Practice Problems

These problems are not to be handed in, but try them first; also try the even problems if you need more practice.

- From §7-1 (pages 417–420): 37–51 odd, 83, 85;
- From §7-2 (pages 430–432): 13, 17, 21, 25, 29, 35, 39, 43, 47.

The answers to these should be in the back of your textbook.

Due Problems

These problems are due May 22 Tuesday.

In each of these problems, show what integral you use, as well as your final answer with correct units (if appropriate).

1 Find the area between the curves with these equations:

$$y = x^2,$$
$$y = 2x.$$

(Show at least what integral you use, as well as your final answer.)

2 If, for 35 years, you deposit \$2000 per year into an IRA that earns 6 % annual interest (continuously compounded). How much will be in the account at the end of the 35 years?

3 Suppose that the price (in dollars per pound) at which a quantity x (in pounds per week) of a certain good will be demanded is

$$D(x) = 190 - 50x$$

while the price at which this quantity will be supplied is

$$S(x) = 50 + 100x.$$

a. What are the equilibrium price and quantity?

b. At equilibrium, what are the consumers' surplus and the producers' surplus?