

Math 112 End of Week 1 Newsletter

Every Friday, I will email the class or post a newsletter. These newsletters and emails will contain a summary of the calendar, information about homework, links to review material and studying advice. The studying advice will include old exam problems to look at each week.

UPCOMING SCHEDULE:

Friday : Section 9.4 (intro to derivative rules)
Monday: Section 9.4/9.5 (Marginal Revenue/Cost Application and derivative rules)
Tuesday: First Test Prep and Homework Discussion (bring lots of questions!!!)
Wednesday: 9.5/9.6 (more derivative rules – product, quotient, and chain rules)
Thursday: Activity 3: Exploring Graphs of Derivatives (first step at seeing connections to original graph)
Next Friday: 9.7/9.8 (Combining Derivative Rules)

Activity 1 Solutions: See link on left side of course website.

Activity 2 Solutions: Will be posted by this weekend.

Activity 3: Print off to bring to quiz section on Thursday next week

<https://sites.math.washington.edu/~aloveles/Math112Winter2019/Activity03.pdf>

HOMEWORK: Closing Tuesday: 9.3 and 9.4 Closing Thursday: 9.5

This is a busy first week set of homework, please, please, please, please start now if you haven't yet!

NEW POSTINGS: There are a lot of new postings. You can find them in the most recent announcement and on the right side of the course page. I also provide direct links below:

1. Overview of 9.3 with examples:

<https://sites.math.washington.edu/~aloveles/Math112Winter2019/m112review9-3.pdf>

2. Review of functional notation (should help if you are stuck in 9.3):

<https://sites.math.washington.edu/~aloveles/Math112Winter2019/FunctionalNotation.pdf>

3. Overview of 9.4 with examples:

<https://sites.math.washington.edu/~aloveles/Math112Winter2019/m112review9-4.pdf>

4. Review of exponent rules (should help if you are stuck in 9.4):

<https://sites.math.washington.edu/~aloveles/Math112Winter2019/exponentrules.pdf>

5. More practice problem (and solutions) from 9.4:

<https://sites.math.washington.edu/~aloveles/Math112Winter2019/m112practice9-4.pdf>

OLD EXAMS:

Here are some old exam questions that pertain to material we have done lately. Try these problems out now to get an idea of how well you are understanding the material and to access if you are ready for the first exam.

You can also see the entire exam archive here: <https://sites.math.washington.edu/~m112/Archives.html>

For practice with 9.3 material try:

Problem 3 from: <https://sites.math.washington.edu/~m112/Midterm1/win14exam1loveless.pdf>

Problem 4bc from: <https://sites.math.washington.edu/~m112/Midterm1/win13exam1.pdf>

Problem 3 from: <https://sites.math.washington.edu/~m112/Midterm1/spr16exam1taggart.pdf>

Problem 3 from: <https://sites.math.washington.edu/~m112/Midterm1/spr13exam1.pdf>

For practice with 9.4 material try:

Problem 4a from: <https://sites.math.washington.edu/~m112/Midterm1/win13exam1.pdf>

Problem 1c from: https://sites.math.washington.edu/~m112/Midterm1/Wi15_MT1.pdf

Problem 1b from: <https://sites.math.washington.edu/~m112/Midterm1/win14exam1loveless.pdf>

Problem 1c from: <https://sites.math.washington.edu/~m112/Midterm1/win17exam1taggart.pdf>

SPECIAL NOTES AND ADVICE:

ADVICE AND GETTING HELP

How to get high grades in this course

If you want to get a high grade in this course, then read the common problems/solutions for exam issues in 111/2 here:

<https://sites.math.washington.edu/~aloveles/Math112Winter2019/ExamAdvice.pdf>

You might also be interested in my recipe for success in UW math courses:

<https://sites.math.washington.edu/~aloveles/Math125Winter2019/Recipe%20for%20Success.pdf>

And my how to get help on homework:

<https://sites.math.washington.edu/~aloveles/Math112Winter2019/111-2%20Help.pdf>

The main key is to treat every homework question like an exam problem!

HOMework HINTS: Here are hints on the most common questions from office hours:

- First, make sure to give EXACT answers unless otherwise specified.

If the answer is $1/3$, actually type in $1/3$ (do not type in 0.333)

- Second, read the 9.3 review sheet (there are several examples in my review sheet).

On 9.3 problem 9(b): This is your first chance to use the main concept from Wednesday and Friday's lectures. To find $g'(z)$ you first need to find and simplify $(g(z+h)-g(z))/h$, then let h go to 0. That gives you $g'(z)$.

On 9.3 problem 9(d): Use part (c) to replace $g(1)$ and $g'(1)$ in the given approximation, then solve for $g(1.0003)$.

On 9.3 problem 15: This is all about translation and being able to approximate from a graph. For example, $f'(25)$ = "the slope of the tangent line at 25" (draw and approximate the slope). And $(f(1+h)-f(1))/h$ = "the slope of the secant line from 1 to $1+h$ " (draw and approximate). Once you translate correctly, then draw the line and use two points from the line to get the slope.

HOMework TIP:

Always glance through the homework the day it becomes visible. And before you start homework on a given section:

1. Read that section of the book.
2. Read the lecture notes for that section.
3. Look at my supplemental review sheets for that section.
4. Then get out paper and attempt each homework questions like it is an exam question (write out your work).
5. If you get stuck, then you can show a tutor, or your TA, or me, your work.

After you finish each assignment, look back through the homework and summarize the key concepts for yourself. Ask yourself: Could I do similar problems on a test? And glance at some old exams to see if you really could do similar problems on a test.

STUDY TIP:

Print off several (6+) old midterms NOW!! Then in the 5 minutes before or after lecture and quiz section each day, flip through the old exams. This should help you get very comfortable with what a midterm looks like in this class and it will add importance to the homework (as you see that the same problems from homework are on old exams).

Hope some of this helps. Let me know if you find something that is particularly useful or if you have input on other review materials that you might find helpful (I will add it to my list of projects for the future).

Dr. Andy Loveless