

Homework Assignment 11.

Given Dec 04, due Dec 16.

1. Section 7.3: Problems: 30, 43, 45.
2. Section 7.4: Problems: 14, 28, 46, 56, 58.
3. Consider volume and surface area of revolution by evolving the region $\Omega = \{a \leq x \leq b, f_1(x) \leq y \leq f_2(x)\}$ around the y axis.

Let

$$V = 2\pi R_1 \cdot \text{Area of } \Omega$$

and

$$A = 2\pi R_2 \cdot \text{perimeter of } \Omega.$$

What is R_1 and R_2 ?

4. Section 7.8: Read page 499-500, examples 1-3. Then do problems: 3, 4, 10.
5. Chap 7: Problems: 54.
6. Section 8.1: Problems: 2, 8, 18, 20, 26, 27, 30, 32, 33, 40, 44, 46, 52, 56, 58, 68, 69.
7. Section 8.1: Problems: 61-66.
(Hint: $\cos x = 2 \cos^2(x/2) - 1$, $\sin x = \cos(x - \pi/2)$.)