

**Homework 8 for M312, Section 30353**  
**due Wednesday, October 23, 2013**

1. (10 pts) Exercise 7.4.4 (p. 391).
2. (10 pts) Exercise 7.4.5 (p. 391).
3. (10 pts) Exercise 7.4.6 (p. 391).
4. (10 pts) Exercise 7.4.7 (p. 391).
5. (10 pts) Exercise 7.4.19 (p. 392).
6. (10 pts) Exercise 7.4.25 (p. 392).
7. (10 pts) Exercise 7.5.4 (p. 398).
8. (10 pts) Exercise 7.5.5 (p. 398).
9. (10 pts) Exercise 7.5.8 (p. 398).
10. (10 pts) Exercise 7.5.13 (p. 398).
11. (extra credit, 20 pts) For  $R_2 > R_1 > 0$  define the *overblown bagel* by the inequality

$$(R_1 - \sqrt{x^2 + y^2})^2 + z^2 \leq R_2^2.$$

Compute its volume and the surface area of its boundary.