MA 241
Homework #7
Due Thursday, October 28, in class

Exam #2 will be Thursday, November 3.

The numbered problems come from *Filling and Wrapping*. You may use the formulas we have already done in class, together with the following ones.

For a right prism with base area B, base perimeter P, and height h,

$$V = Bh \text{ and } S = 2B + Ph.$$

For a right circular cylinder of radius r and height h,

$$V = \pi r^2 h \text{ and } S = 2\pi r^2 + 2\pi rh.$$

For a pyramid with base area B and height h,

$$V = \frac{1}{3}Bh.$$

For a pyramid having a base being a regular polygon with perimeter P and apothem a, and having the apex centered over the base at height h,

$$S = \frac{1}{2}Pa + \frac{1}{2}P\sqrt{a^2 + h^2}.$$

For a circular cone of radius r having the apex centered over the base at height h,

$$V = \frac{1}{3}\pi r^2 h \text{ and } S = \pi r^2 + \pi r\sqrt{r^2 + h^2}.$$

For a sphere of radius r,

$$V = \frac{4}{3}\pi r^3 \text{ and } S = 4\pi r^2.$$

1. p. 61, #22.
2. p. 63, #30–31.
3. p. 63, #32.
4. p. 64, #33.
5. p. 68, #48.

6. p. 68, #49.
7. p. 82, #2.
8. p. 83, #7.
9. p. 84, #8. Give an exact answer, not an approximation.
10. p. 86, #16–17.
11. p. 86, #18.
12. p. 87, #25. Give exact answers, not approximations.
13. p. 87, #26. Give an exact answer, not an approximations.
14. p. 89, #37–38.
15. p. 90, #45. Give an exact answer, not an approximation.