

## Math 111 End of Week 6 Newsletter

### UPCOMING SCHEDULE:

Friday: Section 4.2: Intro to Linear Programming. (Examples from lecture pack)  
Monday: UNIVERSITY HOLIDAY – No class  
Tuesday: Activity 6 – A couple full examples of linear programming for you to try in groups.  
<http://www.math.washington.edu/~aloveles/Math111Winter2020/Activity06.pdf>  
Wednesday: Section 4.2/5.1: More Linear Programming + intro to exponentials  
Thursday: Test Prep and HW discussion  
Next Friday: Section 5.1/5.2: Exponential Functions (we will learn about  $y = e^x$ ), Powers/Roots

**ACTIVITY SOLUTIONS:** Activity 5 summarized some important facts from 2.3 about revenue, cost and profit. I hope you found that helpful. The Activity 5 solutions are online here:

<http://www.math.washington.edu/~aloveles/Math111Winter2020/Activity05key.pdf>  
(this link will start to work Thursday evening after all my quiz sections are done)

**HW SCHEDULE:** Closing Tues: 1.5 *and* 4.1 Closing Thur: 4.2

*Homework Notes/Hints:* Please, please, please read these before attempting 1.5 and 4.1:

First, **CLICK HERE:** [Screenshots of how to enter answer plus FULL SOLUTION to section 4.1 / Problem 4](#)

Some students have trouble with graphing in webassign, so I made the step-by-step instructions above which contain the full solution to section 4.1/ number 4, I hope these help with any technical entry issue.

*Hints for Section 1.5 Homework:* Last year, I got two recurring questions about 1.5. Here are some comments pertaining to these issues:

- A) **Please don't use the "watch it" in section 1.5.** Students are often confused by the different methods shown. I showed how to solve a system in class, the way I did it is typically easiest for the problems we do (and the method I showed you always works).
- B) **SECTION 1.5 / PROBLEM 6:** The wording is a little different than the other problems, so let me clarify. *You need to compute the total mixed bag cost before you start the problem.* If the price is \$3.40 per pound for the mixed bag and it is a total of 70 pounds, then the total money is  $3.40 \cdot 70 = \$238$ . You are then going to set up equations very much like you did in the other problems. Your set up will look something like:  
$$x + y = 70 \quad \text{and} \quad 2.6x + 5.4y = 238.$$
  
(Note: Your numbers will likely be different than mine).

### NEW POSTINGS:

1. *Additional Fully Worked Out Examples From 1.5 and 4.1 (skills review):*

<http://www.math.washington.edu/~aloveles/Math111Fall2020/Section1.5&4.1Review.pdf>

2. *Four more examples of how to set up the applied problems in 1.5, 4.1, and 4.2:*

<https://sites.math.washington.edu/~aloveles/Math111Winter2020/Chapter4PreviewAndNotes.pdf>

3. *Three additional full examples on section 4.2 (if you still need to see more examples after lecture, check these out):*

<https://sites.math.washington.edu/~aloveles/Math111Winter2020/Section4.2Review.pdf>

**Exam 2 is TWO weeks away. It will cover:**

- 1.6 (supply/demand and finding/using linear functions) – likely half a page on this
- 2.1-2.3 (applied functional notation and quadratics) – likely TWO pages on this material
- 1.5,4.1-4.2 (method of linear programming, graphing inequalities and finding intersections) – likely one page
- 5.1-5.3 (intro to exponentials and logs and solving) – likely half a page on this

So you see that 2.1-2.3 will account for about half the exam. Some of you have told me you want more practice on the chapter 2 material. So I've been busy trying to create an archive of additional problems. See the next page for links to this material...

## MORE PRACTICE with Chapter 2:

- I created this 2.3 review which contains 6 old exam problems on page 2 followed by solutions in extreme details (my thinking is you can attempt the problems on your own, then put your solution next to my solution and see if that helps you understanding) here:

<http://www.math.washington.edu/~aloveles/Math111Winter2020/Section2.3Review.pdf>

- **OPTIONAL PRACTICE HOMEWORK:** I taught myself how to code problems into Webassign and I created two OPTIONAL review assignments. You can see these if you log into Webassign. These are worth NO points (these are just optional practice for **chapter 2 material**). You get 100 submission on each problem. **After 1 failed submission you will see the correct answers and notes on how to do the problem.** I have them set to close the day of our next midterm (but you'll still be able to see them after that). This is just to give you another way to study. Let me explain the two assignments that you will see in Webassign:

a) "(Optional) Ch 2 Functional Notation Review" - Practice going from VC to AVC or TC to MC etc... These skills should be routine at this point. So I created this collection of quick problems that give you a chance to test yourself on these skills. All you do in these problems is go from one applied function to others. These should be very fast!

b) "(Optional) Ch 2 Review - Problems from Old Exams"- Do you know how to find maximum profit with algebra? Do you know how to find SDP? Do you know how to find when TR is increasing? Do you know how to find when AC is equal to 1.75? ... This is a collection of problems *directly from old exams* that have to do with chapter 2 and should give you some quick practice with these types of problems. I had planned to code in all the old exam questions, but the coding actually takes a long time so I stopped after I got a few. And you can look in the exam archive if you want to see more.

Understand that this is my first time coding in Webassign and I just quickly wrote this over the last several days, so if you find typos or if you notice something unusual, please let me know. This is just a bit of an experiment. Let me know if you find this useful.

***DON'T FORGET THAT THE EXAM COVERS LINEAR PROGRAMMING, SUPPLY/DEMAND, AND SOLVING AS WELL AS CHAPTER 2. These optional assignments are ONLY about chapter 2. So you'll need to use homework and old exams to study for the rest of the material.***

## OLD EXAMS:

Also, here are some old exam questions that pertain to sections 1.5, 4.1 and 4.2 **Linear Programming:**

Page 3 from: [https://sites.math.washington.edu/~m111/Midterm2/au15\\_MT2\\_Loveless.pdf](https://sites.math.washington.edu/~m111/Midterm2/au15_MT2_Loveless.pdf)

Page 4 from: [https://sites.math.washington.edu/~m111/Midterm2/aut14\\_MT2\\_loveless.pdf](https://sites.math.washington.edu/~m111/Midterm2/aut14_MT2_loveless.pdf)

Page 3 from: [https://sites.math.washington.edu/~m111/Midterm2/au16\\_MT2\\_Loveless.pdf](https://sites.math.washington.edu/~m111/Midterm2/au16_MT2_Loveless.pdf)

Page 4 from: [https://sites.math.washington.edu/~m111/Midterm2/win16\\_MT2\\_taggart.pdf](https://sites.math.washington.edu/~m111/Midterm2/win16_MT2_taggart.pdf)

Okay, if you find something helpful here, please advertise to your classmates. I want these materials to be used.

Dr. Andy Loveless