Exam 2 Review Sheet   Calc 2   2/18/2004

Format: As always, 10 problems with generally ascending difficulty, plus an extra credit opportunity.

Prerequisites: As always, the exam is comprehensive over everything since kindergarten. In particular, though, you should be prepared to integrate by u-substitution, parts, or using a table of integrals, and able to exercise some judgement in telling which approach is appropriate.

Content: The exam will cover §7.7 through §8.7.

> ‣ Improper Integrals – Understand what they mean and how to work them out **carefully**.
> ‣ Area – Understand how and why we slice regions to compute their areas, and be good at doing so.
> ‣ Density – Understand when and how we integrate density functions and what the results mean, and be good at doing so.
> ‣ Arc Length – Know the formula and be able to use it.
> ‣ Volume – Understand how and why we slice regions to compute their volumes, and be good at doing so.
> ‣ Center of Mass – Know the formula and be able to use it.
> ‣ Work – Be good at setting up spring problems and pump problems.
> ‣ Economics – Be good at setting up present and future value problems, and understand the difference.
> ‣ Probability – Be good at setting up integrals for means and medians of distributions. Understand variations like those in §8.7:4-7.

Grading: As always, each problem is worth 10 points.

> ‣ 10 points indicates complete, accurate, and adequately justified completion of a problem.
> ‣ Isolated mistakes within an otherwise valid solution generally cost about a third of the points possible (3 or 4 points out of 10).
> ‣ Even if you can't complete a problem, make an effort to indicate to me how much you know so I can gauge credit accordingly.
> ‣ Pay attention to what's asked for: You don't need to waste time working out integrals if you're only asked to set them up. Providing a decimal approximation when an exact value is requested, or vice versa, costs you points. Pay attention to the difference.