Math 124 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. **It is vital that you spend some time each week reviewing homework and practice your homework stills on similar old exam problems**. If you find something helpful here, please advertise to your classmates.

UPCOMING SCHEDULE:
Friday: Section 2.1 and 2.2 (introduction to limits and notation)
Monday: Section 2.3 (limits using algebra)
Tuesday: Limits and Graphs Worksheet:
                        http://www.math.washington.edu/~m124/source/worksheets/aut_ws2.pdf
Wednesday: Section 2.5 (Continuity)
Thursday: Homework discussion and test prep (bring homework questions!)
Friday: Section 2.6 (Limits at Infinity)

WORKSHEET 1 (from last Tuesday's quiz section) has solutions posted here:
http://www.math.washington.edu/~m124/source/worksheets/aut_ws1sol.pdf

HOMEWORK:
  Closing Friday (tonight) at 11:59pm: hw01S10.1
  Closing Monday at 11:59pm: hw02S2.1
  Closing Wednesday at 11:59pm: hw03S2.2
  Closing Friday at 11:59pm: hw04S2.3

HOMEWORK HINT:
You should always read through ALL the homework as soon as it become visible so that you can familiarize yourself with all the problems and immediately ask if you have questions about how to start a problem. In most assignments this quarter, there will be several 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.
In particular, take a look at (I already gave hints on the 10.1 homework)
  2.1 / 5 (you'll need the distance formula)
  2.1 / 6 (should be quick once you find the equation of the circle and line)
  2.1 / 7, 8 (circular motion like we discussed in class, also check out the online postings)
  2.2 / 13, 14 (most of your answers will involve the symbol "r", you are working in general)

IMPORTANT HOMEWORK COMMENTS:
There are NO homework extensions for any reason! You should be activity working on the homework as we discuss the material in lecture. The "closing dates" for the homework are typically 2-3 days later than they need to be just to give you plenty of breathing room, but you should always plan to complete the assignments at least 2 days before they are due to in case of emergency (because remember, you won't be granted an extensions for any reason). Also remember the goal of the homework is to give you practice with the material you can master it. If you miss one homework assignment or if you miss a few problems on a homework assignment, those points won't hurt your grade in any measurable way. BUT if you don't know the material for the exams and perform poorly on the exams, that will hurt your grade a lot. **At the end of the term, I round up your homework grade by 5% so you can miss a little homework and still get 100%** (anyone that gets 95% or above will get 100% for homework, for everyone else I will add 5% to their homework grade at the end of the term).

How to Approach Homework:
1. Don't move on until you completely understand the problem
(Could you do a similar problem on a test?).
2. Always get it right in one submission. **At most you should be using 2 submissions** (in case you have a typo in your first answer). DON'T use webassign to check your work and don't just guess. Practice checking your own answers. If you solved an equation, then you can check your answer by seeing that works in the equation!
Always check your last step against your first step. If you think you are just mistyping something, don't use 5 submissions typing the same thing in five different ways.
3. If you still don't have the answer after 2 submissions, then bring your question to quiz sections, office hours, the MSC, etc… You should never, ever, ever use more than 3 submissions (you are generously given 5 submissions, which you should never use up).
Remember you only get one submission on the test!
4. Treat every problem like it is a test. Don't rush through the homework (the goal is not to finish quickly, the goal is to learn the material). At the end of each assignment go back and review the material. Take notes of things that stumped you and come talk to me or a tutor to clarify those issues. Also start making a review sheet of things that might help you if you see the same problem again (remember you get a sheet of notes on the exam, so you should start making now as you do the homework).
5. At least once a week, go take a peek in the exam archive. See which problems you can do and which problems look like problems from the homework. In this way, you will start to see a direct connection between homework and tests. Here is the department exam archive:
http://www.math.washington.edu/~m124/SampleMid1.php
Here is my personal test archive:
http://www.math.washington.edu/~aloveles/Math124Winter2016/LovelessExamArchive.html

GETTING HELP: If you need help, here is what you need to do.
1. Start your homework early so that you have time to get help (if you email me the night the homework is due, you won't get a reply). So start the homework at least 5 or 6 days before it is due and always finish it at least two days before the closing date.
2. Quiz section: Your first and best place to ask is in quiz section.
3. Math Study Center (MSC): The Math Study Center is your best place to get some extra help. It is located in Communications B-014 It will be open Mondays-Thursdays from 9:30am to 9:30pm as well as Friday 9:30-1:30 and Sunday 11:00-6:00. Come on by! This is staffed by Math Department grad students and undergraduate tutors that we have hired.
4. Office hours: You can also visit my posted office hours (there are many). See the course website.
5. CLUE: Sundays-Thursdays in the evenings from 7:00-midnight there is drop in tutoring in Mary Gates Hall (Commons). This is staffed by general undergraduate tutors. Check it out.
6. Study groups: You can and should form study groups with classmates. That is a good way to get help. Just remember that you need to keep asking yourself if you could do the problem on your own on an exam!
7. Email: If you have tried all other helping options and are still stumped, you can send me an email (aloveles@uw.edu), but use this as a last resort.

NEW POSTINGS
Remember the course website is here:
http://www.math.washington.edu/~aloveles/Math124Winter2016/index.html
There are several new postings:

1. Week 1 Overview (contains a basic review for 10.1, 2.1, and 2.2).
http://www.math.washington.edu/~aloveles/Math124Winter2016/m124week1review.pdf

2. Unit circle and basic trig review:
http://www.math.washington.edu/~aloveles/Math120Fall2011/Overview%20of%20Trigonometric%20Functions.pdf

3. General Brief Intro to Parametric Equations:
http://www.math.washington.edu/~aloveles/Math124Winter2016/m124ParametricEquationsIntro.pdf

4. Full Precalc Review Sheet:
http://www.math.washington.edu/~aloveles/Math124Winter2016/m124PrecalcReview.pdf
Abbreviated Precalc Review (for first week):
http://www.math.washington.edu/~aloveles/Math124Winter2016/m124PrecalcQuiz.pdf

SUPPLEMENTAL POSTING

1. If you want to see additional examples of circular motion then check out these old exam problems:
Problem 4 from http://www.math.washington.edu/~m120/Win06/loveless/w06Math120e2v1Soln.pdf
Problem 2 from http://www.math.washington.edu/~m120/Aut06/loveless/Exam2Version1Solutions.pdf
If you read the precalculus review sheets and read these old exam questions, then should help as you attempt the **circular motion problems** in the homework.

2. If you want a reminder of how to find equations of lines and circles and how to do intersections:
Problem 1 from http://www.math.washington.edu/~m120/Aut06/loveless/Exam1Version1Solutions.pdf
Problem 2 from http://www.math.washington.edu/~m120/Win06/loveless/m120Exam1v1Solutions.pdf
(**These problems are nearly identical to the 2.1 / 6 problem**, these are some of the more commonly asked questions in our precalculus courses)

3. In the coming days, you will often see **multipart functions**. If you have forgotten what a multipart function is check out these old exam problems for some examples:
Prob 6 from http://www.math.washington.edu/~m120/Win15/final/Math120Win15FinalSolutions.pdf
Prob 3 & 4 from http://www.math.washington.edu/~m120/Aut06/loveless/Exam1Version1Solutions.pdf
Reading through these examples will give you a light intro to multipart functions.

OLD EXAMS:
Most weeks, I will also email you links to a few old exams just to encourage you to start accessing yourself on how ready you are for the exams. There are many old exams (most with solutions) in the departmental exam archive here:
http://www.math.washington.edu/~m126/midterms/midterm1.php
and in my additional exam archive here:
http://www.math.washington.edu/~aloveles/Math126Winter2015/examarchive.html
(you probably should just ignore the exams marked honors unless you want an extra big challenge).

Here is my most recent old exam (flip through it to get a sense of what exam 1 will look like):
 http://www.math.washington.edu/~aloveles/Math124Winter2016/m124w13e1.pdf
We haven't covered much material yet, so it is hard for me to find old exam questions that only use the material we have so far. I will have more problems to send you next week. But here are a few for now:

Here are introductory limit problems (2.1, 2.2) from old midterms:
Problem 5 from (we will know how to do (a)(b)(c) by next week, we won't know (d) for a few weeks)
 http://www.math.washington.edu/~m124/source/Exams/Midterm1/2015aut/ostroff.pdf

Here are a circular motion problems from an old tests:
Problem 6a from:
 http://www.math.washington.edu/~m124/source/Exams/Midterm1/mid1w09/alexMidterm1v1.pdf
Problem 5 from:
 http://www.math.washington.edu/~m124/source/Exams/Midterm1/2015aut/koblitz.pdf

For your own interest (not required):
For fun/motivation, you can read some of my old honors exams (these are more challenging than our exam will be). But these exams often have large applied problems, so they should give you good idea of some of the applications you can do with the material we are learning.
So, **just for your own interest**, and when you have a free few minutes, read through these old exam questions from my Math 124 Honor class (you don't yet have the skills to do these problems, but by the end of the term these are all problems you could do):
Check out problem 5 from:
http://www.math.washington.edu/~aloveles/Math124Winter2016/m124f12e1.pdf
Check out problems 3 and 5 from:
http://www.math.washington.edu/~aloveles/Math124Winter2016/m124f11e1.pdf
Check out problem 6 from:
http://www.math.washington.edu/~aloveles/Math124Winter2016/m124f10exam1.pdf
Check out problem 5 from:
http://www.math.washington.edu/~aloveles/Math124Winter2016/m124f12e2.pdf
Check out problem 6 from (this is a ferris wheel problem, so the first part of it is like HW):
http://www.math.washington.edu/~aloveles/Math124Winter2016/f11m124e2.pdf
Check out problem 6 from:
http://www.math.washington.edu/~aloveles/Math124Winter2016/m124f10e2.pdf

Answers for most of these questions are posted with the exams in the exam archives. While you are in the archive, glance through the other questions on these exams to get a sense of what midterm 1 will look like. I think it is very well worth your time to stop and spend 30 minutes each week doing a self-assessment like this and looking through some old midterms.

STUDY TIP:
Treat the homework as if it were an exam! Use one submission as much as possible (you only get one submission on exam questions) and avoid using the "Watch It" and "Practice another version" (those also aren't available during the exam). After the homework due date passes, you can go back and see the answers and solutions. Make sure to do this. It is a good use of 10 minutes to go back through the homework set and look at the solutions to make sure you really do understand all the concepts. Make some notes to yourself about problems to come back and review again in a week. It's nice to review each assignment right after you finish it and again a week or two later. In the upper right corner of each problem you see where the problem came from in the book, so if you want more practice, then go to the book and try other problems that are nearby the problem you are having difficulty with.

I hope some of this helps. Now you have to put in the time and effort to really get to know these concepts well. If you find something helpful in these newsletters, please share it with your classmates.

Dr. Andy Loveless