Macroeconomics Unit 1: Basic Economics Concepts

Key Terms- Define the following:

1. Scarcity

Individuals, businesses, and governments have unlimited wants but limited resources.

2. Consumer Goods vs. Capital Goods to proceed this Consumer goods- (ex: pizza) goods made for direct consumption

Capital goods- (ex: restaurant oven) goods made for indirect consumption. Goods that make consumer goods 3.Trade-offs

ALL possible options given up when you make a choice

4. Opportunity Cost

The ONE best option given up when you make a choice including the money, time, and forgone opportunities.

3 Economic Systems

1. Centrally Planned Economies

Economic system where the government owns the resources and decides what to make, how to make it, and who gets it. Total government control of the economy

2. Free-Market Economies (Capitalism)

Economic system where individual citizens own the resources and decides what to make, how to make it, and who gets it. Little or no government involvement in the economy

3. Mixed Economies

Almost all economies are a mixture of the above systems.

Production Possibilities Curve (Frontier)

Use the chart to create a PPC to the right.

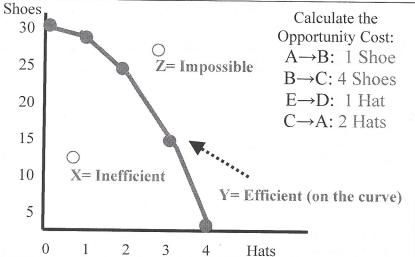
10 	A	В	C^	D	E .
Hats	0	-1	2	3	4
Shoes	30	29	25	15	0

Label the following three points on the graph:

X= Unemployment/Inefficiency

Y= Efficient

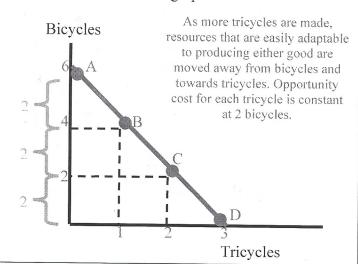
Z= Impossible given current resource



Constant Opportunity Cost

Why does this occur? Resources are easily adaptable between both products.

Draw the graph below



Increasing Opportunity Cost

Why does this occur? Resources are not easily adaptable between both products

Draw the graph below

At combination A, all resources are put towards **Bikes** making bikes, including resources that are better for making iPhones. The opportunity cost of the first iPhone is small (3 bikes) as resources, like electrical engineers, are moved away from making bikes. As more iPhones are produced, the opportunity 12 cost gets larger. **iPhones**

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Key Terms

Define Investment-

Investment is business spending on capital (tools and machinery) that makes businesses more productive Define Capital Stock-

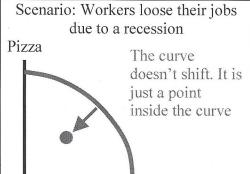
Capital stock is the amount of capital businesses have. The more capital stock, the more output they can make

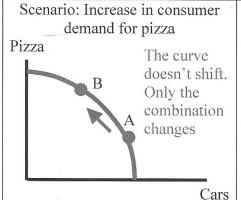
Shifting the PPC

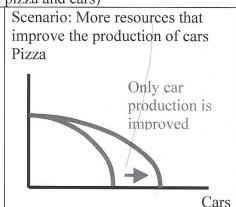
Identify the three shifters of the PPC

- 1. Change in resource quantity or quality
- 2. Change in Technology
- 3. Change in Trade (Doesn't change the amount they can produce, but it does change the amount they can consume)

Production Possibilities Practice (draw 3 PPCs with pizza and cars)







Absolute and Comparative Advantage

Output Questions

Cars

The table shows the amount of sugar and cars each country can make with the same number of resources

	Sugar (tons)	Cars
Cuba	40	10
Cuba	(1S costs ¼ Car)	(1C costs 4 Sugar)
Mexico	50	100
MEXICO	(1S costs 2 Cars)	(1C costs ½ Sugar)

- 1. Which country has an absolute advantage in sugar? How about cars? Mexico/Mexico
- 2. What is Cuba's opportunity cost for producing one car? 4 sugar
- 3. Which country has a comparative advantage in cars? How about sugar? Mexico/Cuba
- 4. For both countries to benefit from trade, how much sugar can be traded for each car? 1 Car for
 - Sugar (any number between 4 and $\frac{1}{2}$)

Input Questions

The table shows the number of hours it takes to produce a ton of sausage and a ton of computers

	Sausage	Computers
Canada	2 (1S costs 1/3 comp)	6 (1C costs 3 sausg)
UK	10 (1S costs 1 comp)	10 (1C costs 1 sausg)

- 1. Which country has an absolute advantage in sausage? How about computers? Canada/Canada
- 2. What is Canada's opportunity cost for producing one computer? 3 sausage
- 3. Which country has a comparative advantage in computers? How about sausage? UK/Canada
- 4. For both countries to benefit from trade, how many sausages can be traded for each computer? 1 comp for ___2__ sausage (any number between 3 and 1)

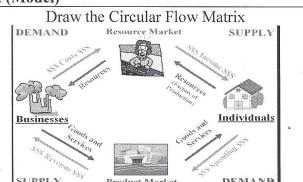
Circular Flow Matrix (Model)

Product Market- Places where individuals buy goods and services from businesses

Factor (Resource) Market- Places where businesses buy the factors (land, labor, capital) from individuals

Factor Payments- Payments made by businesses. Rent for land, wages for labor, interest for capital

Transfer Payments- Payments made by the government to meet a specific goal rather than pay for goods and services (ex: welfare)



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Demand	Supply		
The Law of Demand:	Supply The Law of Supply:		
Inverse relationship between price P↑ Qd ↓	The Law of Supply: Direct relationship between price P↑ Qs _↑		
and quantity demanded P \ Qd	and quantity supplied $P\downarrow Qs \downarrow $		
What is the different between a change in qu	uantity demanded and a change in demand?		
A change in quantity demanded is movement along the	e curve due to a change in price. A change in demand		
is when the entire demand curve shifts left or right due			
	upply (Shifting the Curve)		
What changes demand? (5 Shifters of Demand)	What changes supply? (5 Shifters of Supply)		
1. Tastes and preferences	1. Prices/availability of inputs (resources)		
2. Number of consumers	2. Number of producers		
3. Price of related goods- Substitutes and complements	3. Technology		
4. Income	4. Government action: taxes & subsidies		
5. Future expectations	5. Expectations of future profit		
Substitutes: Price of A Demand for B	Normal Goods: Income ↑ Demand↑_		
Price of $A \downarrow Demand$ for $B _ \downarrow _$ Complements: Price of $A \uparrow Demand$ for $B \downarrow \bot$	Income ↓ Demand↓_ Inferior Goods: Income ↑ Demand↓_		
Price of A\Demand for B	Income \ Demand		
Equilibrium and Disequilibrium	Government Involvement		
Draw a shortage Draw a surplus			
PRICE S PRICE	designed to keep prices artificially low		
11102	When binding, ceilings go _below		
P2	equilibrium and result in a <u>shortage</u> .		
	Price Floor- Minimum legal price sellers		
Pe Pe	can sell a product		
	When binding, floors goabove_		
P1	equilibrium and result in a <u>surplus</u> .		
	Subsidy- Government payment to		
Qs Qe Qd Quantity Qd Qe Qs	producers designed to encourage them to produce more		
	i i		
Supply and Demand Practice	Double Shift Practice If demand increases AND supply increases		
Demand Decrease Pl Demand Increase Pl	then price _indeterminate_ and quantity		
S Price _↓_ S	Price		
	Quantity 1 Price		
(dumin)	S S1		
DID			
	A B		
Supply Decrease Supply Increase			
P ₁ Suppry Decrease Suppry mercase P ₁			
Price _↑_ S	Price D D1		
Quantity _ _	Quantity 1		
	Quantity Double Shift Rule: If TWO curves shift		
	at the same time, EITHER price or		
D VD			
Q	quantity will be indeterminate.		

Consumer Price Index (CPI) What is the CPI?

CPI is an index number that shows how prices change over time for a fixed basket of consumer goods Consumer Price Index (CPI) Equation-

CPI = Price of market basket

Price of market
basket in base year

CPI Practice

- 1. Assume the value of a market basket for a given year is \$550 and the same basket in the base year was \$500. Calculate the CPI. CPI = 110
- 2. If the CPI for a given year is 90 then the change in prices between that year and the base year is $_-10\%$
- 3. Fill in the blanks in the chart below. Start with 2009 as the base year then recalculate with 2010 as the base year.

Year	Market Basket	Base Year 2009	Base Year 2010
2009	\$20	100	50
2010	\$40	200	100
2011	\$50	250	125

Helped or Hurt by Unanticipated Inflation

Assume expected inflation is 2% but actual inflation turns out to be 5%. Who is helped and hurt by inflation?

Helped	Hurt	
-Borrowers	-Lenders	
	-Savers	
	-People on fixed	
	incomes	

Three Causes of Inflation

- 1. The Government prints money to pay citizens and pay off debts (see the Quantity Theory of money) Usually causes hyperinflation. Examples: Germany after WWI, Zimbabwe in 2008.
- 2. Demand-Pull Inflation- An overheated economy with excessive spending but same amount of goods.
 3. Cost-Push Inflation- The result of a "negative supply shock" that increases the costs of production and forces producers to increase prices. Example: A significant increase in the price of oil would lead to higher costs for firms and higher prices.

GDP Deflator

What is the GDP Deflator?

The deflator is an index number that measures all prices and is used to convert nominal GDP into real GDP Deflator Equation-

 $\frac{\text{GDP}}{\text{Deflator}} = \frac{\text{Nominal GDP}}{\text{Real GDP}} \times 100$

GDP Deflator Practice

- 1. The Nominal GDP is \$100 billion and the Real GDP is \$80 billion. Calculate the GDP deflator.
 - 125 (prices are 25% higher since the base year)
- 2. The Real GDP is \$100 billion and the GDP deflator is 200. Calculate the Nominal GDP.

Nominal GDP =\$200 billion

3. The Real GDP is \$200 billion and the GDP deflator is 120. Calculate the Nominal GDP.

Nominal GDP = \$240 billion

4. The Nominal GDP is \$300 billion and the GDP deflator is 150. Calculate the Real GDP.

Real GDP = \$200 billion

5. The Nominal GDP is \$100 billion and the GDP deflator is 125. Calculate the Real GDP.
Real GDP = \$80 (same as question #1)

Key Terms

Define deflation-

A decrease in the general price level. The opposite of inflation

Define disinflation-

A decrease in the rate of inflation. Prices are going up, but not as fast as before

Define Velocity of Money-

The velocity of money is the average times a dollar is spent and re-spent in a specific period of time

Quantity Theory of Money

Quantity Theory of Money Equation:

M x V = P x Q

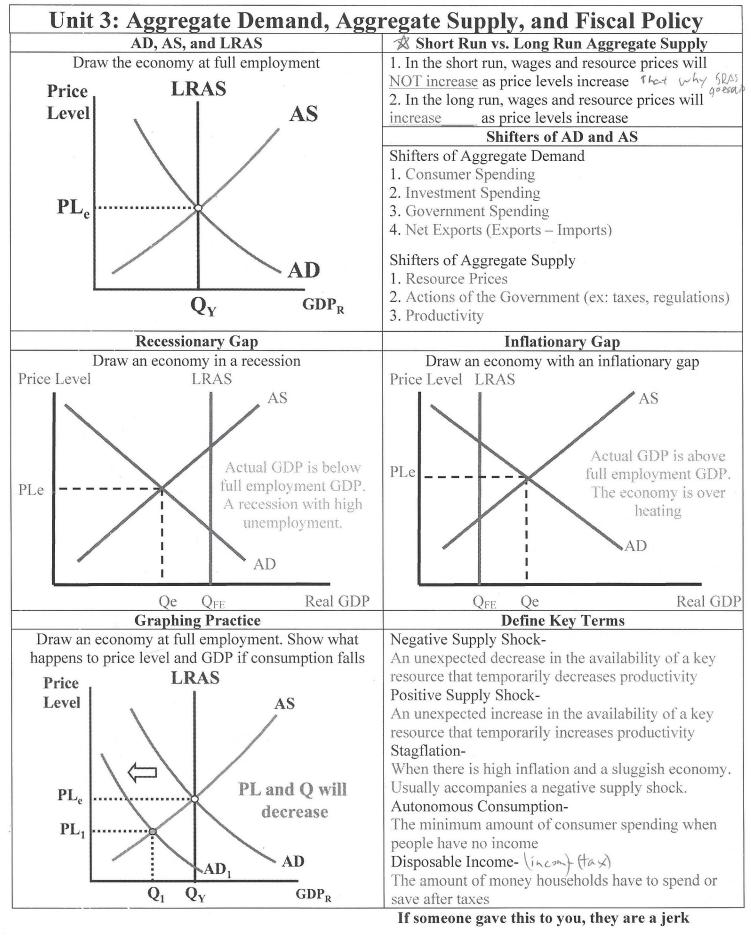
M = Money Supply P = Price Level
V = Velocity of Money Q = Quantity/Output

Assume the amount of money is \$5 and it is being used to buy 10 products with a price of \$2 each.

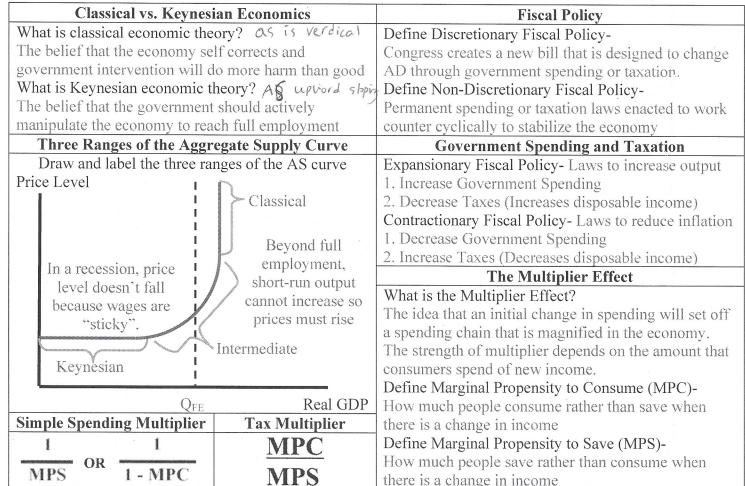
- 1. How much is the velocity of money? 4
- 2. If the velocity and output stay the same, what will happen if the amount of money increases to \$10?

 Price level will also double.

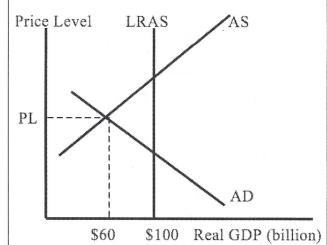
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Policy and Multiplier Practice



would increase interest rates and decrease investment

- 1. Is there a recessionary or inflationary gap? Recessionary
- 2. If the government does no policy and resource prices are flexible, in the long run wages will __fall__ and aggregate supply will increase
- 3. If fiscal policy is used to close they gap the government could <u>increase</u> spending or <u>decrease</u> taxes on consumers **Assume the MPC is .5:** (multiplier is 2)
- 4. What is the least amount of government spending that could potentially close the gap? \$20 billion
- 5. How much could the government cut taxes to close the gap? \$40 billion tax cut (consumers only spend half)

Now assume that the MPC is .8: (multiplier is 5)

6. What is the least amount of government spending that could potentially close the gap? \$8 billion

L	Problem with Fiscal Policy	Inflation
	1. Deficit Spending-if the government increases spending without	What happens
	increasing taxes they will increase the annual deficit and the national debt	when people
	2. Time Lags-Congress takes time to write, debate, pass, and implement	If people expe
	legislation	will seek high
	3. Crowding out- Government spending might cause unintended effects	for businesses
	that weaken the impact of the policy. Ex: deficit spending to increase AD	causes the ago

Inflationary Expectations

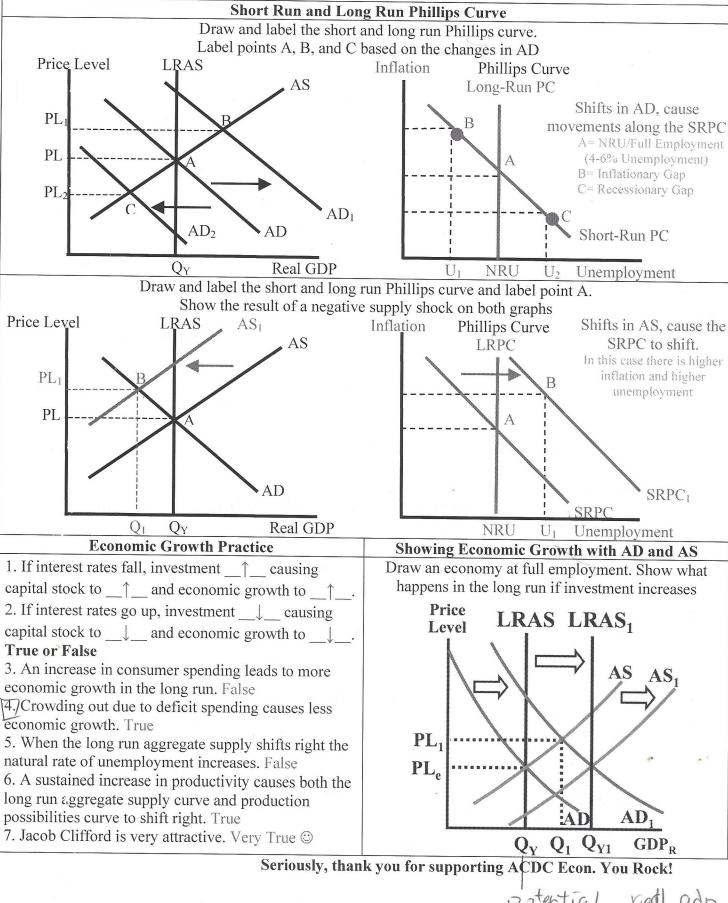
What happens to aggregate supply when people expect inflation?

If people expect inflation, workers will seek higher wages and costs for businesses will increase. This causes the aggregate supply to decrease

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10 17 11 01

1



potential rad gap



Unit 4: The Financial Sector, Money, and Monetary Policy

Define Key Terms

The Financial Sector-

The part of the economy made up of institutions (like banks) that focus on pairing lenders and borrowers

Assets-

Any item of economic value that can be converted into cash. Something owned

Liabilities-

A legal or financial obligation that must be paid back. Something owed

Liquidity-

The ease in which an asset can be converted into medium of exchange. Cash and money in checking accounts is very liquid. A car or a home is not

The Demand for Money

What is the transaction demand for money?

People demand money to make everyday purchases. This is not affected by the interest rate

What is the asset demand for money?

When people demand money as a liquid asset because they prefer it to other non-liquid assets like bonds
Interest rate \(\frac{1}{2} \), the quantity of money demanded \(\frac{1}{2} \)
Interest rate \(\frac{1}{2} \), the quantity of money demanded \(\frac{1}{2} \)

Shifters of Money Demand

- 1. Changes in price level- Inflation requires consumer to hold more cash for financial transactions.
- 2. Changes income- Sustained economic growth in the economy leads to a increase in the demand for money
- 3. Changes in taxation that affects personal investment- Government policies such as changing the capital gains tax would change the demand for money

The Three Functions of Money

- 1. A Medium of Exchange- Money can easily be used to buy goods and services. Don't have to barter
- 2. A Unit of Account-Money measures the value of goods and services and measures value
- 3. A Store of Value-Money allows you to store purchasing power for the future

Types of Money

1. Commodity Money

Something that performs the function of money and has an alternative use (ex: mackerel in prison)

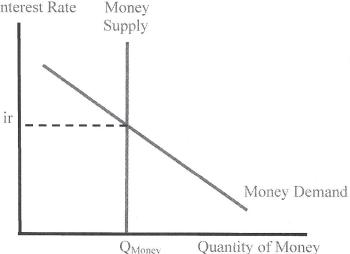
2. Fiat Money

Something used for exchange but has no other important use (ex: \$20 dollar bill)

The Money Market Graph

Draw the demand and supply of money and label the equilibrium nominal interest rate

Nominal
Interest Rate Money



Shifters of Money Supply

- 1. Reserve ratio-the the percent of deposits that banks must hold in reserve (the % they can NOT loan out)
- -To increase money supply, decrease the reserve ratio
- -To decrease money supply, increase the reserve ratio
- 2. Discount Rate- the interest rate that the FED charges commercial banks
- -To increase money supply, decrease the discount rate
- -To decrease money supply, increase the discount rate
- 3. Open Market Operations- when the FED buys or sells government bonds (securities)
- -To increase money supply, the FED buys bonds
- -To decrease money supply, the FED sells bonds

Money Market Practice

- 1. Unexpected inflation causes the demand for money to increase and the interest rate to increase.
- 2. If the supply of money increased, the interest rate will __decrease__ and investment will __increase

True or False

- 3. When the interest rate is high, the opportunity cost of holding money increases so the quantity of money demanded will decrease. True
- 4. The money supply includes all assets like cash, demand deposits, bonds, and real estate. False
- 5. Monetary policy is when the central banks changes the interest rates by changing the money supply True

The Federal Reserve (The Fed) Money Multiplier Equation What is the Federal Reserve (The Fed)			
What is the Federal Reserve and what does it do?		1	
The Fed is the central bank of the United States and	it regulates commercial	1	
banks and adjusts the money supply to adjust interes	t rates to meet economic	Reserve	
goals. This is called Monetary Policy.		Requirement	
Money Multiplier Practice		r Practice	
1. Assume the reserve requirement is .10. If the Fed	1. If the FED increases the	reserve requirement the	
buys \$10 billion worth of bonds the money supply will increase by \$100 billion.	money supply will	and interest rates	
will <u>increase</u> by <u>\$100</u> billion. 2. Assume the reserve requirement is .20. If the Fed	2 If the EED colled and 1 11		
sells \$10 billion worth of bonds the money supply	interest rates, and investment		
will decrease by \$_\$50 billion.	3. If the FED decreases the	e reserve requirement the	
3. Assume the reserve requirement is .10. If the Fed	money supply willa		
buys \$5 billion worth of bonds the money supply	4. If the FED decreases the	discount rate, the money	
will increase by \$50 billion.	supply will^ and ir	nterest rates .	
4. Assume the reserve requirement is .50. If the Fed	5. If the FED buys bonds the	ne money supply will	
sells \$5 billion worth of bonds the money supply	interest rates, and	investment ↑	
will decrease by \$10 billion.		Funds Rate	
5. Assume the reserve requirement is .25. If the Fed	Federal Funds Rate- The fe	ederal funds rate is the interest	
sells \$2 billion worth of bonds the money supply will decrease by \$8 billion.	rate that banks charge each	other for loans. The Fed uses	
will decrease by \$8 billion.	open market operations to l	nit this target rate.	
Bonds	Interest Rates and Inflation		
What is maturity?	1. If the nominal interest	rate is 7% and expected	
A borrower issues a bond that must be paid back by a	inflation is 3%, what is the real interest rate? 4%		
certain amount of time. That time is its maturity. A	2. If the real interest rate is -2% and the nominal		
bond can be sold early at an agreed upon price. If the interest rate increases, bond prices will	interest rate was 3%, what was the inflation rate? 5%		
If the interest rate decreases, bond prices will	Real interest rate = nominal rate - expected inflation Nominal interest rate = real rate + expected inflation		
	alance Sheets	ear rate + expected inflation	
Define Fractional Reserve Banking-	Define Demand Deposits	2.	
Process where banks hold a portion of deposits in	Bank deposits that can be withdrawn at any time (ex:		
reserve and loan the rest of the money out	checking accounts)		
Define Excess Reserves-	Define Owner's Fauity-		
The amount banks are legally free to loan out. Excess	The amount of money owners have put into a		
reserves and required reserves make up total reserves	company or bank. It doesn't need to be held in reserve		
1. If the reserve requirement is .1 (or 10%) how	Use the bank balance sheet to answer the questions		
much is this bank's required reserves and excess	Assets	Liabilities	
reserves? Req =\$2,000 Excess = \$3,000 2. What is the maximum possible increase in the	oans \$15,000	Demand Deposits \$20,000	
money supply if the bank loaned out all its		Owner's Equity \$10,000	
excess reserves? $$30,000 ($3,000 \times 10)$	reasury Bonds \$10,000		
3. Assume a customer deposits \$5,000 into this	Total \$30,000 Total \$30,000		
bank, what is the initial change in the money	5. Assume a customer withdraws \$15,000. Identify three		
supply? There is no initial change or	options this bank has to avoid defaulting other than asking		
4. If the \$5,000 deposit is placed in reserve, how	borrows to pay back loans.		
much is demand deposits and excess reserves?	They can sell treasury bonds, borrow money from the Fed,		
Demand deposits=\$25,000 Excess = \$7,500 or	borrow money from another	bank	

If your friend gave you this packet, they are a jerk...and a thief. Don't be their friend

Please don't post online. Thank you for supporting ACDC Econ Monetary Policy and AD/AS Draw and label both graphs and show the economy in a recession. Use the money market graph to show how the FED closes the recessionary gap using monetary policy Interest Rate Money Market Price Level AD and AS S_{M} LRAS ir AD_1 ir Q_{M1} Quantity of Money Q_{FE} Real GDP Use arrows to explain the process: $S_M \uparrow \to ir \downarrow \to I \uparrow$ and $C \uparrow \to AD \uparrow \to Full$ Employment Draw and label both graphs and show the economy with an inflationary gap. Use the money market graph to show how the FED closes the inflationary gap using monetary policy Interest Rate Money Market Price Level AD and AS S_{M} LRAS D_{M} AD Q_{MI} Q_{M} Quantity of Money Q_{FE} Qe Real GDP Use arrows to explain the process: $S_M \downarrow \to ir \uparrow \to I \downarrow$ and $C \downarrow \to AD \downarrow \to Full$ Employment The Loanable Funds Market Draw the loanable funds market and label the Shifters of Demand for Loanable Funds equilibrium real interest rate 1. Changes in perceived business opportunities Real 2. Changes in government borrowing Interest Shifters of Supply for Loanable Funds Rate 1. Changes in private savings behavior 2. Changes in public savings 3. Changes in foreign personal investment ire 4. Changes in expected profitability **Loanable Funds Practice** 1. What happens to the real interest rate if the government runs a deficit? Demand increases so interest rate increase 2. If lenders decide to lend less, real interest rates

, investment __↓___, and economic growth__↓

Quantity of Loans

Seriously, Thank you!

3. An increase in savings would cause real interest rates to

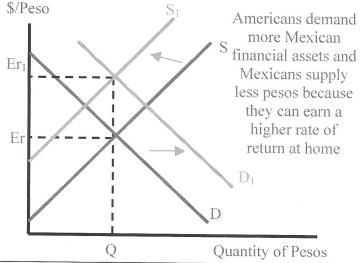
, investment _______, and economic growth __________

Unit 5: International Trade Key Terms Balance of Payments Exports- the sale of goods and service created by What is the Balance of Payments? domestic producers and sold to foreigners Summary of all international transactions within a Imports- the purchase of goods and service created by given year prepared in the domestic country's foreigners currency. It has two accounts, the current account and Net Exports (X_N) - Exports – Imports. The difference the financial account. between a nation's exports of goods and services and What is the Current Account? its imports of goods and services Measures the international trade in goods and services. Trade Deficit- Exporting less than is imported investment income, and net transfer payments. (aka.trade gap) What is the Financial Account? Trade Surplus-Exporting more than is imported. China Measures the international trade of financial assets has a huge trade surplus with the US. like stocks, bonds, and real estate. **Interest Rates and Capital Flows Balance of Payments Practice** Net Capital Flow-Identify if the example would be included in the The difference between the amount of money coming current account or the financial account for the US into a country to buy domestic assets and the amount 1. A US company sells ten jets in Canada Current of money leaving a country to buy foreign assets. 2. An American company buys a beach resort in What is the difference between capital inflows and Mexico Financial capital outflows? 3. A Chinese company sells toys in the US Current Inflows looks at money coming into the country to 4. An American on vacation buys Japanese buy domestic assets and outflows looks at money government bonds Financial 5. An immigrant living in the US sends his earning to going out of the country to buy foreign assets Interest rate \(\frac{1}{2}\), the capital inflows his family overseas Current (called remittance) Interest rate ↓, the capital inflows __↓__ 6. An American company produces and sells cars in Interest rate \(\frac{1}{2}\), the capital outflows \(_\frac{1}{2}\) the US Neither Interest rate ↓, the capital outflows 7. An Italian tourists buys souvenirs in the US Current The Foreign Exchange Market **Currency Valuation** Draw the foreign exchange market for US dollars (\$) Define Appreciationrelative to Japanese Yen (¥) The increase of value of a country's currency relative ¥/\$ to a foreign currency SI Define Depreciation-The decrease of value of a country's currency relative to a foreign currency **FOREX Shifters** Er 1. Changes in Tastes-Americans supply Ex: British tourists flock to the U.S. more dollars to get Er 2. Changes in Relative Incomes (Resulting in more yen. The dollar imports)- Ex: US growth increase US incomes depreciates 3. Changes in Relative Price Level (Resulting in more imports)- Ex: US prices increase relative to Britain Quantity of Dollars 4. Changes in relative Interest Rates- Ex: If the US has Show on the graph what happens to the value of the a higher interest rate than Britain. dollar if American want more Japanese products

If your friend gave this to you, they are a jerk

Interest Rates and Foreign Exchange

Draw the foreign exchange market for Mexican Pesos. Show what happens to the value of pesos relative to the US dollar if interest rates in Mexico increase



Foreign Exchange and Net Exports

If a country's currency appreciates, net exports _______ If a country's currency depreciates, net exports _______ 1. The US dollar will appreciate relative to another currency if demand for the dollar <u>increases</u> or if supply <u>decreases</u>. This will cause US exports to <u>decrease</u> and imports to <u>increase</u>.

2. The US dollar will depreciate relative to another currency if demand for the dollar <u>decreases</u> or if supply <u>increases</u>. This will cause US exports to <u>increase</u> and imports to <u>decrease</u>.

Appreciation and Depreciation Practice

- 1. If American tourists increase visits to Japan, the supply of US dollars will <u>increase</u> and the demand for Japanese yen will <u>increase</u>. The dollar will <u>depreciate</u> and the yen will <u>appreciate</u>.
- 2. If the US government significantly decreases personal income taxes, the dollar will depreciate and the yen will appreciate
- 3. If inflation in the Japan rises significantly faster than in the US, the dollar will appreciate and the yen will depreciate
- 4. If Japan has a large budget deficit that increases Japanese interest rates, the dollar will depreciate and the yen will appreciate
- 5. If Japan places high tariffs on all US imports, the dollar will depreciate and the yen will appreciate
- 6. The US suffers a larger recession the dollar will appreciate and the yen will depreciate

Exchange Rate Regimes

What are floating exchange rates?

The value of a currency can fluctuate according to the market and is not manipulated by the government What are fixed exchange rates?

When the value of a currency is manipulated by the government to keep it at a specific level

How does a government fix, or peg, its exchange rate? If the government wants to keep their currency depreciated to promote trade, they buy other currencies to increase the supply of their currency

Congratulation! You are done with macroeconomics