

In this project we will be working on the following objectives:

- Learning to apply course material
- Developing skill in expressing myself orally or in writing

Each group of 3-4 students will present one of the eight application topics below. I will email the class to solicit input on the assignment of groups and topics.

Group Preparation

- Read and discuss the relevant section (or portion of a section) of the textbook.
- Solve the designated problem. (Problems marked with (C) are challenge problems.)
- Write up your solution (only one per group) and turn it in on the day that you present. It will count as a quality solution.
- Create and rehearse your presentation. (Time yourselves!)

Group Presentation

A good presentation will explain: (1) the background situation, (2) why an integral is appropriate in this situation, and (3) the solution to your assigned problem.

- Length: 5-7 minutes.
- Use the board. Come early to class to write up the main points of your explanations.
- Give each group member a chance to speak.
- The presentation will count towards your grade like a quality solution.

WebAssign Practice After each day of presentations, the class will be assigned a WebAssign problem set, consisting of four problems, one for each application topic. You only need to do two of the four problems in the problem set.

Application Problems

(Mon Mar 17)

Work (physics)

Present: 6.4 #7 or 11(C)

WebAssign: 6.4 #8

Trajectories

Present 8.1 #37 or 39(C)

WebAssign: 8.1 #36

Hydrostatic pressure

Present: 8.3 #14 or 16(C)

WebAssign: 8.3 #13

Moments and center of mass

Present: 8.3 #28

WebAssign: 8.3 #27

(Wed Mar 19)

Surface area

Present: 8.2 #7 or 28(C)

WebAssign: 8.2 #5

Consumer surplus

Present: 8.4 #4 or 10(C)

WebAssign: 8.4 #5

Producer surplus

Present: 8.4 #6(C)

WebAssign: 8.4 #7

Cardiac output

Present: 8.4 #18

WebAssign: 8.4 #17