



PATTISON HIGH SCHOOL

We don't teach a class; we teach individual students in a class

Calculus 12

WINTER Period 1
2020

Mr. Joel
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Description

Calculus builds on a foundation of knowledge where each piece is as important as the next. From the concept of a limit to derivatives as an instantaneous rate of change, each idea is needed before the next can be understood. Throughout the course, we will be exploring and practicing good thinking strategies for solving problems in Calculus.

Learning and understanding mathematics is a skill that takes time and patience to master. Continual hard work will be needed to excel in this course.

Overview

Limits

This is the fundamentals of Calculus and the reason why the mathematics are sound logically. We will not need to investigate the entire idea of limits, just the fundamentals required for Calculus.

Derivatives

The first foray into Calculus, we'll understand how to find instantaneous rates of change and rate of change as a function.

Application of Derivatives

After learning how to find derivatives, we'll use that knowledge to apply to general questions and provide examples and uses for them in simulated situations.

Integrals

We will first explore what integrals mean and how to compute them as a definite integral, afterwards connecting the idea of the integral to the derivative through the Fundamental Theorem of Calculus.

Application of Integrals

After learning how to compute integrals, we'll once again try to apply them the simulated reality and practice through examples its usefulness.

Expectations

It is expected that you arrive to class on time and ready to work. There is limited time in a semester and every minute should be utilized fully. Every student in my classes are trying to achieve their potential and to best do so, a respectful and caring environment is required. As participants of my class, I will maintain the expectation that the learning environment is cared for by all its members.

Assessment & Evaluation

Category	Timeline	Weight
Homework	Daily	10%
Quiz	Weekly (at random)	10%
Chapter Test/Project	When Appropriate	20%
Extension Question	Bi/Tri-Weekly	15%
Midterm	Week 6-7	20%
Final	Week 14-15	25%

During homework, one should self-assess against the solutions to be sure of their understanding. Upon the return of Chapter Tests, the correction marks present a chance of self and peer-assessment as well.

Materials and Resources

The following are materials that will help you succeed in this course.

1. USB – for storing digital text
2. Binder – for organizing the paper-based materials given
3. Paper – for taking notes (recommended due to the number of diagrams that will appear)
4. New workbook (to be confirmed) – the workbook form which we will be working from
5. Pen/Pencil – for taking notes
6. Calculator – you'll only be allowed to use a scientific calculator