

Acc Calculus Unit 1 Preparation for Calculus

Content Area: **Math**
Course(s): **Accelerated Calculus**
Time Period: **Marking Period 1**
Length: **2 weeks**
Status: **Published**

Unit Overview

This unit, which includes a summer assignment, covers concepts and skills that are prerequisites for a successful experience in calculus.

Enduring Understandings

Concepts and skills from algebra, geometry, and precalculus are the foundation for solving higher-level calculus problems we will encounter this year.

Essential Questions

- How do you identify intercepts and points of intersection, and test for symmetry?
- How do you find the slope of a line and use the slope to write an equation of the line?
- How do you determine the domain and range of a function, and classify functions?
- How do you find the inverse of a function?
- How are the functions $f(x) = e^x$ and $g(x) = \ln x$ related, and what properties can you use to simplify exponential and logarithmic expressions?

New Jersey Student Learning Standards (No CCS)

N/A

Interdisciplinary Connections

LA.W.9-10.6

Use technology, including the Internet, to produce, share, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically.

SCI.HS-ETS1-2

Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.

TECH.8.1.12.C.CS4

Contribute to project teams to produce original works or solve problems.

Technology Standards

TECH.8.1.12.C.CS4

Contribute to project teams to produce original works or solve problems.

TECH.8.1.12.D.CS3

Exhibit leadership for digital citizenship.

TECH.8.1.12.E.CS4

Process data and report results.

TECH.8.1.12.F.CS3

Collect and analyze data to identify solutions and/or make informed decisions.

TECH.8.1.12.F.CS4

Use multiple processes and diverse perspectives to explore alternative solutions.

TECH.8.2.12.C.CS2

The application of engineering design.

21st Century Themes/Careers

CAEP.9.2.12.C.3

Identify transferable career skills and design alternate career plans.

Financial Literacy Integration

PFL.9.1.12.C.1

Compare and contrast the financial benefits of different products and services offered by a variety of financial institutions.

PFL.9.1.12.C.2

Compare and compute interest and compound interest and develop an amortization table using business tools.

PFL.9.1.12.C.3

Compute and assess the accumulating effect of interest paid over time when using a variety of sources of credit.