

AP Calculus
Mrs. Donna Witiak
Summer 2011

DETAILS:

- ✓ This summer assignment will be due on the **second** day of school. You will submit it in a folder with pockets inside or in a binder to keep your work neat and orderly.
- ✓ Read each section prior to completing the problems so that you follow the methods used in Calculus. Then complete your assignment for that section. You must SHOW ALL WORK FOR CREDIT The answers to the odd #'d problems are in the back of the book. Use the answers to check that you're on the right track!
- ✓ **Copy all definitions, rules or theorems that you find in the pages assigned. This will be your notes.** Also, copying the sketch that goes along with the definitions helps in understanding the concept and also aids in your ability to explain the concept to me in your future exams.
- ✓ As you read the text, you will come across "Explorations". Work through these with your calculator to be sure that you are proficient with your calculator.
- ✓ You will discover that you are familiar with the entire chapter! This chapter is a review of Pre-Calculus (Honors Analysis!!)

This will count as a 100 Point Test Grade

- 1) Include this heading on all of the assignments

Name_____

AP Calculus

Date_____

Page #____

Section_____

Problems #__

- 2) Staple each section of problems together (ie. all problems from 1.1 get stapled together in order)
- 3) Check off all the problems in the list above as you do them.
Include this list as your first page!!!
- 4.) Put all of your work in order in a **folder** with pockets or in a **Binder**. If I cannot find your work in numerical order of the page assignment you will not receive credit for it. Please be neat!!
- 5.) Part of the final packet will include all of the notes you took from the chapter in logical order, clearly labeled by section (ie., 1.1, 1.2, etc.)
- 6.) Part of the final packet will include all of the problems listed listed above, also in logical order, clearly labeled by section.
- 7.) Scoring Rubric
Part I - notes (1.1, 1.2 etc) 40 points
Part II - problems (1.1, 1.2 etc) 60 points

Total 100 points!!

Mathematics is your ticket to the Future!!

PROBLEM LIST

Chapter 1 – Prerequisites for Calculus

1.1 Lines

- Slope of a Line
- Parallel and Perpendicular Lines
- Equations of Lines
- Applications

(write the directions before completing every set of problems!)

- page 7 Quick Review 1.1 # 1-10
- page 7 Exercises # 1-39 odd, #40-52 all

1.2 Functions and Graphs

- Domains and Ranges
- Interpreting Graphs
- Even and Odd Functions
- Symmetry
- Piece-wise Defined Functions
- Absolute Value Functions
- Composite Functions

(write the directions before completing every set of problems!)

- page 17 Quick Review # 1-12 all
- page 17 Exercises #1-17odd,19-34all,37-49all,63-65all

1.3 Exponential Functions

- Exponential Growth
- Exponential Decay
- The number e
- Applications

(write the directions before completing every set of problems!)

- page 24 Quick Review #1-10

- page 24 Exercises #1-6 no grapher, 7-10 grapher, 11-14all, 15-18 include a sketch, 23-39 odd
- **continuously compounded interest $A(t) = A_0 \left(1 + \frac{r}{k}\right)^{kt}$
 A_0 = initial investment, r = rate expressed as decimal
 k = # of times/yr compounded, t = time in years

1.4 Parametric Equations

- Relations
- Circles and Ellipses
- Lines and other curves

(write the directions before completing every set of problems!)

- page 30 Quick Review #1-10 all
- page 30 Exercises #1-4, 7-29odd, 37

1.5 Functions and Logarithms

- One-to-One Functions
- Inverses
- Log Functions and their Properties
- Applications

(write the directions before completing every set of problems!)

- page 39 Quick Review # 1-10 all
- page 39 Exercises #1-12all, 13-23odd, 33, 37-40(AlgII!), 46-50

1.6 Trigonometric Functions

- Radian Measure
- Graphs of the Trig Functions and their Inverses
- Even and Odd Trig Functions
- Periodicity
- Applications

(write the directions before completing every set of problems!)

- page 48 Quick Review #1-10 all

- page 48 Exercises # 1-4, 7-10, 11-31 odd, 34-37all.

Chapter 1 Review

(write the directions before completing every set of problems!)

- Review "key terms" on page 51. These were all mentioned in the chapter.
- Work through the Chapter Review Exercises....page 52 #1-67 all.
