**Math 126 End of Week 5 Newsletter**

**UPCOMING SCHEDULE**:

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|---|---|
| Friday: | Section 14.3 (Partial Derivatives) |
| Monday: | Section 14.4/14.7 (Tangent Planes, Max/Min) |
| Tuesday: | Homework Q&A |
| Wednesday: | Section 14.7 (Global Max/Min, and applied optimization) |
| Thursday: | Homework Q&A |
| Next Friday: | Section 15.1/15.2 (Intro to double integrals) |

**HOMEWORK**:

| | |
|---|---|
| Closing Tuesday at 11pm: | 14.3(part 1) and (part 2) |
| Closing Thursday at 11pm: | 14.4, 14.7 (part 1) |

**PREVIOUS HOMEWORK STATS**:

13.3(2): median score = 100%, median time browser open to assignment = 100 minutes
13.4: median score = 100%, median time browser open to assignment = 70 minutes
14.1: median score = 100%, median time browser open to assignment = 54 minutes

**NEW POSTINGS**

Remember the course website is here: https://sites.math.washington.edu/~aloveles/Math126Spring2017/index.html
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/Math126Spring2017/m124-126max-minreview.pdf
2. **Huge 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/Math126Spring2017/sp10m126week6reviewB.pdf
3. **More practice with partial derivatives (I posted this last week):**
https://sites.math.washington.edu/~aloveles/Math126Spring2017/PartialDerivativesPractice.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 I think it truly comes down to **practicing old exams in an exam like situation**. 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.

**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 13.3 and 13.4 (curvature, TNB frame stuff, acceleration /velocity). You will want to practice such questions and make sure your computations are fast.
2. At least one page on partial derivative 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 one page on 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 will have an easier time setting up the problems. But you will need to practice, practice, practice to build good routines in order to cut down on errors (and check things you can check).

**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. Here are a few chapter 14 questions (we didn't yet finish 14.7 this week, we will on Wednesday), but it would be a good idea to still look at these 14.7 problems now.

For practice with 14.1, 14.3, 14.4:
Problem 2 and 3a from: https://sites.math.washington.edu/~aloveles/Math126Spring2017/w16m126e2.pdf
Problem 3 from: http://www.math.washington.edu/~m126/midterms/midterm2/m126spr14novikExII.pdf
Problem 2 from: http://www.math.washington.edu/~m126/midterms/midterm2/m126win14bekyelExII.pdf
Problem 2a from: http://www.math.washington.edu/~m126/midterms/midterm2/m126spr13lovelessExII.pdf
Problem 2 from: http://www.math.washington.edu/~m126/midterms/midterm2/m126spr14perkinsExII.pdf
Problem 2a from: http://www.math.washington.edu/~m126/midterms/midterm2/m126aut12lovelessExII.pdf
Problem 1b from: http://www.math.washington.edu/~m126/midterms/midterm2/m126spr11lovelessExII.pdf
Problem 2 from: http://www.math.washington.edu/~m126/midterms/midterm2/m126spr10lovelessExII.pdf

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

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