

Math 125 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 5.1/5.2 (Riemann sums and Definite Integrals)
Monday: Section 5.2/5.3 (Fundamental Theorem of Calculus)
Tuesday: Homework discussion and test prep (bring lots of homework questions!)
Wednesday: Section 5.3/5.4 (Net Change and Total Change)
Thursday: Fundamental Theorem of Calculus Worksheet:
<https://www.math.washington.edu/~m125/Worksheets/Fundamental.pdf>
Next Friday: Section 5.4/5.5 (Substitution)

HOMEWORK: Closing Wednesday: HW_1A, HW_1B (4.9, 5.1)
Closing Friday: HW_1C (5.3)

NEW POSTINGS: My new postings are here: <https://sites.math.washington.edu/~aloveles/Math125Winter2018/>

Here are some direct links:

1. Full Chapter 5 Review: <https://sites.math.washington.edu/~aloveles/Math125Winter2018/Chapter5.pdf>
2. 5.1/5.2: Overhead Riemann Sum Summary (know this process well):
<https://sites.math.washington.edu/~aloveles/Math125Winter2018/5-1RiemannApproximationStepsOverhead.pdf>
3. 5.1/5.2: A full example of Riemann sums with visuals (also contains an outline for how to do the last problem in 5.2):
<https://sites.math.washington.edu/~aloveles/Math125Winter2018/RiemannSums.pdf>
4. Derivative and Antiderivative Table:
<https://sites.math.washington.edu/~aloveles/Math125Winter2018/CalculusFactSheet.pdf>

OLD EXAMS: *It is vital that you spend some time at the end of each week reviewing the previous homework and practicing your homework skills on old exam problems.*

The departmental exam archive is here: <https://www.math.washington.edu/~m125/Quizzes/Q4.php>

My personal exam archive is here:

<https://sites.math.washington.edu/~aloveles/Math125Winter2018/LovelessExamArchive.html>

For practice using material from 4.9, 5.1, and 5.2 see:

Problem 4 from: <https://sites.math.washington.edu/~aloveles/Math125Spring2017/sp13m125e1.pdf>

Problem 3 from: <https://sites.math.washington.edu/~aloveles/Math125Spring2017/w17m125e1.pdf>

Problem 2 from: <https://www.math.washington.edu/~m125/Quizzes/week4/mid1f.pdf>

Problem 4 from: <https://www.math.washington.edu/~m125/Quizzes/week4/mid1e.pdf>

Problem 4 from: <https://www.math.washington.edu/~m125/Quizzes/week4/mid1m.pdf>

(and you can find many more practice problems in the other exams in the archives!).

ADVICE AND GETTING HELP:

How to get high grades in this course

If you want to get a high grade in this course, then start by reading my recipe for success which is here:

<https://sites.math.washington.edu/~aloveles/Math125Winter2018/Recipe%20for%20Success.pdf>

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

How to get help in this course:

If you get stuck on homework or in studying for exams and you need help, then first start by reading this:

<https://sites.math.washington.edu/~aloveles/Math125Winter2018/124-5-6%20Help.pdf>

Let me know if any of this helps. See the next page for some advice, extra comments, supplemental material and homework hints.

SPECIAL NOTES AND ADVICE:

GENERAL DEPARTMENTAL COURSE MATERIALS: Official math department rules and outlines for this course are posted here: <http://www.math.washington.edu/~m125/> In particular, *solutions to the worksheets* will appear in the weekly outlines (typically on Fridays). Here is the week one outline: <http://www.math.washington.edu/~m125/outline1.php>

HOMEWORK HINTS: In most assignments this quarter, there will be a few applied or supplemental problems for you to practice, review, and apply what you know. It is smart to read these applied problems as soon as you can and make sure you ask if you have set up questions. A few particular notes:

The last problem in HW_1A: Watch out for the units! During acceleration $a(t)$ = “the constant they give you”, so you can do antiderivatives to get $v(t)$ (a line with positive slope) and $d(t)$. (Note that $v(0) = 0$, and $d(0) = 0$). Figure out when $v(t)$ reaches the cruising speed (that time and corresponding distance are essential to answering the question). Once you have these numbers, you can answer all the questions, but you have to think about what it is asking and reason out your solutions. I find it helpful to draw a picture of the velocity function.

A few problems in HW_1B have to do with the notation of Riemann sums. I will do an example somewhat like this on Friday in lecture, but make sure to also ask in quiz section. It is most important that you can actually compute a Riemann sum for a specific value of “ n ”, but it is nice to be able to read the notation as well.

One of the problems in HW_1B have to do with actually adding the sum (it is the cubic we did in class). I post a fairly complete outline of the solution in my Riemann sum illustration review sheet, so check it out.

SUPPLEMENTAL REVIEW MATERIAL:

1. *Calculus 1 Review sheet that I wrote:*

<https://sites.math.washington.edu/~aloveles/Math125Spring2017/Calc1Review.pdf>

2. *Unit circle and basic trig review (You need to know this well!)*

<http://www.math.washington.edu/~aloveles/Math120Fall2011/Overview%20of%20Trigonometric%20Functions.pdf>

3. *Full Precalc Review Sheet:*

<http://www.math.washington.edu/~aloveles/Math125Spring2016/m124PrecalcReview.pdf>

4. *My full page of Math 124 (Calculus 1) Review materials and practice sheets:*

<https://sites.math.washington.edu/~aloveles/Math124Winter2017/index.html>

Hope this helps.

- Dr. Andy Loveless