Honors Calculus I and II
Fall 2003
Homework Assignments

Homework 1, due Thursday August 28th

• Read Chapter 1.

• Do the following book problems, to be handed in during your recitation:
  – Section 1.2: questions 26, 36, 40.
  – Section 1.3: questions 20, 28.

Homework 2, due Thursday September 4th

• Try to log on to the Addison-Wesley site:
  The ID for our course is sparling23295;
  The course name is ”calc on line”.
  If you succeed, check out the information available there.

• Do the following book problems, to be handed in during your recitation:
  – Section 1.5, questions 38, 40.
  – Section 1.6, questions 8, 22, 38.

Homework 3, due Thursday September 11th

• Try to log on to the Addison-Wesley site:
  The ID for our course is sparling23295;
  The course name is ”calc on line”.
  If you succeed, check out the information available there. I would like to hear by email that you have been successful in accessing the material there.

• Do the following book problems, to be handed in during your recitation:
  – Section 1.5, questions 28, 36, 46 and 47 (the last two count as one question).
  – Section 1.6, questions 30, 40.
Homework 4, due Thursday September 18th

- Do the following book problems, to be handed in during your recitation:
  - Section 2.2, questions 28 and 34.
  - Section 2.3, questions 12, 18 and 36.
  - Section 2.4, questions 6, 14, 28 and 32.

Homework 5, due Thursday September 25th

- Prepare for the first exam, this Friday 26th September.
  Content: the first two chapters and the beginning of chapter three.

- Do the following book problems, to be handed in during your recitation:
  - Section 2.6, questions 42, 44 and 60.
  - Section 2.7, questions 10 and 46.
  - Section 2.8, question 30.
  - Section 2.9, question 34.

Homework 6, due Thursday October 2nd

- Look over the solutions on the web to Exam One and learn from your mistakes (if any)!
  If you find any errors in my solutions, email me: bonus points may be involved!

- Do the following book problems, to be handed in during your recitation:
  - Section 2.10, questions 4, 6 and 14.
  - Section 3.1, questions 26 (also plot the acceleration) and 30.
  - Section 3.2, questions 18 and 20 (also sketch each of the vectors involved).
Homework 7, due Thursday October 9th

- Look over the solutions on the web to Quiz 5.
  Note particularly the way that lines are described using vectors, relevant for question one.

- Do the following book problems, to be handed in during your recitation:
  - Section 3.2, question 30.
  - Section 3.3, questions 24 and 32.
  - Section 3.4, questions 48 (also find the velocity and acceleration vectors and the speed), 68 and 82.
  - Section 3.5, questions 20, 22 and 26 (also sketch each of the vectors involved).

Homework 8, due Thursday October 16th

- Look over the solutions on the web to Quiz 6.

- Do the following book problems, to be handed in during your recitation:
  - Section 3.5, questions 40, 56 and 58.
  - Section 3.6, questions 14, 18 and 20.
  - Section 4.1, questions 6, 12 and 16.

Homework 9, due Thursday October 23rd

- Look over the solutions on the web to Quiz 7.
  Pay particular attention to the notion of speed (as the length of the velocity vector) and to the fact that the extrema of the speed occur when the velocity vector and the acceleration vector are perpendicular to each other (so when $\mathbf{V} \cdot \mathbf{A} = 0$). Also make sure you understand how to do question 3 (note in particular that the percentage errors all add).

- Do the following book problems, to be handed in during your recitation:
  - Section 4.2, questions 12, 20 and 24.
  - Section 4.3, questions 34 and 36.
  - Section 4.4, questions 28 and 32.
Homework 10, due Thursday October 30th

- Look over the solutions on the web to Quiz 8.
- Prepare for exam 2 by going through the quizzes and homeworks and read up to the end of chapter 4. Make sure you study the solution graphics also.
- Do the following book problems, to be handed in during your recitation:
  - Section 4.5, questions 30 and 38.
  - Section 4.6, questions 18 and 22.
  - Section 4.7, questions 20 and 24.
  - Section 4.8, questions 16, 18, 32 and 36. For question 36, also do the limit $\lim_{x \to -\infty} \frac{e^x}{x^2}$.

Homework 11, due Thursday November 6th

- Hopefully exam 2 was a treat and not a trick!
- Look over the solutions on the web to Exam 2 and make sure you can do everything. Make sure you study the solution graphics also.
- Read Chapter 5 in the book.
- Do the following book problems, to be handed in during your recitation:
  - Section 5.1, questions 30, 34 and 42.
  - Section 5.2, questions 4, 6, 12.
  - Section 5.3, questions 2, 8, 10 and 12.
Homework 12, due Thursday November 13th

• Look over the solutions on the web to Quiz 9 and make sure you can do everything. Make sure you study the solution graphics also.

• Read Chapter 5 in the book.

• Do the following book problems, to be handed in during your recitation:
  – Section 5.4 questions 12, 14, 16, 18 and 20.
  – Section 5.5, questions 24, 26, 28, 30 and 36.
  – Section 5.6, questions 8, 12 and 16.
  – Section 5.7, questions 8, 10 and 14.

Homework 13, due Thursday November 20th

• Look over the solutions on the web to Quiz 10 and make sure you can do everything. Make sure you study the solution graphics also.

• Read Chapter 5 in the book.

• Do the following book problems, to be handed in during your recitation:
  – Section 5.7 questions 32-34.
  – Section 5.8, questions 44 and 48.
  – Section 5.9, questions 10, 12, 14 and 26.
  – Section 5.10, question 14 (use all three rules: Simpson’s, trapezoidal and midpoint).
Homework 14, due Thursday December 4th

- Look over the solutions on the web to Quiz 11 and make sure you can do everything. Make sure you study the solution graphics also.

- Start preparing for the final, by going through the quizzes and exams and their solutions.

- Read to the end of Chapter 7 in the book.

- Do the following book problems, to be handed in during your recitation:
  - Section 6.1, questions 16 and 26.
  - Section 6.2, questions 6 and 20.
  - Section 6.6, questions 10, 14 and 34.
  - Section 6.7, questions 10 and 22.
  - Section 6.9, questions 6, 8 and 16.
  - Section 7.1, questions 4, 20, 30 and 32.