

**Homework 14 - Math 141, Frank Thorne (thornef@mailbox.sc.edu)**

**Due Friday, December 2**

- (a) Stewart, Ch. 6.1, 1-4.
- (b) Stewart, Ch. 6.1, 5-18; even required, odd recommended.
- (c) Stewart, Ch. 6.1, 42, 45. (In 42, do not worry about what the “Midpoint Rule” is; just come up with a reasonable estimate for the area. There is a range of answers I’d happily accept.)
- (d) Find the volume of a sphere with radius  $r$ .
- (e) Find the volume of a hollowed out sphere of radius  $r$ , with a smaller sphere of radius  $s$  removed from the center. (Hint: there is an easy way!)
- (f) Find the volume of a circular cone of radius  $r$  and height  $h$ .
- (g) Find the area of a square pyramid with base length  $b$  and height  $b$ .

**Important.** For all volume problems, please sketch the solid whose volume you are computing, and draw and label a typical slice.

- (h) Stewart, Ch. 6.2, 1-10; even required, odd recommended.
- (i) Stewart, Ch. 6.2, 41, 42, 51, 68, 70.

**That’s it!**