

Homework Set 1, ECO 250. We will go over problems from this homework on Friday, Sept. 29.

From Your Book.

Ch. 21: #1. In Ch. 22: #1, 6, 7. In Ch. 23: #1.

From Your Coursebook.

Ch. 21: Objectives 2 and 6; Mult. Choice 1,5,6,8,9,10,12,14.

Ch. 22: Objectives 1, 2, 3, and 5; Exercises 1, 5; Mult. Choice 1-14.

Ch. 23: Objectives 1 and 2; Exercise 1; Mult. Choice 1-6, 16,17.

More Homework Problems. In this section I toy with your mind.

1. Assume that the probability of losing your job is 12% per year (or approx. 1% per month), and it takes on average 2 months for a unemployed person to find a new job.

a) What is the rate of unemployment?

b) If, in a recession, the probability of losing your job increases to 2% per month, and the average interval before finding a job rises to 3 months, what is the unemployment rate?

2. Your textbook (p. 931) reports that the World Development Report estimates the per capita GNP of Pakistan to be \$380 in 1990, in United States dollars. This implies that the average person in Pakistan is living on \$380/year. This is hard to swallow, since a person could not survive for one year in the United States on \$380. How can we resolve this apparent contradiction?

3. If I was teaching a class called "The Macroeconomics of GSU," then I would define "output" as the amount of learning that takes place at the school and "unemployment" as the inability of a student to register for a class that he or she wishes to take.

a) For that class (Macro of GSU), give an example of: frictional unemployment, structural unemployment, and cyclical unemployment.

b) How would a tuition increase affect the rate of unemployment?

4. In which two of the following countries is GDP most likely to exceed GNP?

Canada: has lots of natural resources.

Italy: everyone cheats on their taxes; governmental instability.

Kuwait: very wealthy country. Everyone hires personal servants from Palestine and the Phillipines.

China: lots of foreign investment.

Cuba: very closed country. Little trade with other countries.

Homework Set 2, ECO 250, Darren Grant. We will go over problems from this homework on Tuesday and Wednesday, Oct. 10 and 11.

From Your Book.

- Ch. 22: #2, 3, and 5.
- Ch. 23: #6.
- Ch. 26: #3, 5, and 7.

From Your Study Guide.

- Ch. 22 (Ch. 7): Objective 4; Exercise 3; Mult. Choice 4, 7, 16; Short Answer 3-5.
- Ch. 23 (Ch. 8): Objectives 3, 4; Exercises 3-5; Mult. Choice 8-15, 19, 20; Short Answer 4, 5.
- Ch. 26 (Ch. 11): Objectives 1-5; Exercises 1, 2, and 5; Mult. Choice 1-20; Short Answer 1, 4.

More Homework Problems. These problems are not too dissimilar from some of the problems assigned to you above. They are included as an indicator of the kinds of free-response questions you might see on my test.

1. (Flaherty) You are given the following information about the prices of three goods in a "market basket" for a hypothetical economy.

Commodity	Quant.	Price in 1990	Price in 1991	Price in 1992	Price in 1993
Steak	4	\$3	\$3	\$3	\$4
Lawn Chairs	1	\$12	\$11	\$10	\$10
Cassette Tapes	3	\$4	\$6	\$7	\$8

- a) Compute a price index for 1991, 1992, and 1993 using 1990 as the base year.
- b) By what percentage did the price level change from 1990 to 1993?

Alan Greenspan has recently stated that he thinks the CPI has overstated the true increase in the price level over time.

- c) Who is Alan Greenspan?
- d) Why might he think the CPI overstates the true increase in the price level?
- e) Fill in the following table. You will need to use your results from above, and remember that 1990 is the base year.

Year	Nominal GDP	Price Index	Real GDP
1990	\$5.0		
1992			\$5.2
1994	\$8.0		\$5.4

- f) If the following table represented (approximately) the U.S. economy, then the figures would be in {hundreds, thousands, millions, billions, etc.}?
- g) In 1990 net exports were \$100 Billion, investment was \$1 Trillion, and government purchases were \$1.5 Trillion. Using the definition of GDP, what accounts for the remaining \$2.4 Trillion?
- h) What is "Gross" about GDP?

2. (Flaherty) Suppose the simplified consolidated balance sheet shown below is for the commercial banking system. Assume the banking system lends all excess reserves.

Assets	Liabilities
Reserves: \$ 500	Demand Deposits: \$2000
Securities: \$ 400	
Loans: \$ ???	
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Total Assets: \$2000	Total Deposits: \$2000

- a) Fill in the amount of loans outstanding in the table.
- b) Give me an example of a "security."
- c) If this table were to approximate the U.S. banking system, the figures would be in {hundreds, thousands, millions, billions, etc.}?

Assume the Fed's required reserve ratio is 25%.

- d) Verify that initially the banking system has no excess reserves.

Also assume the Fed buys \$10 Bil. in securities through Open Market Operations. It buys these securities from the banking system, and deposits the money it pays for the securities into the banks' reserve accounts (that they hold with the Fed).

- e) How much in excess reserves does the banking system now have?
- f) What is the maximum amount the banking **system** might lend?

My friend says, "I'm concerned that my bank does not have enough money in reserve to pay all its depositors. Because of this, I fear that there may be a run on the bank, in which depositors will panic and ask for their money back, and the bank will fail."

- g) Name an important reason, not related to the reserve requirements, why my friend should not worry so much about customers panicking and asking for their money back.
- h) Have there been (relatively) many bank failures in the last ten or fifteen years?

Homework Set #3, ECO 250. As Mr. Spock says, "Study hard and prosper." We will go over these fine, fine problems on Friday, Oct. 20.

From Your Book: #2 a, c; #4, #5.

From Your Study Guide: Objectives 1-4; Exercises 1, 2 a-c; Multiple Choice 11, 13, 14.

More Homework Problems.

1. The U. S. economy is currently in short run equilibrium at price level  $P_1$  and output level  $Y_1$ . Demonstrate the effect of each of the following on an AS/AD graph. Use separate graphs for each question. Identify  $P_1$  and  $Y_1$  on each graph. Use arrows to show how the curve(s) shift, and identify the new equilibrium point. Tell me what has happened to prices and output.

A) There is an increase in foreign purchases of American agricultural products; for example, the Russians buy more American wheat.

B) There is a large increase in the minimum wage.

C) There is a large increase in the price of oil, most of which is imported.

D) An increase in interest rates causes a reduction in the purchase of new homes.

2. The U. S. economy is currently in short run equilibrium at price level  $P_1$  and output level  $Y_1$ . The unemployment rate is currently 10%.

A) Draw this situation on an AS/AD graph. Be sure to draw a LRAS curve in the appropriate location.

B) Is the economy in an expansion, a recession, or in long-run equilibrium?

C) How would you expect the economy to change in the next three or four years? Demonstrate on the AS/AD graph?

3. Analysts suspect the Fed (Federal Reserve Board) may cut interest rates at its next meeting in November.

A) What is the name of that part of the Fed which is responsible for setting interest rates?

B) Demonstrate the effects of the interest rate cut on an AS/AD graph. What should happen to output? To inflation?

Homework 4, ECO 250, Darren Grant. We'll go over these on Thursday, Oct. 26; and we'll have a  on Friday, Oct. 27.

1. When the ideas of J. M. Keynes are incorporated into the AS/AD framework, what shape does the AS curve have?

A) Draw it on an AS/AD graph.

B) Why does the AS curve have this shape? This answer has two parts.

C) What does Keynes view as the primary source of instability in the economy?

D) What did Keynes think about the power of the self-correcting mechanism to pull the economy out of recession?

E) How would Keynes' ideas have been shaped by the events around him?

2. In the crazy country of Sheridania, the following events occurred: In 1994 the economy was in long run equilibrium. In 1995, many of the countries with which Sheridania trades enacted a tariff on imports.

A) Does the question say that Sheridania enacted a tariff on imports?

B) Draw an AS/AD graph for 1994.

C) How would the tariffs affect Sheridania's economy? Illustrate on an AS/AD graph. Is the economy now in expansion or recession?

D) How would we expect the economy (prices and output) to change in 1996? Shift the appropriate curve on the graph.

E) If one were to draw a graph of the unemployment rate over time for Sheridania, what would it look like? Identify the points for 1994, 1995, and 1996.

3. Country A is currently mired in recession. Country B is currently in an expansion; the economy has been growing for some time. Both countries' AS curves have the shape suggested by John M. Keynes (Dr. Keynes to you).

A) Draw separate AS/AD graphs for each country. Identify the LRAS point on each graph in the proper location.

B) In both countries, the government undertakes expansionary fiscal policy (for example, an increase in government purchases). Draw the effects of the policy on both graphs. Assume that the policy shifts the appropriate curve by the same amount in both countries. Identify the new price level and output level on the graphs.

C) Does inflation increase more in country A or country B?

D) Does unemployment decrease more in country A or country B?

E) In which country is the expansionary policy more desirable?

4. Below I have photocopied an article from the Sept. 27, 1995 Wall Street Journal that I once read to you in class. Answer the following questions about the article. My questions focus on a particular paragraph in the article, but read the whole article to understand the context.

A) “if the final outcome is a package that cuts taxes in 1996 but delays spending restraint until sometime later; that would stimulate an economy already operating close to what the Fed considers full capacity.” Draw the situation before the tax cut on an AS/AD graph, including the LRAS point.

B) Now show me how equilibrium will change when taxes are cut but spending is not. Shift the appropriate curve on the graph.

C) Would it generally be considered desirable to stimulate an economy operating close to full capacity?

5. THE BLOW YOUR MIND DEPARTMENT. The analysis behind the development of the AS curve implies that real wages are “too low” when we’re above LRAS, while real wages are “too high” when we’re below LRAS. That is, wages are lower than average in expansions and higher than average during recessions. This appears to conflict with the empirical fact that real wages tend to rise in an economic expansion and fall during a recession. How can we resolve this apparent contradiction?

Homework 5, ECO 250, Darren Grant. We will go over this homework on Friday, Nov. 3.

From Your Book:

Read Chapter 27. It is more complex than my lecture is intended to be, but covers the same material. Then work #1, 2a, 2e, 3.

Read, in Chapter 34, pp. 831-841. Again, some of it is more complex than my lecture. Then work problem #1a,c; 3.

Work Chapter 29, #6.

From Your Study Guide:

In Chapter 12 (27), do: Objectives 2, 3, 5; Exercise 10 a,b, Multiple Choice 1, 2, 3, 7, 9, 10, 12, 14, 19, 20.

In Chapter 19 (34), do: Objective 1; Short Answer 1, 3; Multiple Choice 1, 2, 4, 7, 8, 10, 11, 13, 15, 16.

More Homework Problems.

1. If we were to think of GSU as a macroeconomy, as we did once in an earlier homework assignment, then the analog of “unemployment” would be the inability of students to register for classes they wished to have. The analog of “output” might be the quality of education that students receive at GSU, measured, perhaps, as the average starting real wage a GSU graduate earns on his first job after graduation.

A) What do you think the analog of “money” would be in the “GSU macroeconomy”?

President Henry comes up with a new plan to increase GSU’s output, that is, to increase the starting salary of GSU graduates. It is to improve the average level of grades by simply grading easier, so that the average GSU graduate’s GPA is, say, a 3.20, rather than, say, 2.40. Then, employers will think students are smarter than they are, so they will offer them higher real wages.

B) What kind of economic policy is this similar to?

C) How would students change their behavior in response to the policy? Would it tend to reinforce or counteract the intent of the policy?

D) How would employers change their behavior, in response to the policy, in the long run? How do you think “output” would be affected in the long run?

2. In 1993, the M2 money supply was \$3.5 Trillion, while nominal GDP was \$6.4 Trillion.

A) Using the “Quantity Theory of Money,” calculate the velocity of M2.

B) The book says, “You can think of (money) velocity as the number of times a dollar bill changes hands, on average, during the course of a year.” Look at your answer to part A. Does the answer you calculated seem realistic, given the definition above? Does it seem to be too large? Too small?

C) This is a toughy but by no means impossible. How can we reconcile the apparent contradiction above?

D) If the money supply were to increase by 40% and the level of real output increases by 20%, then how much will prices increase, according to the quantity theory of money?

3. Refer to the graph below. Also, the following formula may be of use (you should know this):

$$\frac{\text{Real GDP}}{100} = \frac{\text{Nominal GDP}}{\text{Price Index}}$$

The money supply is \$250 Million.  
Nominal wages are \$6.00.

A) What are real wages?

B) What is nominal GDP?

C) What is the velocity of money?

The Fed reduces the money supply to \$200 Million.

D) How would the Fed accomplish this?

E) In the short run, how would the reduction in the money supply affect prices and output? Demonstrate on the AS/AD graph.

F) How would the self-correcting mechanism affect the graph in the long run? Demonstrate on the AS/AD graph.

G) In the long run, what is the price level?

H) In the long run, what is real GDP? Nominal GDP?

I) In the long run, what are real wages? Nominal wages?

Homework 6, ECO 250, Darren Grant. We will go over these on Wednesday, Nov. 15.

From the Book.

Read, in Chapter 25, pp. 634-639. Then work #4, 5.

Read, in Chapter 31, pp. 761-776. Then work #3, 4, 6.

Read, in Chapter 34, pp. 841-845. Then work #1 a,b,c; 5.

From the Study Guide.

In Chapter 10 (25), Objectives 1, 6, 7; Mult. Choice #7, 8, 11, 12, 15.

In Chapter 16 (31), Objectives 1, 3, 4; Mult. Choice #2, 5, 6, 8, 14.

In Chapter 19 (34), Objectives 2, 3; Mult. Choice #1-17 except those you did before.

More Homework Problems. Some of these you have seen before. Be sure you can do them!

1. Darrentia (a crazy country) has been in recession for a couple of years. Darrentia's AS curve has the shape suggested by John M. Keynes (Dr. Keynes to you).

A) Draw an AS/AD graph for Darrentia. Identify the LRAS point on the graph in the proper location.

B) If the economy were left alone for a few years, how would the "self-correcting mechanism" influence the economy? Demonstrate on a AS/AD graph. What would happen to inflation? To unemployment?

C) Instead of leaving the economy alone, the government (it's a dictatorship) decided to increase the money supply by \$100 Million. Demonstrate the effects of the increase in government purchases on a brand new AS/AD graph. What happens to inflation? To unemployment?

D) Would a Keynesian be more likely to recommend leaving the economy alone, as in B, or increasing the money supply, as in C? Give at least one good reason why.

E) Would a rational expectations / new classical economist advocate leaving the economy alone, as in B, or increasing the money supply, as in C? Give at least one good reason why.

F) Would a monetarist be more likely to recommend leaving the economy alone, as in B, or increasing the money supply, as in C? Give at least one good reason why.

2. The money supply is \$200 Million. Real GDP is \$1.2 Billion. Nominal wages are \$6.00. The price index is 100. Initially, the economy is in long-run equilibrium (at the LRAS point).

A) What is GDP in Millions?

B) What are real wages?

C) What is nominal GDP?

D) What is the velocity of money?

The Fed uses Open Market Operations to increase the money supply to \$300 Million.

- E) Did the Fed buy or sell government securities?
- F) Do interest rates increase or decrease?
- G) In the short run, how would the increase in the money supply affect prices and output? Demonstrate on an AS/AD graph.
- H) Now, is unemployment greater than, equal to, or less than the Natural Rate of Unemployment?
- I) In the long run, what is the price level?
- J) In the long run, what is real GDP? Nominal GDP?
- K) In the long run, what are real wages? Nominal wages?

3. Let us compare fiscal and monetary policy goals during two different periods in the 1990's. During the 1990-2 the U. S. economy was in a recession. In contrast, during 1993-4 the economy grew at a very fast pace; by the end of 1994 unemployment was at its lowest level in many years.

- A) Draw an AS/AD graph for the economy in, say, 1991. Identify the LRAS point on your graph.
- B) If one were to use countercyclical fiscal policy during 1991, what would you do?
- C) If one were to use countercyclical monetary policy during 1991, what would you do?
- D) How would the countercyclical policy affect the economy in the short run? Demonstrate on the AS/AD graph. What would happen to inflation? To unemployment?
- E) Draw a brand new AS/AD graph for the economy in 1994. Identify the LRAS point on your graph.
- F) If one were to use countercyclical fiscal policy during 1994, what would you do?
- G) If one were to use countercyclical monetary policy during 1994, what would you do?
- H) How would the countercyclical policy affect the economy in the short run? Demonstrate on the AS/AD graph. What would happen to inflation? To unemployment?
- I) Why doesn't the Federal Reserve ever use fiscal policy to accomplish its desired goals?

Homework 7, ECO 250, Darren Grant. We will go over this homework on Friday, Dec. 1.

From Your Book.

Read Chapter 36. Then do problems #1, 6.

Read Chapter 37, pp. 898-903; 910-916 only. Then do problem #5.

From Your Study Guide.

Ch.21 (36), Objectives 1-6; exercise 2; Mult. Choice 1-20.

Ch. 22 (37), Objectives 1, 4; Mult. Choice 10, 13-16.

Sample policy question.

The economy is initially in long run equilibrium at the LRAS point. The AS curve has the shape given by John M. Keynes. There is a surge in the demand for U.S. products abroad, so that there is a big increase in U.S. exports.

- A) Demonstrate the effects of this on an AS/AD graph. How are output and inflation affected?
- B) Is unemployment currently greater than, less than, or equal to the Natural Rate of Unemployment?
- C) Are policy makers more concerned right now with lowering inflation or lowering unemployment?
- D) The government decides to use countercyclical fiscal policy to improve the economy. If taxes were held fixed, what happens to government spending-does it increase or decrease?
- E) On a brand new AS/AD graph, show the effects of the fiscal policy. What happens to inflation and output?
- F) How does the policy affect interest rates?
- G) What happens to the government deficit?
- H) Would a monetarist think that using discretionary fiscal policy is a good idea in general? Why or why not?
- I) What does the Fed have to do with fiscal policy?
- J) My friend says, "What's happening here is very much like what happened during the early 1980's, when we used restrictive fiscal policy to lower inflation and also lower the deficit." Do you agree? Why or why not?