Math 125 End of Week 4 Newsletter

UPCOMING SCHEDULE:

Friday:	Section 6.4 (Work)
Monday:	Section 6.4/6.5 (Work and Average Value)
Tuesday:	Exam 1 return and homework discussion (bring lots of homework questions!)
Wednesday:	Section 7.1 (Integration by parts)
Thursday:	Worksheet 5 – Integration by Parts
	http://www.math.washington.edu/~m125/Worksheets/IntByParts.pdf
Friday:	Section 7.2 (Integrating Trig. Functions)

HOMEWORK:

Closing Wednesday at 11:00pm: HW_4A, HW_4B, HW_4C (These cover 6.4 and 6.5)

HW_3A: median score = 96%, median time students had browser open to assignment = 120 minutes

HW_3B: median score = 94%, median time students had browser open to assignment = 130 minutes

HW_3C: median score = 98%, median time students had browser open to assignment = 193 minutes

HOMEWORK COMMENTS AND HINTS:

On HW_4A: You'll want to read all my posted examples before you start!

On Problem 5, if I was doing this in class, I would break it up into two problems. But Webassign requires you type on the set up all in one box. Not to worry, here is a hint: the work to lift the coal is 500 lbs * 300 ft = 150000 ft-lbs (your numbers will be different). But that is the same as $\int_0^{300} 500 \, dx$. Now your job is to figure out the work to lift the cable which will look like $\int_0^{300} ??? \, dx$ (you need to fill in the questions marks). So the total answer is $\int_0^{300} ??? \, dx + \int_0^{300} 500 \, dx = \int_0^{300} ??? + 500 \, dx$. Meaning in the given blanks your answer will be ??? + 500.

On Problem 8, don't overthink it. If you are given $PV^{1.4} = k$, then $P = k/V^{1.4}$.   The problem tells you to integrate this to get work. But you need to start by converting some units. And you need to find k (you can find k because they give you a particular value of P and V).

On HW_4B: I don't think you need any hints here.

On HW_4C: Students often struggle with problem 2. Start by drawing an accurate picture for the start of the problem, label "x". Then draw a picture for the end of the problem. What is the formula for the distance traveled by a subdivision at x (think about where it started and where it ended up).

NEW POSTINGS

Here, again, is the course website: http://www.math.washington.edu/~aloveles/Math125Spring2016/index.html

There are several new postings:

1. **Overview of 6.4 and 6.5:**
        http://www.math.washington.edu/~aloveles/Math125Spring2016/EndOfChapter6.pdf
2. Remember that **lecture materials are posted here**:
        http://www.math.washington.edu/~aloveles/Math125Spring2016/lecture.html
3. **My old midterm questions on work compiled together**:
        http://www.math.washington.edu/~aloveles/Math125Spring2016/OldExamWorkProblems%20-%20Loveless.pdf
My full solutions:
http://www.math.washington.edu/~aloveles/Math125Spring2016/OldExamWorkProblems%20-%20Loveless%20-%20Solutions.pdf
4. **Nearly every type of old final problem I could find on work**:
        http://www.math.washington.edu/~aloveles/Math125Spring2016/sp13m125WorkExamples.pdf
My full solutions:
        http://www.math.washington.edu/~aloveles/Math125Spring2016/sp13m125WorkExamplesSolns.pdf

OLD EXAMS:
The math departmental exam 2 archive is here: http://www.math.washington.edu/~m125/Quizzes/Q8.php
My personal exam archive is here:
   http://www.math.washington.edu/~aloveles/Math125Spring2016/LovelessExamArchive.html

Here are some targeted practice problems from old exams on the current material:

for practice using Section 6.4 material:
Chain:
Problem 3:   http://www.math.washington.edu/~m125/Quizzes/week8/win13_mid2.pdf
Problem 4:   http://www.math.washington.edu/~m125/Quizzes/week8/win16_pollack_2.pdf
Pumping:
Problem 1:   http://www.math.washington.edu/~m125/Quizzes/week8/mid2h.pdf
Problem 2:   http://www.math.washington.edu/~m125/Quizzes/week8/mid2b.pdf
Problem 4:   http://www.math.washington.edu/~m125/Quizzes/week8/125_Au14_MT2.pdf
Springs:
Problem 4:   http://www.math.washington.edu/~m125/Quizzes/week8/mid2p.pdf
Problem 4:   http://www.math.washington.edu/~m125/Quizzes/week8/win16_ostroff_2.pdf

See a lot more practice in my other postings from the previous page!!!

I hope some of this helps.

Dr. Andy Loveless