

Math 111 End of Week 2 Newsletter

Supplemental Reading: Don't forget that you should be reading the supplemental text. You should finish reading it by this (there are many useful things here that reiterate what I am saying in lecture):

<http://www.math.washington.edu/~aloveles/Math111Winter2020/supplementAll.pdf>

UPCOMING SCHEDULE:

Friday: Supplements 9: Average Cost, Average Variable Cost, and reading graphs of MR/MC, AC/AVC.
Monday: NO CLASS – University Holiday (MSC will NOT be open this day)
Tuesday: Activity 3: Clarification and Organization of Business Terms (Print off and bring):
<http://www.math.washington.edu/~aloveles/Math111Winter2020/Activity03.pdf>
(This is a great chance for you to clarify any questions you have about basic the business graphs)
Wednesday: Section 1.1: Solving Linear Equations (the beginning of using Algebra)
Thursday: Test Prep and homework questions
Next Friday: Section 1.2/1.3: Functional Notation and Linear Functions.
Next Monday: Section 1.6 (part 1): Finding equations for lines and using them in business problems.
(Section 1.6 is the last section we will cover before Exam 1).

Activity 2 (from this last week) solutions are here for your review:

<http://www.math.washington.edu/~aloveles/Math111Winter2020/Activity02key.pdf>

HOMEWORK: Closing Tues: Sup. 6-7 Closing Thu: Supplement 8-9 Closing **Friday:** Section 1.1

SUMMARY OF WEEK 1-2 HOMEWORK STATS:

Supplement 1-3: median score = 97%, median time = 140 minutes (i.e. time students had HW open on browser)

Supplement 4: median score = 91%, median time = 115 minutes

Supplement 5: median score = 95%, median time = 107 minutes

This was a lot of homework as it covered two weeks of material (we didn't make anything big due in week 1 which is why week 2 had a lot of homework). If you started in week 1 it wasn't as bad, but if you waited to do it all until week two, then you had several hours of work. Notes

- *The vast majority of the class did well on these assignments.*
- *The vast majority of the class had their browsers open to the homework for 5-6 hours over the first two weeks (so about 2-3 hours per week of homework which is a good estimate for this course).*
Now you can plan appropriately for future weeks.

SEE THE LAST PAGE OF THIS NEWSLETTER FOR SEVERAL HOMEWORK HINTS FOR THE COMING WEEK

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. Here are a few things I want to point out:

- 1) [A review of everything from Supplement 1-9](#) (all the graphical materials): **The review sheet above is a big one** that I spent a lot of time creating. I gave out the first two pages in class, the last two pages review the main concepts of the business terms and graphs we will be discussing.
- 2) [A flowchart I created to help you organize how to handle graph problems](#)
- 3) [Brief Supp. 6-7 review](#)
- 4) [Visual Summary of Supp. 8-9 concepts and graphs](#)

You will find many more things on my website, so check it out!

OLD EXAM QUESTIONS FOR PRACTICE:

The old exam archive is here: <http://www.math.washington.edu/~m111/Archives.html>

You should look at this archive every week. Click on a few old exams, try a few problems. Ask yourself, could I do this material on a test?

Try pages 1 and 2 of this test: https://sites.math.washington.edu/~m111/Midterm1/Wi17_MT1_bekyel.pdf

Or pages 1 and 2 of this test: https://sites.math.washington.edu/~m111/Midterm1/au16_MT1_Loveless.pdf

Or pages 1 and 2 of this test: https://sites.math.washington.edu/~m111/Midterm1/win15_MT1_taggart.pdf

These are all things that you should be able to do now. Try it out, can you do these!

IMPORTANT COURSE COMMENTS

I have had about a dozen emails asking for extensions or extra submissions. I also have had five or six emails from students saying that the homework was too challenging or that there was no help available. Here are a few comments for everyone:

1. Start your homework early! Especially if you find this material challenging, you need to be starting this homework as soon as it becomes visible. That gives you time to seek out help and ask questions.
2. There are no extensions for any reason whatsoever; I emphasized this on the first day of class. You should plan on getting the homework done at least two days before it closes, so that there is no chance that you won't complete it by the closing time. Also remember that I add 5% to everyone's homework up to a max of 100%, so even if you missed a few problems, it still would be possible for you to get 100% on homework. More importantly you need to understand the ideas so you can show your work on a test.
3. We will NOT give more submissions. The fact that you have 5 submissions is already too generous. Here is how you should do the homework.
 - (a) Read the question and attempt the problem.
 - (b) If the first submission is incorrect, reread and make sure you understand the graph and the question. Also make sure you were as accurate as possible (did you print off the large graph and draw lines and do things as accurately as you could).
 - (c) If your second submission is incorrect, then move on to other questions and ask someone about that problem later (a classmate, a tutor, me).
 - (d) *You should NEVER use more than 3 submissions.*

Remember on a test you only get ONE submission! So use the homework for practice and get the answer correct the first time (don't use submissions to check your work, practice checking your work yourself).

For those that thought the homework was too challenging, I think you should look at the homework stats to see that vast majority of the class comfortably completed the homework. The level is appropriate. You should expect about 3-4 hours of homework each week for this class. This is a college class and you will have to put in quite a bit of work on your own. In order to do well in this class, you have to get past blaming me or the homework and find a constructive way to work and think so you can do well in the course. You can all do this and I want you to do well. Also remember, I am your ally. I am trying to help you do well in this course. The majority of the students I have worked with in the MSC and chatted with via email are respectful and we are on the same page, I'm just hoping we all can get on the same page and have a great quarter.

A REMINDER ABOUT WHERE YOU CAN FIND HELP:

You should be completing as much of the homework as possible completely on your own!

During a test, you will NOT have a tutor sitting with you helping you. So as much as possible you need to be doing the homework without a tutor helping you (read the text, read my notes, attempt the problems on your own, let yourself struggle a bit before you seek out help). If you can't do the homework without a tutor helping you with every part of every problem, then you won't do well in this course.

That being said, if you have very carefully thought about a problem and used two submissions, then write down your work in a neat way and show your work to a tutor to get clarification. Here is where you find help.

1. Quiz section. Most Thursdays you will have dedicated time for questions, and you can also ask questions on Tuesdays as time allows.
2. Math Study Center is in the Communications building B-006 (it is small classroom next door to the full calculus tutor center) and it is open **12:30- 4:30pm Mondays-Thursdays**
3. You can ask me in the morning before class as I have short office hours before every lecture.
4. You can ask me quick questions between classes (some questions in this class are quick and easy to resolve).
5. You can use CLUE tutoring which is in Mary Gates Hall Commons from 7pm – 11pm on Sundays-Thursdays.
6. You can form study groups with classmates. If the MSC is busy, you can make good use of it by forming a study group with classmates and finding what questions you have in common and you can ask them together.
7. Also check out the other postings on my course website.

That offers a great number of opportunities for you to get in-person help! And this even even all the resources available on campus (there is also the IC and there is also the regular MSC).

HW HINTS for Supp. 6-7, Supp. 8-9, Section 1.1 and Section 1.2/3:

SUPPLEMENT 6-7 HW NOTES: Watch the units. As we will discuss in class, MR and MC are always in dollars/item if you estimate using the slope of a tangent (even if TR and TC are in thousands, we still have MR and MC in dollars/item). We don't have to convert anything or move any decimal points. Students tend to overcomplicate this or doubt themselves.
Sup. 6-7 Specific Notes

Problem 1: You can enter an answer as "400 thousand dollars" or "400000 dollars" (both are acceptable)

Problem 2(e)(f)(g)(h): Almost identical to what we discussed in lecture Wednesday! These are key concept questions. (Also Problem 3(b)(f) are the same idea).

The rest of the questions are just getting you used to working with TR, TC, VC, Profit, MR and MC.

SUPPLEMENT 8-9 / PROBLEM 1: Practice computing and working with Average Cost, Average Variable Cost and Average Revenue (DRAW DIAGONAL LINES AND COMPUTE SLOPES!).

SUPPLEMENT 8-9 / PROBLEM 2: Practice with the concepts of Break Even Price and Shutdown Price. And more practice with AC and AVC. Students tend to ask about part 2(h): The question asks to find the range of quantities over which $MC(q) \leq 2.50$. Whenever you are given an inequality, first find when it is EQUAL (then make conclusions from there).

Step 1: **FIRST find all quantities at which $MR(q) = 2.50$** (you should know how to do this with a reference line).

Step 2: Make appropriate conclusions.

SUPPLEMENT 8-9 / PROBLEM 3: We will discuss this graph in lecture on Friday. This is a graph of slopes! It is a graph of increments. Put your ruler away and read off values. It actually is a quick problem, but you should wait to do it until after we have discussed it in class. All the parts should be fast, except maybe the last part.

The challenge part is part (e), for this part here are some hints:

Step 1: Observe $MR(q) = 10$ (constant). Draw MR (a horizontal line on the MC, AC, AVC graph)

Step 2: Find the quantity at which MR intersects MC, you get $q = 46$.

Step 3: Now you need to find the profit at $q = 46$ which is a bit a puzzle given what you know.

Thus, **you need to find $P(46) = TR(46) - TC(46) = ???$**

a) Find $TR(46) = ??$ (re-read all the info you have, there is enough to immediately know this)

b) Find $TC(46) = ??$ (you should know how to find $TC(46)$ by reading another value off the graph).

SECTION 1.1 / PROBLEM 1 and 2: **Leave your final answer as a precise fractions.** I will say this in class and it says it at the beginning of the assignment, but I wanted to remind you again as it is something I get a lot of emails about as students often miss the instructions at the start of the assignment.

SECTION 1.1 / PROBLEM 6: In this problem, it says that in the formula "r" represents the number next to the percent sign (It says "r%"). **So if the problem says that interest rate is 15.9%, then that means $r = 15.9$ in this formula** (it does NOT mean 0.159 in this formula).

SECTION 1.1 / PROBLEM 12: The questions says "After how many days...". **It wants after how many whole days.** If you solve and find the values are equal at 6.6 days (for example), then the answer would be after 6 days it starts to become cheaper (note by saying "after 6 days", you aren't including 6). So you need to round down.

SECTION 1.2 HW / PROBLEM 3: **Notice that you can EXACTLY give the values of $f(0)$ and $f(6.5)$, because they tell you enough information in the picture!** Some students try to approximate and email me angry because they think Webassign is being picky, but Webassign should be picky here because you know everything you need to know to give the exact answers.

I hope you find these newsletters to be helpful.

See you in class.

Dr. Andy Loveless