

# MATH 150 HW: CHAPTER 6

SPRING 2008

**Write your name and class and clearly separate sections! See the syllabus.**

Show work where appropriate, and use “good form and procedure,” as in class!

This is due when you take the Quiz on Chapter 6.

Graded out of 15 points.

“\*” denotes “See Hint below.”

Read some of the Examples for additional assistance.

6.1: 1-13 odd, 25, 27, 31 (Warning: The graphs intersect at an  $x$ -value in  $[0,2]$ .)

**Look at 35.**

6.2: 1-37 odd, 38

**Check out** the animations on my web site – Notes for Chapter 6!

6.3: 1\*-9 odd, 13, 15, 19, 21, 23, 25, 29

**Note on #1:** How would you perform the integration?

**Challenge Problem (not required; don't turn in):**

Use the cylindrical shells method to prove that the volume of a sphere of radius  $r$  ( $r > 0$ ) is  $\frac{4}{3}\pi r^3$ .

6.4: 1, 3, 5, 9, 11, 13

**Look at 22.**

**Read** Examples 1 and 2 on pp. 329-330.

6.5: 1, 3, 7, 29\*, 33\*, 35, 39

**Note on #29:** Ignore the fact that  $f$  is not differentiable at 0.

**Note on #33:** Round off your answer to two decimal places. The solutions manual goes to ridiculous lengths to simplify an exact answer.

**Challenge Problem (not required; don't turn in): 37**

6.6: Skip.

6.7: Skip.

6.8: 23