

Math 112 End of Week 2 Newsletter

Most important for students in Math 112 right now: Master derivative rules!!! Practice, practice, practice, practice until it is impossible for you to make a mistake taking a derivative. These tools will be essential to the rest of the course. You will see additional practice listed below and you can find lots of practice in the exam archive.

UPCOMING SCHEDULE:

Friday (Today): Finish 9.6/9.7 (product/quotient/chain rules)

Monday: NO CLASS (Holiday)

Tuesday: Test Prep and homework discussion (know your derivative rules!)

Wednesday: 9.7/9.8 (combining derivative rules and second derivatives)

Thursday: Activity 4 (Rate of Ascent – Comparing two graphs and their derivatives)

Next Friday: 9.9 (Derivative Applications)

Activity 3: Solutions will be online by tomorrow (left side of course website).

Activity 4: Print out for Thurs: <https://sites.math.washington.edu/~aloveles/Math112Winter2018/Activity04.pdf>

HOMEWORK: Closing Fri (tomorrow): 9.5 Closing Tue: 9.6, 9.7(1) Closing Thu: 9.7(2), 9.8

HW Hints: Here are hints on the most common questions from office hours the last time I taught this course:

A) On 9.6 problem 11(b): Remember that the answer from the previous part *is in thousands!*

B) On 9.6 problem 13: In this problem "r" is the rate, NOT written as a decimal.

So for example, 6% is $r = 6$ (instead of $r = 0.06$).

Homework Stats: On 9.3, the median score was 100%. The first step to success in this course is to get 100% on homework. The next step is to make sure you understand the concepts and could do similar problems on a test. That's where looking at old exams each week will help (see below).

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 9.5 and 9.6 with examples: (Also reviews finding the **equation** for tangent lines)

<https://sites.math.washington.edu/~aloveles/Math112Winter2019/m112review9-5&9-6.pdf>

2. Business Term review and Discussion of Redefinition of MR and MC:

<https://sites.math.washington.edu/~aloveles/Math112Winter2019/m112reviewMR&MC.pdf>

3. More Derivative Practice: <https://sites.math.washington.edu/~m112/Midterm1/derivativepractice.pdf>

Answers: <https://sites.math.washington.edu/~m112/Midterm1/derivativepracticeans.pdf>

4. Overview of 9.7 and 9.8 with examples:

<https://sites.math.washington.edu/~aloveles/Math112Winter2019/m112review9-7&9-8.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 9.5, 9.6 and 9.7 (Derivative Rules):

Problem 1 from: <https://sites.math.washington.edu/~m112/Midterm1/win13exam1.pdf>

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

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

For practice with 9.5, 9.6 and 9.7 (MR and MC and Applications):

Problem 2 from: <https://sites.math.washington.edu/~m112/Midterm1/win13exam1.pdf>

Problem 3 from: <https://sites.math.washington.edu/~m112/Midterm1/win13exam1.pdf>

Problems 2 and 3 from: <https://sites.math.washington.edu/~m112/Midterm1/win14exam1loveless.pdf>

Problem 3 from: https://sites.math.washington.edu/~m112/Midterm1/Wi15_MT1.pdf

See the next page for some important study tips. Hope this helps.

STUDY TIPS:

I always like to share how I studied when I was in graduate school. I was a so-so student as an undergrad, but I did much better in grad school, getting perfect scores on almost all my exam. Here is how I did it:

1. At least 1 week before an exam, spent an intense night of studying.
Try to trick yourself into thinking the exam is the next day.
Work through several old exams. This studying should consist of two elements:
 - a. *Problem recognition*: Flip through lots and lots and lots of exams quickly and see if you can figure out how to quickly start each problem.
 - b. *Working out the details*: Carefully work through a few exams in details to practice finishing problems and to practice being careful with your work.
2. After this intense studying session, talk to me or your TA or someone in the MSC to clear up any confusion.
3. Then at least 2 days before the exam, put in another night of intense studying. Then when I review in class, all the concepts will be fresh in your mind and you will be able to ask good questions.

More days of studying is better. I often started two weeks in advance, this is the condensed version. But, if you only could devote two nights to studying, then this is an efficient and effective use of your time and it gives your mind more time to process the information.

And the number one most important key is: ***Do the problems yourself!!!!***

If you are just reading solutions or if a tutor is helping you on every problem or if you are using the "Watch It" regularly on the homework, then you will NOT do well on the exam. During your studying, you need to be working the problems completely on your own without help. It is okay to use study groups and you can definitely gain from talking things over with classmates, but the vast majority of your study time should be you working on problems completely on your own without help (each time you do a problem you should require less help until you can completely do it on your own).

If any of this works for you or if this newsletter is helpful, let me know. I appreciate the feedback, I'm looking for more ways to help students navigate this course and this university.

- Dr. Andy Loveless