

Math 126 End of Week 5 Newsletter

UPCOMING SCHEDULE:

Friday: Section 14.4/14.7 (Tangent Planes and Intro to Max/Min)
Monday: Section 14.7 (Global Max/Min and applied optimization)
Tuesday: Homework Q&A
Wednesday: Section 15.1 (Intro to Double Integrals)
Thursday: Mini-lecture on mechanics of double-integrals and HW Q&A
Next Friday: Section 15.2 (Double over general regions)

HOMEWORK: Closing Tues: 14.4, 14.7 Closing Thurs: 15.1, 15.2

NEW POSTINGS

1. **Summary of max/min calculus 1 facts on page 1, and summary of max/min calculus 3 facts on page 2:**

<https://sites.math.washington.edu/~aloveles/Math126Spring2019/m124-126max-minreview.pdf>

2. **Summary with fully worked out extra examples for 14.4 and 14.7:**

(This review sheet has full examples of every main concept, please check it out!)

<https://sites.math.washington.edu/~aloveles/Math126Spring2019/14-4and14-7Examples.pdf>

3. **More practice with partial derivatives (I posted this last week):**

<https://sites.math.washington.edu/~aloveles/Math126Spring2019/PartialDerivativesPractice.pdf>

4. **15-1 Overview:** <https://sites.math.washington.edu/~aloveles/Math126Spring2019/15-1Review.pdf>

15-1/15-2 Set up Practice Problems:

<https://sites.math.washington.edu/~aloveles/Math126Spring2019/15-2%20Practice.pdf>

solns: <https://sites.math.washington.edu/~aloveles/Math126Spring2019/15-2%20Practice%20Solns.pdf>

15-2 Overview (and more practice):

<https://sites.math.washington.edu/~aloveles/Math126Spring2019/15-2and15-3Review.pdf>

OLD EXAMS: As always, at the end of each week, I strongly encourage you to look in the exam archive to practice some exam problems pertaining to the current material.

For practice with 14.7:

Local Max/Min:

Problem 4 from: <http://www.math.washington.edu/~m126/midterms/midterm2/m126spr14novikExII.pdf>

Problem 3 from: <http://www.math.washington.edu/~m126/midterms/midterm2/m126spr14taggartExII.pdf>

Problem 2b from: <http://www.math.washington.edu/~m126/midterms/midterm2/m126spr13lovelessExII.pdf>

Problem 2 from: <http://www.math.washington.edu/~m126/midterms/midterm2/m126spr11lovelessExII.pdf>

Global Max/Min:

Problem 4 from: <http://www.math.washington.edu/~m126/midterms/midterm2/m126spr14lovelessExII.pdf>

Problem 5 from: <http://www.math.washington.edu/~m126/midterms/midterm2/m126spr14perkinsExII.pdf>

Problem 4a from: <http://www.math.washington.edu/~m126/midterms/midterm2/m126spr11lovelessExII.pdf>

Applied Max/Min:

Problem 4 from: <http://www.math.washington.edu/~m126/midterms/midterm2/m126win14bekyelExII.pdf>

Problem 4 from: <http://www.math.washington.edu/~m126/midterms/midterm2/m126aut12lovelessExII.pdf>

Problem 5 from: <http://www.math.washington.edu/~m126/midterms/midterm2/m126spr10lovelessExII.pdf>

For practice with 15.1 and 15.2:

Problem 1(a) from: <http://www.math.washington.edu/~m126/midterms/midterm2/m126spr14perkinsExII.pdf>

Problem 3(a) from: <http://www.math.washington.edu/~m126/midterms/midterm2/m126spr11lovelessExII.pdf>

Problem 2 from: <http://www.math.washington.edu/~m126/midterms/midterm2/m126spr14lovelessExII.pdf>

Problem 1(b) from: <http://www.math.washington.edu/~m126/midterms/midterm2/m126spr14perkinsExII.pdf>

Problem 4(a) from: <http://www.math.washington.edu/~m126/midterms/midterm2/m126spr14taggartExII.pdf>

Problem 2(b) from: <http://www.math.washington.edu/~m126/midterms/midterm2/m126aut13lovelessExII.pdf>

More Exam Advice:

Several students have emailed me about how to do better on Exam 2. Here is a short version of some of things I have said in email to several of these students: I think I have given a lot of advice on things to try, but it truly comes down to **practicing homework and old exams in an exam-like situation**. Before the exam, you **MUST** do a lot of problems completely on your own, do not look at notes, do not look at practice another version, do not look at online videos, do not ask a friend or a tutor. If you don't ever practice doing problems on your own before the test, then you won't be ready. Work through several old exams at least one week before the next midterm and come show me or your TA or a tutor your work. We can comment on ways to better show your understanding, but you have to put in the time and do lots of problems on your own without relying on notes or a tutor.

Also practice checking your work. Some things are easier to check than others. Things that are easy to check should be done right away (if a vector is orthogonal or if the solution you found is actually a solution). If you build checking your work into your routine you can avoid small errors.

For the second test, you should expect:

1. At least one page on 13.4 and/or 10.3 (acceleration/velocity and polar). You will want to practice such questions and make sure your computations are fast.
2. At least 1+ page on 14.1, 14.3, 14.4, 14.7 partial derivatives related material (computing partials, tangent plane, local max/min, global max/min, second derivative test). **It will be vitally important that you get your partial derivatives right. You'll want to check those twice.** Also when you find the critical points, you can check to make sure that they all make BOTH partials equal to zero. So you can be sure your points are right!!
3. At least 1+ page on 15.1-15.4 double integrals (set up, general regions, polar regions, switching order of integration) We will discuss these skills in chapter 15.

You can see there are fewer total skills going into exam 2. And you won't need as much time for tedious computations. But the processes and ideas are bigger. In any case, you will need to practice, practice, practice to build good routines in order to cut down on errors (and check things you can check).

I hope some of this helps. Now you have to put in the time and effort to really get to know these concepts well.

Dr. Andy Loveless