that involve quadratic equations

Trigonometry 25%

- Demonstrate an understanding of angles in standard position
- Solve problems, using the three primary trigonometric ratios for angles from 0° to 360° in standard position
- Solve problems, using the cosine and sine law, including the ambiguous case

Sequences & Series 5%

- Analyze arithmetic sequences and series to solve problems
- Analyze geometric sequences and series to solve problems

GPS: The Right Direction

Mathematics 20-1

Course Evaluation:

A variety of instructional and assessment strategies will be used throughout this course. The course includes a final examination worth 30% of your final grade. The 70% school mark is evaluated over the term as follows:

Quizzes and Assignments **20 %**

Unit Tests **50 %**

Please note this is an approximate timeline and unit order may change as needed

September: *Radicals and Quadratic Functions*

October: *Quadratic Functions and Quadratic Equations*

November: *Rational Expressions & Equations and Systems of Equations*

December: *Sequences & Series and Trigonometry*

January: *Final Exam Review*

Final Exam **30 %**

Missed/Late Work Policy:

Circumstances may arise where students miss assessments. Missed assessments must be made up within two (2) school days following a *verified absence*, except with prior permission from your teacher. Regular student and parent monitoring of the student's progress is recommended through PowerSchool, which is accessible via the GPS website.

Attendance Policy:

Regular Attendance is crucial to be successful in math. All absences must be verified by a parent or guardian to receive credit for missed assessments.

If students have two (2) or fewer lates and all of their absences are verified at the end of each semester they can choose to excuse one (1) low mark quiz or assignment.

Assessments:

Assignments will be given regularly and are a crucial component to practicing and developing skills in math. Assessments will either be formative or summative.

Formative assessments are completed on a regular basis as a method to evaluate student progress prior to being tested on a concept. Formative assessments will be given during class time and as part of the regular homework routine. The expectation is that students are completing these as a way to improve knowledge and understanding. They will be given verbal feedback or recorded in PowerSchool with a weighting of zero. **Just because an assignment isn't for marks does not mean it does not impact your mark**

Summative assessments are completed regularly and will be evaluated for a mark in PowerSchool. Most summative assessments will be due two (2) days after they are given, unless noted by the teacher. Summative assessments will no longer be accepted once the unit exam is completed.

At the teacher's discretion, a student handing in a past-due assignment will receive a completion credit in place of a numerical grade (i.e., students will receive an "excused" once they complete a past-due assignment, which neither helps nor hinders their overall grade).

Quizzes and Unit Exam are completed throughout the unit and students will generally be notified prior to being given, exams will always be notified prior to being given. No retests will be permitted. Corrected quizzes can be handed in with the unit exam to be replaced by the unit exam mark, if it exceeds the quiz mark.

Final Exam: The final exam is a cumulative test at the end of the year that covers the content from the entire course.

If you find you are spending an hour or more a night on any assignment you need to **seek extra help right away**. By staying on top of your work you will ensure you do not fall behind as the first units build on each other.

REQUIRED RESOURCES

Textbook – *Absolute Value Publications Pre-Calculus Mathematic Book*

Binder, Loose leaf, **Graphing Calculator***, Writing utensils, ruler, and erasers

I recommend the TI-84 or 84 Plus, if you are unsure that your calculator is acceptable please see Mrs. O'Donnell. Cellphones **cannot be used as calculators.*

Digital Citizenship and Cellphone Use:

Digital citizenship is the appropriate and responsible behavior with regards to technology use. Digital citizenship should be practiced in every course, throughout the school and at home. It is an ongoing partnership between teachers, students, and parents. Just as teachers build an awareness of the importance of digital citizenship at school, parents build and reinforce these concepts with their children at home. Parents are asked to support the effective use of technology in the school by not texting /calling students during instructional time. Students need to approach any use of technology with the digital citizenship components in mind.

Electronic devices are permitted to be used in instructional areas if the student has received *the instructor's prior permission.*

Inappropriate use may result in a loss of privileges. Inappropriate use includes, but is not limited to:

- Personal texting
- Talking and / or sending pictures and / or video of yourself or others - even if you ask their permission
- Listening to music during instructional time
- Engaging in any activities on your device which distract you from the current classroom activity
If students persist in these activities, or in situations of defiance, they may be referred to administration.

NOTE: Electronic devices (laptops may be exempt in some circumstances) are NOT permitted during examinations and their use may result in the student receiving a zero mark.

3 Strike Policy:

When students are not showing appropriate digital citizenship in class the following will occur

First Offense – students will be asked to turn in their phone for the remainder of class.

Second Offense – students will be asked to turn in their phone for the remainder of the day, or for a two day period if class is at the end of the day. Contact will be made home to keep parents informed and let them know about third offense policy.

Third Offense – students will be asked to turn in their phone and parents will be contacted to come in to retrieve the phone and meet regarding future use.

Classroom Responsibilities

Students are expected to be respectful and responsible in all of their classroom interactions. Being respectful and responsible can include but is not limited to:

- Showing up on time, prepared to learn every day
- Not be disruptive to others learning
- Participate in classroom activities and discussions in a way that allows everyone to feel supported and like part of the classroom community

I have high, positive expectations of every student, and every student should have the same expectations of themselves. All work should be completed with pride and to the best of your ability. I am always available to help.

Parents/Guardians:

Please take the time to review your child's course outline. If you have any questions or concerns, please feel free to contact me at odonnella@prsd.ab.ca or by phone. However, email will usually get a quicker response.

Appointments can also be made to meet with me in person and for major concerns I will contact home.

Thank you and I look forward to a successful year!

Mrs. Alicia O'Donnell