1. **Unemployment.** If I was discussing “The Macroeconomics of SHSU,” I could define “unemployment” as the inability of a student to register for a class that he or she wishes to take. In this context, one can find examples of frictional unemployment, structural unemployment, and cyclical unemployment.

A) Looking at the SHSU class schedule, many classes in Agriculture and Chemistry are full, while most classes in Library Science and Economics have open spots. Which type of unemployment does this describe?

B) In the California State University system, recession-induced budget cuts have reduced the number of classes campus-wide, so that it is difficult for students to register for a full schedule. Which type of unemployment does this describe?

C) Around the beginning of each semester, students sometimes register for one section of a class, then move to another section when an opening becomes available. This, in turn, creates an opening in the original section that soon gets filled by someone else. Which type of unemployment does this describe?

D) Would a tuition increase raise the rate of unemployment, or lower it? Explain.

2. **Labor Demand.** Work review question #4 in Chapter 3.

3. **Elasticity of Labor Demand.** Work review question #3 in Chapter 4.

4. **Labor Supply.** Catholic priests take a vow of chastity, forgoing marriage and intimate non-marital relationships. This question relates to the attached article, *which should be read by class time on the homework day, when there will be a short quiz on the article.*

A) How does the vow of chastity affect the labor supply of Catholic priests? Illustrate on a graph. It doesn't have to be a supply/demand graph because I'm not asking about demand.

B) In 2000, the last year for which I have data, the median salary of priests (including housing), set by the bishop of the diocese, was $25,000. In contrast, full-time Protestant pastors earned $40,000. Thus, we could say that Catholic priests earn a relatively low hourly wage. How does this affect labor supply? Illustrate on a graph.

C) A friend says, “These low salaries aren't going to affect the number of people that become priests, because you are either destined to become a priest or not, and nothing is going to stop you.” In economic terms, what is my friend saying about labor supply? Illustrate this concept on a graph.

D) Protestant pastors can marry, and their wages are determined by a fairly competitive market. Which labor market is more likely to have difficulty filling all the available positions—the market for Catholic priests, or the market for Protestant pastors? Why?

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**I PLAN TO GO OVER THESE ON THE HOMEWORK DAY**

1. **Equilibrium.** Explain, using Supply/Demand analysis, the effects of the following. For each, draw two graphs, one for the labor market (workers), and one for the output market (the product).

A) A machine is developed that harvests tomatoes mechanically (on the market for laborers, and the tomato market).
B) An economic contraction leads to a slowdown in housing construction (on the housing market, and the market for construction workers).

C) A huge natural gas reserve is tapped in the Barnett Shale in Fort Worth, Texas (on the market for workers in the natural gas industry, and the market for natural gas).

D) World War I kills a substantial fraction of the unskilled (primarily young) workers in the countries involved (on the market for low-skill labor, and for products made by low-skill labor).

2. **Equilibrium.** Assume the child care industry is a perfectly competitive industry, and that child care workers are hired in a perfectly competitive labor market. There is a sizable Child Care Tax Credit, which lowers the taxes of those parents who put their children in (paid) child care while they (the parents) work.

A) Illustrate, on an S/D graph, the effect of the tax credit on the price and quantity of child care in the short run.

B) Illustrate, on an S/D graph, the effect of the tax credit on wages and employment in the nursing market (many nurses require child care for their children while they are at work).

C) Illustrate, on an S/D graph, the effect of the tax credit on wages and employment in the child care industry. An academic study (really) has found that the supply of child care workers is quite elastic. Be sure this is shown in your graph. Which changes more: the wages of child care workers, or the total number of child care workers employed?

3. **Unemployment.** Work review question #6 in Chapter 14 (#7 is similar, and is answered in the back of the book).

4. **Labor Demand.** Around 1820, with the invention of improvements in the milling of cotton, such as the cotton gin, cotton became much cheaper to raise and harvest, and cotton production exploded. In 1950, with the invention of the mechanical cotton harvester, fewer farm laborers (or sharecroppers) were needed to harvest the cotton.

A) Are cotton gins and cotton farm laborers complements or substitutes in production? Are mechanical harvesters and farm laborers complements or substitutes in production?

B) Consider the effect of the cotton gin on the demand for cotton farm laborers. Which is the primary reason demand increases: a scale effect or a substitution effect?

C) Consider the effect of the mechanical harvester on the demand for cotton farm laborers. Which is the primary reason demand decreases: a scale effect or a substitution effect?

5. **Labor Supply.** A reduction in income tax rates, as with the Bush tax cuts, can lower the wage costs of employers.

A) Explain why, using a supply/demand graph.

B) Describe the income and substitution effects of this income tax reduction on labor supply.

C) For the tax cut to increase labor supply, which must be larger, the income effect or the substitution effect? Explain.
I HOPE TO GO OVER THESE IN CLASS PRIOR TO THE HOMEWORK DAY

1. **Compensating Wage Differentials.** Work review question #7 in Chapter 8.

2. **Compensating Wage Differentials.** A study has shown that single parents are less likely to choose risky occupations (with a high injury or death risk) than married parents are, and that married women are much less likely to choose a risky occupation than are married men.

   A) What do the results of this study tell us about worker attitudes regarding occupational safety and child rearing?

   B) Draw a supply/demand graph for a “safe” occupation and one for a “risky” occupation. Locate, with a “little person,” the typical single parent on the supply curve for each occupation. Then do the same for the typical married man. Who ends up working where?

   C) Describe, using the graphs you just drew, how market wages sort workers into jobs consistent with their preferences for occupational safety.

3. **Incentives.** Work review question #4 in Chapter 11.

4. **Incentives.** At most country fairs, including the Walker County Fair, you pay for the rides with tickets, and for the dart/water pistol/guess-my-weight games with cash.

   A) Why? Explain in words, then using a supply/demand graph for effort.

   B) Who gets paid more, the ride operators or the game hucksters? Why?

I PLAN TO GO OVER THESE ON THE HOMEWORK DAY

1. **Compensating Wage Differentials.** Work review question #6 in Chapter 8. (The main idea in this question is similar to that in #5, which is answered in the back of your book.)

2. **Compensating Wage Differentials.** (Ehrenberg and Smith, modified) Some employers offer jobs for which overtime is mandatory. Others offer jobs for which overtime hours are usually available to workers if they wish to work them. Still other employers offer jobs for which overtime hours are not commonly worked. (By law, overtime pay for hourly workers is 50% greater than regular pay.) Suppose that a careful study of wages finds that, all else equal, jobs for which overtime hours are commonly available pay lower wages than jobs for which overtime is not usually worked. (The term “wage” refers to the normal wage, not the overtime wage.) Furthermore, the study finds that jobs for which overtime is not usually worked pay less than jobs in which overtime is mandatory.

   A) What do the results of this study tell us about worker attitudes regarding overtime? Why?

   B) What kinds of workers would be sorted into each kind of job? Why?

3. **Incentives.** Work review question #6 in Chapter 11.

4. **Incentives.** Section 18.C of the Texas Association of Realtors Residential Lease form reads as follows:

   **Payment of Repair Costs:** Tenant will pay Landlord or any contractor Landlord directs
Tenant to pay, the first $_______ of the cost to repair each condition in need of repair, and Landlord will pay the remainder, except for the following conditions which will be paid as follows. (Then, it says things like roof damage and repairs to water heaters & air conditioners are covered fully by the landlord.)

A) Compared to the “traditional” lease in which the landlord pays for all repairs, this clause has incentive effects that influence tenant “effort.” Clearly describe these effects.

B) Describe how both the landlord and tenant can benefit from this clause, compared to a traditional lease where the landlord pays for all repairs. One way to do this (not the only way) is to use the “spectrum of incentives.”

C) How should the number that goes in the blank be chosen? Illustrate this decision on a supply/demand graph for effort.

5. Compensating Wage Differentials, Sorting, and Incentives. Read “The Ship,” a chapter from the book *Moby Dick*. We will have a reading quiz on it on the homework day. Then answer the following questions, which act as a reading guide.

A) Describe why sailors on whaling vessels would be paid a compensating differential. Do you think it is substantial?

B) Describe how worker/job sorting is accomplished here. In the reading, who is primarily responsible for making sure Ishmael (the narrator) is a good fit for the job he ends up taking?

C) What sort of incentives for effort are used here? Why do you think the ship’s owners use the type of incentives they do?

D) (Bonus–tough) Why do Captain Bildad and Captain Peleg get all agitated toward each other about Ishmael’s pay?
1. **Supply and Demand for Schooling.** Below, from an academic study, is a table of the returns to education of white and black males in South Africa, showing the wage premia for being in the schooling category indicated vs. the next worse (less schooling) category. White males have many more years of schooling, on average, than do black males. We wish to explain the racial divergence in the amount of schooling and in the returns to schooling.

A) One potential explanation is that discrimination forces blacks into low wage jobs; that is, firms are reluctant to employ high skill blacks. Are the data consistent with that explanation? Illustrate on a pair of supply/demand graphs, one for whites and one for blacks. (No shifts, just different graphs.)

B) An alternative explanation is that blacks lack the financial resources needed to obtain more schooling. Are the data consistent with that explanation? Illustrate on a pair of supply/demand graphs.

<table>
<thead>
<tr>
<th></th>
<th>Blacks</th>
<th>Whites</th>
</tr>
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<tbody>
<tr>
<td>Finished Grammar School</td>
<td>10%</td>
<td>0%</td>
</tr>
<tr>
<td>Finished High School</td>
<td>15%</td>
<td>10%</td>
</tr>
<tr>
<td>Finished College</td>
<td>30%</td>
<td>10%</td>
</tr>
</tbody>
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2. **General OJT.** (Milgrom and Roberts, revised) Actuaries perform the crucial task of estimating the time paths and probability distributions of costs and revenues for different insurance contracts. Becoming an actuary takes several years, and involves passing a series of rigorous examinations given either by the Society of Actuaries (http://www.soa.org/) or by the Casualty Actuarial Society (http://www.casact.org/). Usually the individual works for an insurance company while studying for the exams, and the company gives the individual time off to study for the exams. Passing an exam usually results in a significant pay increase.

A) Actuaries have general human capital. Explain why.

B) Who “pays for” the worker’s time off to study for the exams? Choose one answer and explain.
   1) the worker does, by accepting a lower salary
   2) the firm does, to invest in the worker’s human capital

C) Why does the individual get a pay increase after passing each exam? Why not evaluate the employee once per year, like many companies do?

3. **Specific OJT.** (Milgrom and Roberts, revised) Workers who are laid off from their jobs generally receive lower wages once they find new jobs (Fact 1). Moreover, the wage reduction appears to be persistent--for many years, wages are lower than they would have been had the worker keep his/her old job (Fact 2). Moreover, the wage loss differs by the type of job--relatively unskilled laborers such as fast-food workers or retail clerks suffered a smaller wage decline than did certain kinds of skilled labor, such as production workers in automobile or airplane manufacturing plants (Fact 3). What key insight explains all three of these facts?
4. **Investment in Human Capital.** Work review question #9 in Chapter 9.

5. **Schooling and On the Job Training.** The labor market in Japan is different than that in the United States in several different ways.

   A) One difference is that, in Japan, entry into college is (essentially) limited to those who can pass certain standardized tests. In the United States entry is not so limited. Illustrate the effect of the college entry limitations on the rate of return to schooling in Japan, using an appropriate supply/demand graph, with axes properly labeled.

   B) A second difference is that in Japan there is more protectionism, and hence less international trade. How does this affect the rate of return to schooling? Discuss briefly and illustrate on an appropriate supply/demand graph.

   C) Work review question #7 in Chapter 10, which is also about Japan.

6. **On the Job Training.** Three basic facts about men and women in the labor market are these:

   - As a group, women now get just as much schooling as men do (actually, a little more).
   - Upon graduating from college, women receive salary offers that are the same as men’s offers, on average.
   - As they age, men’s average wages and women’s average wages diverge, with women lagging behind men, even when they have the same amount of education.

   A) Reconcile these facts with the theory of human capital.

   B) Under one standard theory of labor market discrimination, “employer discrimination,” employers are willing to pay a fixed premium to hire members of a preferred group instead of members of a non-preferred group. What pattern of facts should you observe if women were discriminated against in this way?

   C) Under another theory of discrimination, families are reluctant to invest in the education of their daughters. What pattern of facts should you observe if women were discriminated against in this way?

7. **OJT, Pay, and Turnover.** Below is drawn a graph of pay at WeirdCo, a company with “innovative” pay practices. The vertical axis is in dollars, and the horizontal axis indicates years spent at this firm. The point indicates the value of the worker’s general human capital at the time they join the firm; this human capital never goes away. The downward sloping line is the worker’s pay. Each year you work at WeirdCo, your salary goes down. Initially, assume all human capital accumulated at WeirdCo is general.
A) If human capital acquisition follows theory, what would happen? Draw the path of human capital acquisition on the graph, beginning, of course, at the point provided.

B) How long would an individual joining this firm remain before leaving? Identify clearly on the graph, and briefly explain below.

C) Now let all human capital acquired at WeirdCo be firm-specific. How long would the individual remain at WeirdCo then? Choose one answer and explain.
   1) they would stay just as long as in part B)
   2) they would stay longer than in part B)
   3) they would stay shorter than in part B)

D) Under what circumstances would this pay policy be effective? Choose one answer and explain.
   1) none–this pay policy just makes no sense
   2) it is a standard example of “backloaded compensation” used to incentivize effort
   3) this is the way most internal labor markets pay people

8. Human Capital. Read the excerpt from the book *Gang Leader for a Day*. We will have a reading quiz on it on the homework day. Then answer the following questions, which act as a reading guide.

A) Is J.T. good at his job? Why?

B) In what ways are the skills J.T. possesses general management skills?

C) Describe how J.T. tries to develop human capital in his gang members.
Homeworks for Unit 4, ECO 361, Darren Grant. There is no “homework day” for Unit 4—we’ll do these before the last week of class.

1. **Discrimination.** Assume that over time employer discrimination against women has fallen. Also, recall that women’s labor supply slopes upward, while men’s is pretty much perfectly inelastic.

   A) On a supply/demand graph for women, show how wages and employment are affected as discrimination falls.

   B) On a supply/demand graph for men, show how wages and employment are affected as discrimination falls.

   C) How should this decreased discrimination affect firms’ profits?

2. **Income Inequality.** Do review question #6 in Chapter 15. In addition to considering the effects of geographic mobility on income inequality, also consider its effects on labor market efficiency.

3. **International Trade.** In class we worked out the effects of international trade, and the lowering of trade barriers, on labor markets and the rate of return to education in the United States. Now, work out the same things for Mexico, instead.