

Workout Book Problems:

9.1,9.3,9.11,10.1,10.3,15.3*,15.7,16.3,16.9.

*In 15.3, don't be thrown off by $\max\{200 - p, 0\}$ and $\max\{90 - 4p, 0\}$. These max functions just ensure that the demand will not be negative if price gets too high. For instance, if price is $p = 50$ then $90 - 4p = -110$, but -110 demand makes no sense, and since 0 is larger, the demand will be 0.

1. A consumer has utility function c_1c_2 and will earn $m_1 = 1000, m_2 = 1000$. The interest rate is a whopping $r = 0.25$.

A) What is the optimal amount of c_1 and c_2 for this consumer?

B) How much does the consumer save/borrow in period 1?

C) Suppose the interest rate increases to $r = 0.5$. Is the consumer a saver or borrower? Is the consumer better off?

2. Demand for giant pumpkins is: $q_d(p) = 2000 - 30p$. Supply is $q_s(p) = 10p$.

A. Sketch the supply and demand functions. (Be sure to put p on the y -axis!).

B. What is the equilibrium price and quantity for giant pumpkins?

C. If the government imposes a tax of \$20 per pumpkin, what will happen to the equilibrium price? Including this tax, how much will consumers pay per pumpkin?

D. On your sketch from part A, label the equilibrium price and quantities before and after the tax is imposed. Label the consumer surplus, producer surplus and area of Dead-Weight-Loss due to the tax.

E. What is the amount of dead-weight-loss?