**These are the webassign problems to study or skip for your Test 3. Obviously, you still need to do the homework problems even if you wouldn't be tested on them! The act of doing harder problems can help build your understanding of the material.**

**4.1:** Skip problems 1 and 2. Problem 3 is too easy. Problem 4 is fine. Problem 5 is ok; the integration is mildy annoying for it. Problems 6-10 are good.

**4.2:** Problems 1-5 are good. Problem 6 is just using the Mean Value theorem, but a bit silly. Problem 7 is okay but the integration is annoying. You will definitely have to do u-sub on your test, but two times in one problem is less than ideal. Problem 8 is fine if you are given the picture. Problem 9 is fine for set up—integration for it is too much.

**4.3:** Problems 1-4 are okay. I won't ask you to set up an integral 6 different ways, but you should be able to change from one set up to another as in Problem 5. Problem 6 is good; on a test hopefully you would see rectangular coordinates would be the way to go since our region D is triangular and not circular which is what you'd expect for spherical coordinates. Problem 7 is fine. On a test I'd give you the formulas for Moments of Inertia if I wanted you do do any problems with them. Problem 8 is okay, but the set ups are definitely too easy. Problem 9 is fine. For center of mass I'd have you set it up or maybe just fine one component of it. Skip problem 10.

**5.1:** Problems 1, 2 are good. Skip problem 3 (too easy!). For a regular section (non-honors, not 242-051), your circles will most likely be centered at the origin so problem 4 could be skipped. Problem 5 is a little silly, but you should understand the theta bounds. Problem 6 is a little tricky for a regular section. Problem 7 is good; I would probably just have you find the mass and set up to find the center of mass. For an honors section or 242-051, problem 8 is delightful. I probably wouldn't ask it for a regular section. Skip problem 9.

**5.2:** Problems 1-7 are fine. Problem 8 is okay, but solving for the upper r bound is a pain without a computer. Problem 9 is good. Problem 10 is okay; it'd be more likely for me to have it bounded by y=1 instead of y=-1 though.

**5.3:** Problems 1 and 2 are fine. Problem 3 is okay; if I was asking this on a test, I would have you set it up in spherical and then in cylindrical because that is a better fit for the problem. Problem 4 is fine; likely just set up to find center of mass. Problem 5 is another cone with a plane problem and better suited for cylindrical coordinates. For Moments of Inertia, I'd give you the formulas on a test. Problem 6 is okay. Problem 7 is fine. Skip problem 8.