

Pre-Calculus 11: Course Outline (Winter, 2024)



Teacher: Mr. Truman

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Office Location/Hours: Room 110 - Hours after school or by appointment

Course Description

Pre-Calculus 11 is a challenging course designed for students to learn specific algebra and trigonometry concepts as well as develop critical thinking skills desired for calculus and post-secondary studies in the sciences. Students are encouraged to evaluate and reflect on their own learning, evaluate other students' problem solving methods, and apply this knowledge to real-world applications. Topics of study include trigonometry, quadratic functions and equations, radical/rational expressions and equations, and systems of equations.

Unit	Big Ideas	About
Unit 1: Radical Operations and Equations	The meanings of, and connections between, operations extend to powers, radicals, and polynomials.	Focuses on radical operations and equations containing radical terms. Performing operations with radical expressions, and solving radical equations.
Unit 2: Solving Quadratic Equations	Algebra allows us to generalize relationships through abstract thinking.	Explores various methods to find solutions to quadratic equations, and understanding the algebraic interpretations of quadratic functions and their corresponding graphs.
Unit 3: Analyzing Quadratic Functions and Inequalities	Quadratic relationships are prevalent in the world around us.	Analyzes the fundamental characteristics of quadratic equations and their graphical representation, and analyze the solutions to quadratic inequalities.
Unit 4: Trigonometry	Trigonometry involves using proportional reasoning to solve indirect measurement problems.	Explores the relationships between angles and sides in right-angled triangles, as well as generalizes these concepts to non-right triangles.
Unit 5: Rational Expressions and Equations	Algebra allows us to generalize relationships through abstract thinking.	Focuses on simplifying, manipulating, and solving rational expressions and equations, providing a bridge between algebraic fundamentals and more advanced mathematical concepts.
Unit 6: Financial Literacy	The meanings of, and connections between, operations extend to powers, radicals, and polynomials.	Explores the application of mathematical principles in various financial scenarios, including simple and compound interest, as well as investments and loans.

Assessment

Assignments	10%	- There will be practice assignments given for each unit section.
Quizzes	20%	- There will be quizzes given based on each section.
Unit Tests	50%	- After each unit, there will be a cumulative test.
Final Exam	20%	- An exam for the whole course will be given at the end of the term.

Class Expectations

Classroom Behaviour

- **Be respectful** - Respect yourself and all others. This includes property, ideas, space, etc.
- **Be on time** - Come to class on time.
- **Be prepared** - Bring all your material with you, prepared to work for the entire class period.
- **Be mindful** - Please handle food, drinks, and electronics appropriately. Follow directions the first time they are given. If you don't understand any instructions, please ask for clarification. In the event that you finish work early, pull out your independent reading, or any other homework you may need to complete.

Absences

If you are absent from class, please check the Class folder for any notes or handouts you missed. Work must be made up within a reasonable time frame. If you are legitimately away (have a note from a parent/guardian/doctor), you will be able to make up in class assignments, quizzes, and/or tests for full marks. Otherwise, only partial marks will be granted.

Course Materials

Students are required to have the following supplies for class:

- Pencil, eraser, ruler, protractor
- Calculator (preferably a graphing calculator)
- Notebook for taking notes or completing assigned work