The Market

A. Example of an economic model — the market for apartments
   1. models are simplifications of reality
   2. for example, assume all apartments are identical
   3. some are close to the university, others are far away
   4. price of outer-ring apartments is **exogenous** — determined outside the model
   5. price of inner-ring apartments is **endogenous** — determined within the model

B. Two principles of economics
   1. **optimization principle** — people choose actions that are in their interest
   2. **equilibrium principle** — people's actions must eventually be consistent with each other

C. Constructing the demand curve
   1. line up the people by willingness-to-pay. See Figure 1.1.
   2. for large numbers of people, this is essentially a smooth curve as in Figure 1.2.

D. Supply curve
   1. depends on time frame
   2. but we'll look at the **short run** — when supply of apartments is fixed.

E. Equilibrium
   1. when demand equals supply
   2. price that clears the market

F. Comparative statics
   1. how does equilibrium adjust when economic conditions change?
   2. "comparative" — compare two equilibria
   3. "statics" — only look at equilibria, not at adjustment
   4. example — increase in supply lowers price; see Figure 1.5.
   5. example — create condos which are purchased by renters; no effect on price; see Figure 1.6.

G. Other ways to allocate apartments
   1. discriminating monopolist
   2. ordinary monopolist
   3. rent control

H. Comparing different institutions
   1. need a criterion to compare how efficient these different allocation methods are.
   2. an allocation is **Pareto efficient** if there is no way to make some group of people better off without making someone else worse off.
   3. if something is *not* Pareto efficient, then there *is* some way to make some people better off without making someone else worse off.
   4. if something is not Pareto efficient, then there is some kind of "waste" in the system.

I. Checking efficiency of different methods
   1. free market — efficient
   2. discriminating monopolist — efficient
   3. ordinary monopolist — not efficient
   4. rent control — not efficient

J. Equilibrium in long run
   1. supply will change
   2. can examine efficiency in this context as well

Chapter 2

Budget Constraint

Most of the material here is pretty straightforward. Drive home the formula for the slope of the budget line, emphasizing the derivation on page 23. Try some different notation to make sure that they see the *idea* of the budget line, and don't just memorize the formulas. In the workbook, we use a number of different choices of notation for precisely this reason. It is also worth pointing out that the slope of a line depends on the (arbitrary) choice of which variable is plotted on the vertical axis. It is surprising how often confusion arises on this point.

Students sometimes have problems with the idea of a numeraire good. They understand the algebra, but they don't understand when it would be used. One nice example is in foreign currency exchange. If you have English pounds and American dollars, then you can measure the total wealth that you have in either dollars or pounds by choosing one or the other of the two goods as numeraire.

In the workbook, students sometimes get thrown in exercises where one of the goods has a negative price, so the budget line has a positive slope. This comes from trying to memorize formulas and figures rather than thinking about the problem. This is a good exercise to go over in order to warn students about the dangers of rote learning!

Budget Constraint

A. Consumer theory: consumers choose the best bundles of goods they can afford.
   1. this is virtually the entire theory in a nutshell
   2. but this theory has many surprising consequences

B. Two parts to theory
   1. "can afford" — **budget constraint**
   2. "best" — according to consumers' **preferences**

C. What do we want to do with the theory?
   1. test it — see if it is adequate to describe consumer behavior
   2. predict how behavior changes as economic environment changes
   3. use observed behavior to estimate underlying values
      a) cost-benefit analysis
      b) predicting impact of some policy

D. Consumption bundle
   1. (x_1, x_2) — how much of each good is consumed
   2. (p_1, p_2) — prices of the two goods
   3. m — money the consumer has to spend
   4. budget constraint: $p_1 x_1 + p_2 x_2 \leq m$
   5. all (x_1, x_2) that satisfy this constraint make up the **budget set** of the consumer. See Figure 2.1.

E. Two goods
   1. theory works with more than two goods, but can't draw pictures.
   2. often think of good 2 (say) as a composite good, representing money to spend on other goods.
   3. budget constraint becomes $p_1 x_1 + x_2 \leq m$.
   4. money spent on good 1 ($p_1 x_1$) plus the money spent on good 2 (x_2) has to be less than or equal to the amount available (m).

F. Budget line
   1. $p_1 x_1 + p_2 x_2 = m$
   2. also written as $x_2 = m/p_2 - (p_1/p_2)x_1$.
   3. budget line has slope of $-p_1/p_2$ and vertical intercept of m/p_2.
   4. set $x_1 = 0$ to find vertical intercept (m/p_2); set $x_2 = 0$ to find horizontal intercept (m/p_1).
   5. slope of budget line measures opportunity cost of good 1 — how much of good 2 you must give up in order to consume more of good 1.

G. Changes in budget line
   1. increasing m makes parallel shift out. See Figure 2.2.
   2. increasing p_1 makes budget line steeper. See Figure 2.3.
   3. increasing p_2 makes budget line flatter
   4. just see how intercepts change
   5. multiplying all prices by t is just like dividing income by t
   6. multiplying all prices and income by t doesn't change budget line
      a) "a perfectly balanced inflation doesn't change consumption possibilities"

H. The numeraire
   1. can arbitrarily assign one price a value of 1 and measure other price relative to that
   2. useful when measuring relative prices; e.g., English pounds per dollar, 1987 dollars versus 1974 dollars, etc.

I. Taxes, subsidies, and rationing
   1. quantity tax — tax levied on units bought: $p_1 + t$
   2. value tax — tax levied on dollars spent: $p_1 + \tau p_1$. Also known as *ad valorem* tax
   3. subsidies — opposite of a tax
      a) $p_1 - s$
      b) $(1 - \sigma)p_1$

4. lump sum tax or subsidy — amount of tax or subsidy is independent of the consumer's choices. Also called a head tax or a poll tax
5. rationing — can't consume more than a certain amount of some good

J. Example — food stamps
1. before 1979 was an *ad valorem* subsidy on food
   a) paid a certain amount of money to get food stamps which were worth more than they cost
   b) some rationing component — could only buy a maximum amount of food stamps
2. after 1979 got a straight lump-sum grant of food coupons. Not the same as a pure lump-sum grant since could only spend the coupons on food.