

First Day Worksheet – A Calculus Student’s Guide to the Galaxy

Last Day of Class: “Is there anything I can do to pull up my grade? Any extra credit work?”
Answer: “No.”

First Day of Class: “What do I have to do to succeed in this class?”

Answer: “Great question! This worksheet will help you develop great work habits to help you to do great in this class!”

Goal: The goal of this sheet is to outline a strategy for you to succeed in calculus. The main topics are:

- I. The Importance of Big Things
- II. The Importance of Small Things
- III. Successful Students – An Instructor’s Perspective
- IV. Successful Students – A Student’s Perspective
- V. Taking Ownership of Your Calculus Education
- VI. Review Questions

I. The Importance of Big Things – Tests

Tests comprise 75% of your grade. You cannot afford to do poorly on tests. See Section III and Section IV for strategies to crush them!! Also, the Final is only worth 25% of your grade. If you come into the instructor’s office right before the final (or, even worse, after the final) and ask “Is there anything I can do to pull up my grade?”, the answer is invariably “No.” It is important to do well from the beginning, especially those of you who will lose eligibility (for a scholarship, sports team, etc.) if you underperform in this class! Plan for your semester, not just for today.

II. The Important of Small Things – Quizzes and Homework

Small things (Quizzes and Homework) can have a major impact on grades. Doing well on quizzes and MyLabsPlus is a matter of effort – *if you work diligently and intelligently, you will have a very high effort grade*. Effort here is defined as your quiz and homework grades.

Problem 1. Say a student averages a 95% on homework and quizzes. What does her average grade have to be on the exams to earn a C in the class (69.5% rounds to a ‘C’)? What about an ‘A’?

Problem 2. Say a student averages a 65% on homework and quizzes. What does his average grade have to be on the exams to earn a C in the class (69.5% rounds to a ‘C’)? What about a ‘B’?

Real Life Examples. Problems 1 and 2 are not manufactured problems. Consider the following *real* scores from the following Cal I students:

Q(/10)	MLP(/10)	T1(/100)	M(/100)	T2(/100)	F(/100)	Overall(/100)	Grade
9	9.1	48.1	81.7	69.3	60.5	71.7	C
9.6	9.6	69.6	71.3	52.9	51.8	69.6	C
9.4	9.9	73.1	95.4	90.7	86.8	89.6	A
3.9	9.3	62.3	87.5	77.1	87.7	78.2	C

III. Successful Students – A Instructor’s Perspective

Successful students in calculus share many common features. They

- Work hard and work smart. Working smart includes good time management, working with other industrious students, doing all of the MLP AND book problems BEFORE the quiz.
- Do ALL of the homework problems – both the book problems and the homework problems.
- Gain an understanding of everything the book has to offer: this includes mastering the quantitative skills necessary to complete the homework problems correctly AND an ability to quickly classify problems and decide which is the best method to solve it.
- Treat every quiz and every homework problem seriously. The instructors look at the book problems when they write the exam. It is foolish to skip hard problems because they are the most likely to show up on quizzes and exams!
- Use the help resources available to them. Successful students use office hours and the Calculus Corner. It is wasteful and inefficient to spend hours on homework problems that you can’t solve. Often, there is one or small things that a student misses and they show up repeatedly (causing big problems!).
- Have good test taking strategies! Good test taking strategies include working on the easy problems first and and saving the hard problems for the end. You do not want to run out of time and leave an easy problem unanswered! Sleeping and eating right is also a valuable test taking strategy. An energy drink and cramming is no substitute for steadily working hard and being well rested!!!!
- Read the directions on all homework, quizzes, and tests.
- Look beyond the material to develop analytical problem solving strategies.

IV. Successful Students – A Student’s Perspective

- “The reason I passed Cal 1 was by doing the bare minimum: the online homework and drills. The reason I conquered Cal 1 was by understanding the problems, which comes from working All of the practice problems assigned. It was a pain, but in the end, doing the work was the only way to succeed.”
- “Completing every homework assignment. Each question allows multiple attempts so it is easy to get full points. The homework assignments served as a small cushion for my grade that really helped me at the end of the semester.”
- “Asking questions. Going to office hours to get clarity on problems I didnt understand helped me tremendously”
- “Accept that you will spend upwards of 13-15 hours a week working math problems, if you are dedicated to the game. ”
- “ Keep up with MLP and work a smaller chunk 3 or 4 days a week, rather than in one sitting. ”
- “GO TO CLASS!”

- “ Work book problems the day of lecture for that section, not later.”

V. Taking Ownership of Your Calculus Education

Step 1. Gather the facts.

- On which days and for how many hours on those days can you work on calculus?
- With whom can you form a study group?
- Who is your instructor? When are the instructor’s office hours? Where is his/her office? Do you know how to get there?
- Who is your TA? When are your TAs working in the MRTC/Calculus Corner?
- When are you free during the week to seek additional help, if necessary?
- When are the calculus exams?
- When is the midterm exam? Do you have a conflict?
- When is the final exam?
- Are you a CEA student? Have you handled the CEA paperwork yet?

Step 2. Make a weekly schedule. Include:

- Your course schedule.
- Built in times to work on calculus (and your other classes).
- Time to work in the Calculus corner.
- Time to use office hours or see your instructor with an appointment.
- Your extracurricular activities.
- Your work schedule.
- Time to relax/sleep.
- Suggestions for how to adapt to weeks with tests. If you miss a calculus session, when and how are you going to make it up?
- Write and sign the pledge “I pledge to work hard in calculus, conduct myself in a manner befitting a University of Arkansas student, do my homework completely and thoroughly before it is due, and use the help resources available to me. ”

VI. Review Questions

- What does it mean to work smart?
- What help resources are available to you?
- What are good test taking strategies (list at least 3)?
- Why are you in calculus and what do you hope to get out of this class?