Macroeconomics and Microeconomics

Ultimate Review Packet

Created by Jacob Clifford

Thank you for watching my YouTube videos and for supporting ACDC Econ by purchasing this review packet. Please keep in mind that the videos and packet are not designed to replace your teacher/professor or textbook, but I guarantee that watching the videos and filling out this packet will improve your understanding of economics and your grade. As you go through each unit, make sure to pause the videos often and define the key terms, draw the graphs, and do the practice questions.

As a personal favor to me, please do not post this online or give it away to your friends. If someone gave this to you, punch them in the gut and tell them, "Clifford is awesome and he's trying to help people learn economics. You are a jerk if you give his stuff away for free!" Then spit on them.

Again, thank you so much for your support. Good luck!

Link to Secret AP Exam Review Session
https://www.youtube.com/watch?v=6Mgk2iAN2y0

Macroeconomics Concepts and Videos

Unit 1: Basic Economic Concepts

UNIT 1 Overview- Introduction
- ☐ Scarcity
- ☐ Microeconomics vs. Macroeconomics
- ☐ Positive vs. Normative Economics
- ☐ Self-Interest and Incentives
- ☐ Marginal Analysis
- ☐ Opportunity Cost and Trade-offs
- ☐ Four Factors of Production
- ☐ Capital Goods and Future Growth

VIDEO 1.1- Production Possibilities Curve
- ☐ Efficiency
- ☐ Straight vs. Bowed PPC
- ☐ Law of Increasing Opportunity Costs

VIDEO 1.2- Shifting the PPC
- ☐ Shifters of the PPC

VIDEOS 1.3/1.4- Specialization and Trade
- ☐ Absolute and Comparative Advantage
- ☐ Terms of Trade

VIDEO 1.5- Comparative Advantage
- ☐ Output and Input Questions

VIDEO 1.6- Economic Systems
- ☐ Free-Market Economy
- ☐ Centrally Planned Economy

VIDEO 1.7- Circular Flow Model
- ☐ Product and Factor Markets
- ☐ Private and Public Sector
- ☐ Factor Payments
- ☐ Transfer Payments

VIDEO 2.1- Demand
- ☐ Law of Demand
- ☐ 5 Shifters (Determinants) of Demand
- ☐ Substitutes and Complements
- ☐ Normal Goods vs. Inferior Goods

VIDEO 2.2- Supply and Equilibrium
- ☐ Law of Supply
- ☐ 6 Shifters (Determinants) of Supply

VIDEO 2.3/2.4- Shifting Demand and Supply
- ☐ Equilibrium Price and Equilibrium Quantity
- ☐ Disequilibrium: Surplus and Shortage

VIDEO 2.5- Double Shifts
- ☐ Double Shift Rule

VIDEO 2.6- Price Controls and Efficiency
- ☐ Price Floors and Ceilings

Unit 2: Macro Measures

VIDEO 2.1/2.2- Gross Domestic Product (GDP)
- ☐ National Income Accounting
- ☐ Percent change in GDP and GDP per Capita
- ☐ Investment
- ☐ Intermediate Goods
- ☐ Household production
- ☐ Income Approach and Factor Payments
- ☐ Expenditures Approach (C+I+G+Xn)
- ☐ Nominal vs. Real GDP

VIDEO 2.3- Measuring Unemployment
- ☐ Labor force and Unemployment rate
- ☐ Frictional Unemployment
- ☐ Structural Unemployment
- ☐ Cyclical Unemployment
- ☐ Natural Rate of Unemployment (NRU)
- ☐ Full Employment Output
- ☐ Discouraged Workers
- ☐ Underemployed Workers

VIDEO 2.4- Inflation
- ☐ Purchasing power
- ☐ Inflation, Deflation, and Disinflation
- ☐ Helped vs. hurt by unanticipated
- ☐ Demand Pull and Cost Push Inflation
- ☐ Quantity Theory of Money
- ☐ Velocity of Money

VIDEO 2.5- Measuring Inflation
- ☐ Consumer Price Index (CPI)

VIDEO 2.6- GDP Deflator Practice
- ☐ GDP Deflator

VIDEO 2.7- The Business Cycle
- ☐ Four Phases of the Business Cycle

Unit 3: AD, AS, Fiscal Policy, and Growth

VIDEO 3.1- Aggregate Demand
- ☐ Aggregates and Price Level
- ☐ Wealth, Interest Rate, Foreign Trade Effects
- ☐ Shifter of Aggregate Demand

VIDEO 3.2- Aggregate Supply
- ☐ Shifters of Aggregate Supply
- ☐ Productivity

VIDEO 3.3- AD/AS in Short and Long-Run
- ☐ Long-Run Aggregate Supply (LRAS)
- ☐ Recessionary Gap
- ☐ Inflationary Gap

VIDEO 3.4- The Phillips Curve
- ☐ Inflation and Unemployment
- ☐ Long-Run Phillips Curve
- ☐ Connect to AD/AS Model

VIDEO 3.5- Graphing Practice
- ☐ Graphing Recessionary and Inflationary Gaps

VIDEO 3.6- Cost Push and Demand Pull Inflation
- ☐ Negative and Positive Supply Shocks
- ☐ Stagflation

VIDEO 3.7-Fiscal Policy
- ☐ Discretionary vs. Non-Discretionary
- ☐ Expansionary vs. Contractionary
- ☐ Autonomous Consumption
- ☐ Disposable Income and Dissaving

VIDEO 3.8- Keynesian vs. Classical Economics
- ☐ John Maynard Keynes
- ☐ Sticky Wages and Deficit Spending
- ☐ Three Ranges of Aggregate Supply

VIDEO 3.9/3.10/3.11/3.12- The Multiplier Effect
- ☐ Marginal Propensity to Consumer (MPC)
- ☐ Marginal Propensity to Save (MPS)
- ☐ Simple Spending Multiplier
- ☐ Tax multiplier

VIDEO 3.13- Problems with Fiscal Policy
- ☐ Deficit Spending and the National Debt
- ☐ Time Lags
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- ☐ Net Export Effect
- ☐ Inflationary Expectations

VIDEO 3.14- Economic Growth
- ☐ Long-Run Adjustments
- ☐ Economic Growth
- ☐ Capital Stock

Unit 4: Money, Banking, and Monetary Policy

VIDEO 4.1- The Financial Sector
- ☐ Financial Sector, Assets, Liabilities

VIDEO 4.2- The Functions of Money
- ☐ Barter System and Coincidence of Wants
- ☐ Commodity vs. Fiat Money
- ☐ Exchange, Unit of Account, Store of Value

VIDEO 4.3- Time Value of Money
- ☐ Time Value of Money

VIDEO 4.4- Nominal vs. Real Interest Rates
- ☐ Nominal and Real Interest Rates
- ☐ Maturity and Bond Prices

VIDEO 4.5- The Federal Reserve (FED)
- ☐ The Role of the Central Bank
- ☐ Expansionary Monetary Policy
- ☐ Contractionary Monetary Policy

VIDEO 4.6/4.7- The Money Market
- ☐ Liquidity
- ☐ Asset Demand and Transaction Demand
- ☐ Demand and Supply of Money
- ☐ Shifters of Money Supply

VIDEO 4.8- Money Creation
- ☐ The Money Multiplier
- ☐ Fractional Reserve Banking
- ☐ Required Reserves and Excess Reserves
- ☐ Discount Rate and Open Market Operations
- ☐ Federal Funds Rate

VIDEO 4.9/4.10/4.11/4.12- Monetary Policy
- ☐ Graphing Monetary Policy

VIDEO 4.13- Bank Balance Sheets
- ☐ Balance Sheets With Assets and Liabilities
- ☐ Demand Deposits and Owners Equity

VIDEO 4.14- Loanable Funds Market
- ☐ Loanable Funds Shifters
- ☐ Crowding Out and Investment

Unit 5: Trade and Foreign Exchange

VIDEO 5.1- Balance of Payments
- ☐ Current Account and Financial Account
- ☐ Balance of Trade- Trade Surplus and Deficit
- ☐ Foreign Direct Investment
- ☐ Net Capital Outflow

VIDEO 5.2/5.3- Foreign Exchange (FOREX)
- ☐ Exchange Rates
- ☐ Appreciation vs. Depreciation
- ☐ Shifters of Currency Demand and Supply
- ☐ Effect on Net Exports

VIDEO 5.4- Exchange Rate Regimes
- ☐ Floating and Fixed Exchange Rates

Key Graphs

Production Possibilities Curve
Market Demand and Supply
Aggregate Demand and Supply and LRAS
The Philips Curve
The Money Market
Bank Balance Sheets
The Loanable Funds Market
Foreign Exchange (FOREX)

Macroeconomics Unit 1: Basic Economics Concepts

Key Terms- Define the following:

1. Scarcity

2. Consumer Goods vs. Capital Goods

3.Trade-offs

4. Opportunity Cost

3 Economic Systems

1. Centrally Planned Economies

2. Free-Market Economies (Capitalism)

3. Mixed Economies

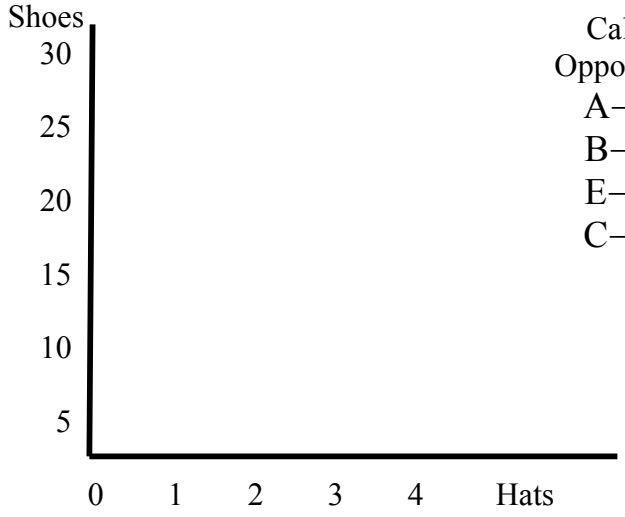
Production Possibilities Curve (Frontier)

Use the chart to create a PPC to the right.

	A	B	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



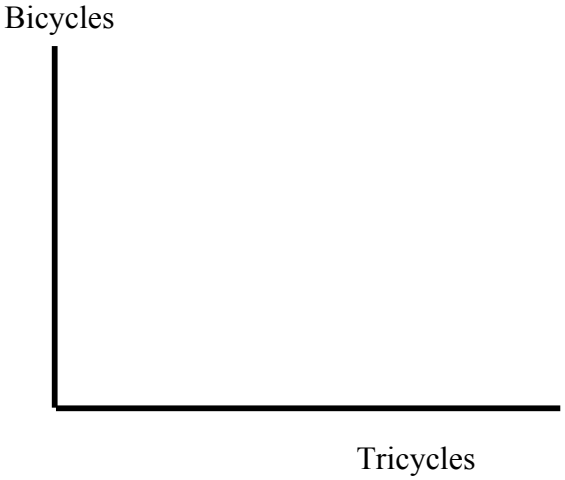
Calculate the Opportunity Cost:

A→B: _____
B→C: _____
E→D: _____
C→A: _____

Constant Opportunity Cost

Why does this occur?

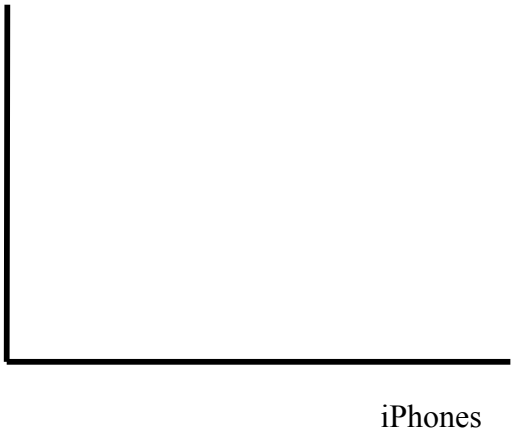
Draw the graph below



Increasing Opportunity Cost

Why does this occur?

Draw the graph below



Key Terms	**Shifting the PPC**
Define Investment- Define Capital Stock-	Identify the three shifters of the PPC

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

Scenario: Workers loose their jobs due to a recession	Scenario: Increase in consumer demand for pizza	Scenario: More resources that improve the production of cars
Pizza Cars	Pizza Cars	Pizza Cars

Absolute and Comparative Advantage

Output Questions

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
Mexico	50	100

1. Which country has an absolute advantage in sugar? How about cars?
2. What is Cuba's opportunity cost for producing one car?
3. Which country has a comparative advantage in cars? How about sugar?
4. For both countries to benefit from trade, how much sugar can be traded for each car? 1 Car for _____ Sugar

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	6
UK	10	10

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

Circular Flow Matrix (Model)

Product Market- Factor (Resource) Market- Factor Payments- Transfer Payments-	Draw the Circular Flow Matrix

Demand	**Supply**
The Law of Demand: P↑ Qd ___ P↓ Qd ___	The Law of Supply: P↑ Qs ___ P↓ Qs ___

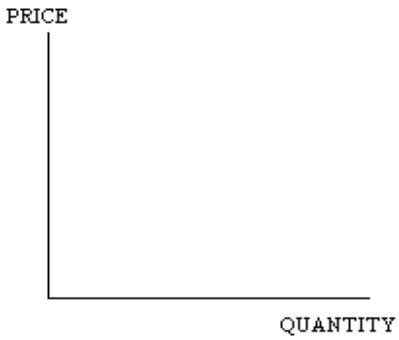
What is the different between a change in quantity demanded and a change in demand?

Changes in Demand and Supply (Shifting the Curve)

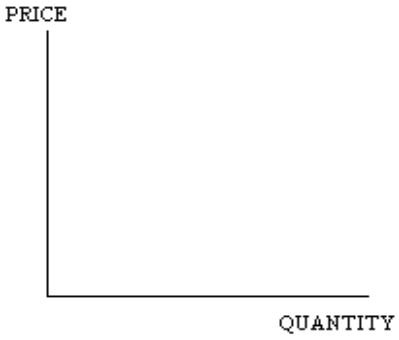
What changes demand? (5 Shifters of Demand)	What changes supply? (5 Shifters of Supply)
Substitutes: Price of A↑ Demand for B ___ Price of A↓ Demand for B ___ Complements: Price of A↑ Demand for B ___ Price of A↓ Demand for B ___	Normal Goods: Income ↑ Demand ____ Income ↓ Demand ____ Inferior Goods: Income ↑ Demand ____ Income ↓ Demand ____

Equilibrium and Disequilibrium

Draw a shortage



Draw a surplus



Government Involvement

Price Ceiling-

When binding, ceilings go _____ equilibrium and result in a _____

Price Floor-

When binding, floors go _____ equilibrium and result in a _____

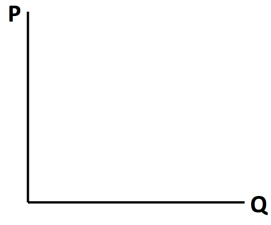
Subsidy-

Supply and Demand Practice

Demand Decrease

Price __
Quantity __

Demand Increase

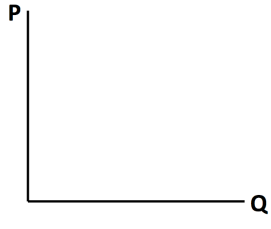


Price __
Quantity __

Supply Decrease

Price __
Quantity __

Supply Increase



Price __
Quantity __

Double Shift Practice

If demand increases AND supply increases then price _____ and quantity _____

Price

Quantity

Double Shift Rule:

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Unit 2: Macro Measures

Measuring Economic Growth

Definition of Gross Domestic Product (GDP)-

What is the expenditures approach?

GDP = ____ + ____ + ____ + ____

What is the income approach?

National Income = ____ + ____ +____ + ____

Define Nominal GDP-

Define Real GDP-

Three things not included in GDP:

1.

2.

3.

Business Cycle

Label peak, recession/contraction, trough, expansion

Real GDP

Measuring Unemployment

1. Frictional Unemployment:

2. Structural Unemployment

3. Cyclical Unemployment

Unemployment Rate Equation

Practice: True or False

1. Investment spending is spending on financial assets like stocks and bonds
2. Transfer payments are not counted in the calculation of GDP
3. If the nominal GDP increases then the economy is definitely experiencing inflation
4. An economy is not at full employment unless there is no unemployment
5. Countries that have generous unemployment benefits tend to have higher natural rates of unemployment
6. Lumberjacks are structurally unemployment when they are replaced by machines

Natural Rate on Unemployment (NRU)

What is the natural rate of unemployment?

Problems With Unemployment Rate

What are discouraged job seekers?

What are underemployed (part-time) workers?

If someone gave this to you, they are a jerk

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Consumer Price Index (CPI)

What is the CPI?

Consumer Price Index (CPI) Equation-

GDP Deflator

What is the GDP Deflator?

GDP Deflator Equation-

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.
2. If the CPI for a given year is 90 then the change in prices between that year and the base year is _____
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	
2010	$40		100
2011	$50		

GDP Deflator Practice

1. The Nominal GDP is $100 billion and the Real GDP is $80 billion. Calculate the GDP deflator.

2. The Real GDP is $100 billion and the GDP deflator is 200. Calculate the Nominal GDP.

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

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

5. The Nominal GDP is $100 billion and the GDP deflator is 125. Calculate the Real GDP.

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

Key Terms

Define deflation-

Define disinflation-

Define Velocity of Money-

Three Causes of Inflation

1.

2.

3.

Quantity Theory of Money

Quantity Theory of Money Equation:

_____ x_____=_____x_____

____= _____=
____= _____=

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?
2. If the velocity and output stay the same, what will happen if the amount of money increases to $10?

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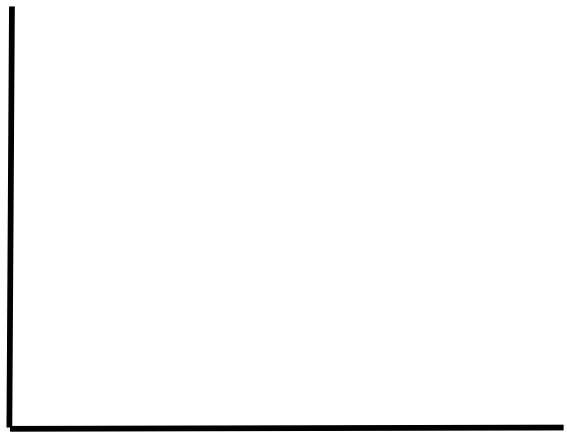
Unit 3: Aggregate Demand, Aggregate Supply, and Fiscal Policy

AD, AS, and LRAS

Draw the economy at full employment



Short Run vs. Long Run Aggregate Supply

1. In the short run, wages and resource prices will _____ as price levels increase
2. In the long run, wages and resource prices will _____ as price levels increase

Shifters of AD and AS

Shifters of Aggregate Demand

1.
2.
3.
4.

Shifters of Aggregate Supply

1.
2.
3.

Recessionary Gap

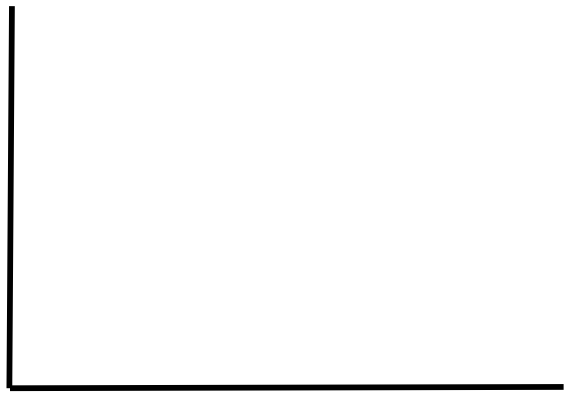
Draw an economy in a recession

Inflationary Gap

Draw an economy with an inflationary gap

Graphing Practice

Draw an economy at full employment. Show what happens to price level and GDP if consumption falls



Define Key Terms

Negative Supply Shock-

Positive Supply Shock-

Stagflation-

Autonomous Consumption-

Disposable Income-

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Classical vs. Keynesian Economics

What is classical economic theory?

What is Keynesian economic theory?

Fiscal Policy

Define Discretionary Fiscal Policy-

Define Non-Discretionary Fiscal Policy-

Three Ranges of the Aggregate Supply Curve

Draw and label the three ranges of the AS curve

Government Spending and Taxation

Expansionary Fiscal Policy-

Contractionary Fiscal Policy-

The Multiplier Effect

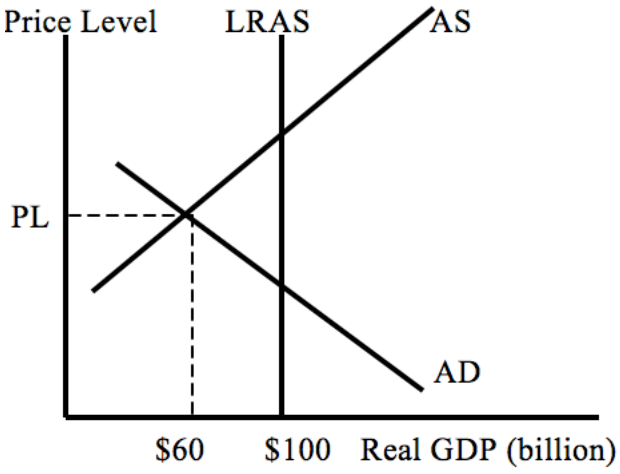
What is the Multiplier Effect?

Define Marginal Propensity to Consume (MPC)-

Define Marginal Propensity to Save (MPS)-

Simple Spending Multiplier	Tax Multiplier

Policy and Multiplier Practice



1. Is there a recessionary or inflationary gap?
2. If the government does no policy and resource prices are flexible, in the long run wages will _____ and aggregate supply will _____
3. If fiscal policy is used to close they gap the government could _____ spending or _____ taxes on consumers

Assume the MPC is .5:

4. What is the least amount of government spending that could potentially close the gap?
5. How much could the government cut taxes to close the gap?

Now assume that the MPC is .8:

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

Problem with Fiscal Policy

1. Deficit Spending-

2. Time Lags-

3. Crowding out-

Inflationary Expectations

What happens to aggregate supply when people expect inflation?

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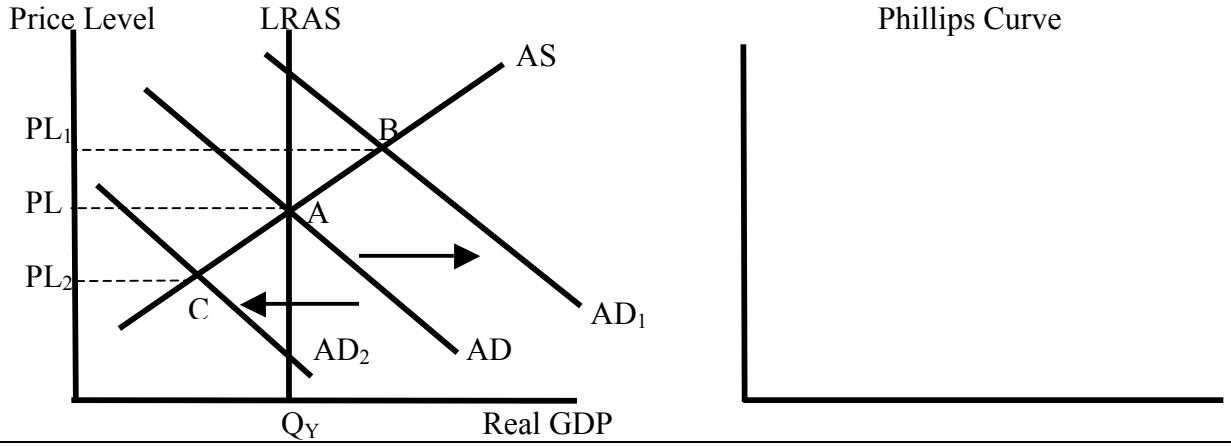
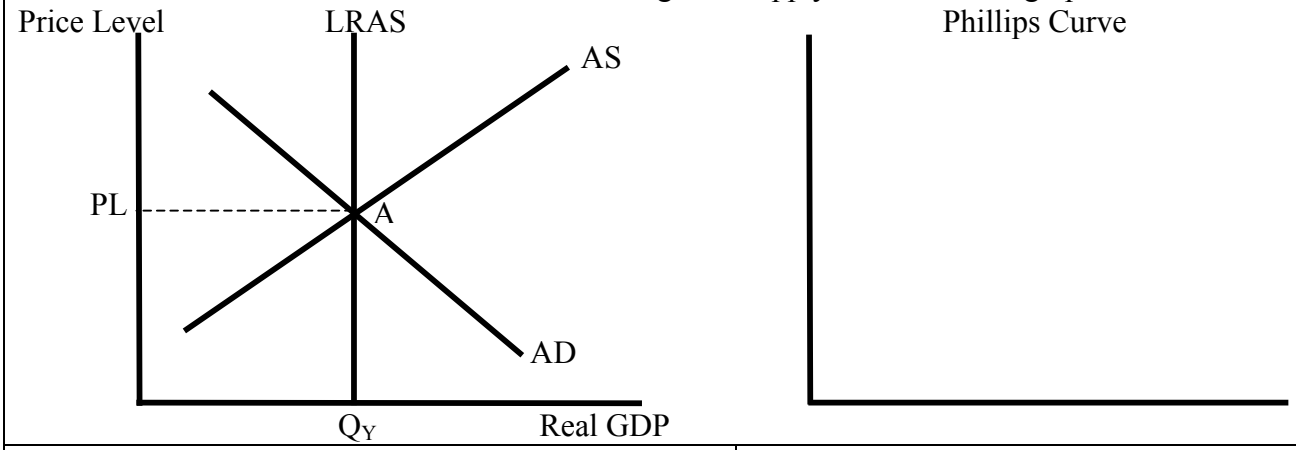
Short Run and Long Run Phillips Curve

Draw and label the short and long run Phillips curve.
Label points A, B, and C based on the changes in AD



Draw and label the short and long run Phillips curve and label point A.
Show the result of a negative supply shock on both graphs



Economic Growth Practice	Showing Economic Growth with AD and AS
1. If interest rates fall, investment _____ causing capital stock to ____ and economic growth to ____. 2. If interest rates go up, investment ____ causing capital stock to ____ and economic growth to ____. **True or False** 3. An increase in consumer spending leads to more economic growth in the long run. 4. Crowding out due to deficit spending causes less economic growth. 5. When the long run aggregate supply shifts right the natural rate of unemployment increases. 6. A sustained increase in productivity causes both the long run aggregate supply curve and production possibilities curve to shift right. 7. Jacob Clifford is very attractive.	Draw an economy at full employment. Show what happens in the long run if investment increases

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

Define Key Terms

The Financial Sector-

Assets-

Liabilities-

Liquidity-

The Three Functions of Money

1.

2.

3.

Types of Money

1. Commodity Money

2. Fiat Money

The Demand for Money

What is the transaction demand for money?

What is the asset demand for money?

Interest rate ↑, the quantity of money demanded ____
Interest rate ↓, the quantity of money demanded ____

Shifters of Money Demand

The Money Market Graph

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

Shifters of Money Supply

Money Market Practice

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

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.
4. The money supply includes all assets like cash, demand deposits, bonds, and real estate.
5. Monetary policy is when the central banks changes the interest rates by changing the money supply

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The Federal Reserve (The Fed)

What is the Federal Reserve and what does it do?

Money Multiplier Equation

Money Multiplier Practice

1. Assume the reserve requirement is .10. If the Fed buys $10 billion worth of bonds the money supply will _____by _____ billion.
2. Assume the reserve requirement is .20. If the Fed sells $10 billion worth of bonds the money supply will _____ by _____ billion.
3. Assume the reserve requirement is .10. If the Fed buys $5 billion worth of bonds the money supply will _____ by _____ billion.
4. Assume the reserve requirement is .50. If the Fed sells $5 billion worth of bonds the money supply will _____by _____ billion.
5. Assume the reserve requirement is .25. If the Fed sells $2 billion worth of bonds the money supply will _____ by _____ billion.

Shifter Practice

1. If the FED increases the reserve requirement the money supply will ____ and interest rates _____.
2. If the FED sells bonds the money supply will ____ interest rates ____, and investment _____.
3. If the FED decreases the reserve requirement the money supply will ____ and interest rates _____.
4. If the FED decreases the discount rate, the money supply will _____ and interest rates _____.
5. If the FED buys bonds the money supply will____ interest rates _____, and investment _____.

Federal Funds Rate

Federal Funds Rate-

Bonds

What is maturity?

If the interest rate increases, bond prices will ____
If the interest rate decreases, bond prices will ____

Interest Rates and Inflation

1. If the nominal interest rate is 7% and expected inflation is 3%, what is the real interest rate?
2. If the real interest rate is -2% and the nominal interest rate was 3%, what was the inflation rate?

Real interest rate =
Nominal interest rate =

Bank Balance Sheets

Define Fractional Reserve Banking-

Define Excess Reserves-

Define Demand Deposits-

Define Owner's Equity-

1. If the reserve requirement is .1 (or 10%) how much is this bank's required reserves and excess reserves?
2. What is the maximum possible increase in the money supply if the bank loaned out all its excess reserves?
3. Assume a customer deposits $5,000 into this bank, what is the initial change in the money supply?
4. If the $5,000 deposit is placed in reserve, how much is demand deposits and excess reserves?

Use the bank balance sheet to answer the questions

Assets		Liabilities	
Loans	**$15,000**	Demand Deposits	**$20,000**
Total Reserves	**$5,000**	Owner's Equity	**$10,000**
Treasury Bonds	**$10,000**		
Total	**$30,000**	Total	**$30,000**

5.Assume a customer withdraws $15,000. Identify three options this bank has to avoid defaulting other than asking borrows to pay back loans.

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

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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

Money Market

AD and AS

Use arrows to explain the process:

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

Money Market

AD and AS

Use arrows to explain the process:

The Loanable Funds Market

Draw the loanable funds market and label the equilibrium real interest rate

Shifters of Demand for Loanable Funds

Shifters of Supply for Loanable Funds

Loanable Funds Practice

1. What happens to the real interest rate if the government runs a deficit?
2. If lenders decide to lend less, real interest rates _____, investment _____, and economic growth _____
3. An increase in savings would cause real interest rates to _____, investment _____, and economic growth ____

Seriously, thank you!

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Unit 5: International Trade

Define Key Terms

Exports-

Imports-

Net Exports (X_N)-

Trade Deficit-

Trade Surplus-

Balance of Payments

What is the Balance of Payments?

What is the Current Account?

What is the Financial Account?

Interest Rates and Capital Flows

Net Capital Flow-

What is the difference between capital inflows and capital outflows?

Interest rate ↑, the capital inflows ____
Interest rate ↓, the capital inflows ____
Interest rate ↑, the capital outflows ____
Interest rate ↓, the capital outflows ____

Balance of Payments Practice

Identify if the example would be included in the current account or the financial account for the US

1. A US company sells ten jets in Canada
2. An American company buys a beach resort in Mexico
3. A Chinese company sells toys in the US
4. An American on vacation buys Japanese government bonds
5. An immigrant living in the US sends his earning to his family overseas
6. An American company produces and sells cars in the US
7. An Italian tourists buys souvenirs in the US

The Foreign Exchange Market

Draw the foreign exchange market for US dollars ($) relative to Japanese Yen (¥)

Show on the graph what happens to the value of the dollar if American want more Japanese products

Currency Valuation

Define Appreciation-

Define Depreciation-

FOREX Shifters

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Interest Rates and Foreign Exchange	Appreciation and Depreciation Practice
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 	1. If American tourists increase visits to Japan, the supply of US dollars will _____and the demand for Japanese yen will _____. The dollar will _____ and the yen will _____ 2. If the US government significantly decreases personal income taxes, the dollar will _____ and the yen will _____ 3. If inflation in the Japan rises significantly faster than in the US, the dollar will _____ and the yen will _____ 4. If Japan has a large budget deficit that increases Japanese interest rates, the dollar will _____ and the yen will _____ 5. If Japan places high tariffs on all US imports, the dollar will _____and the yen will _____ 6. The US suffers a larger recession the dollar will _____ and the yen will _____
Foreign Exchange and Net Exports	**Exchange Rate Regimes**
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 _____or if supply_____. This will cause US exports to _____ and imports to _____. 2. The US dollar will depreciate relative to another currency if demand for the dollar _____or if supply _____. This will cause US exports to _____ and imports to _____.	What are floating exchange rates? What are fixed exchange rates? How does a government fix, or peg, its exchange rate?

Congratulation! You are done with macroeconomics

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
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

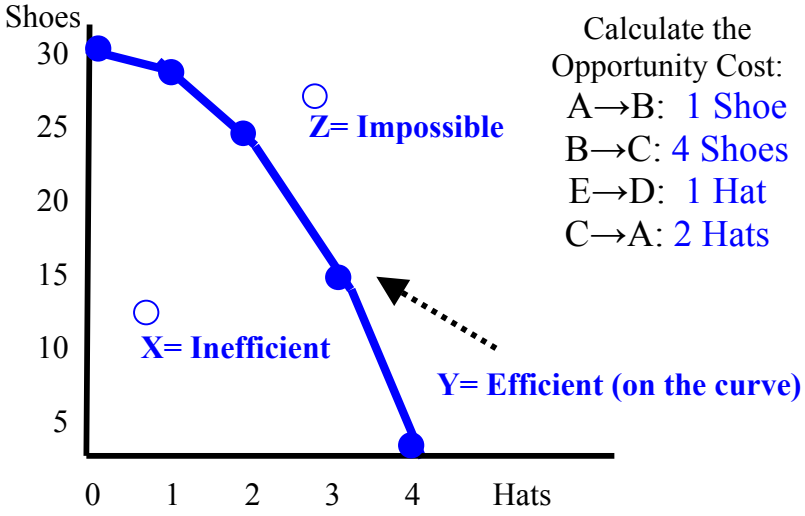
1. Centrally Planned Economies
Economic system where the government owns the resources and decides what to make, how to make it, and who gets it. Total government control of the economy
2. Free-Market Economies (Capitalism)
Economic system where individual citizens own the resources and decides what 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.

	A	B	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

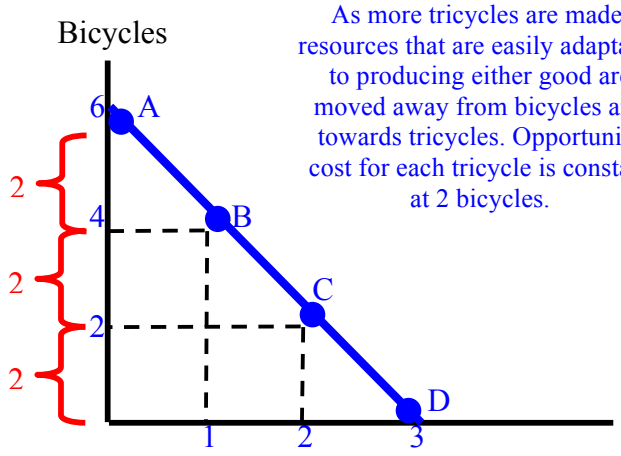


Calculate the Opportunity Cost:
A→B: 1 Shoe
B→C: 4 Shoes
E→D: 1 Hat
C→A: 2 Hats

Constant Opportunity Cost

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

Draw the graph below

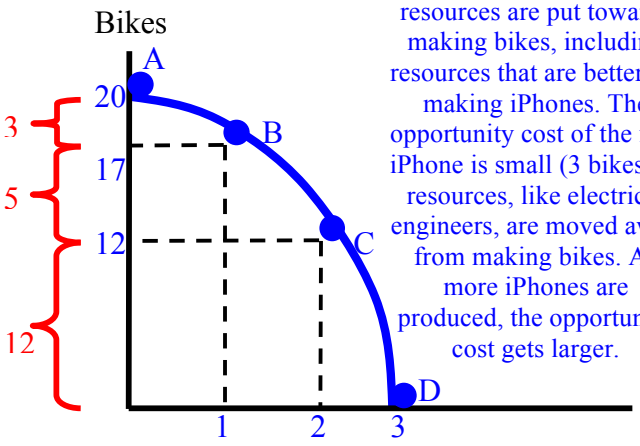


As more tricycles are made, resources that are easily adaptable to producing either good are moved away from bicycles and towards tricycles. Opportunity cost for each tricycle is constant at 2 bicycles.

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 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 cost gets larger.

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

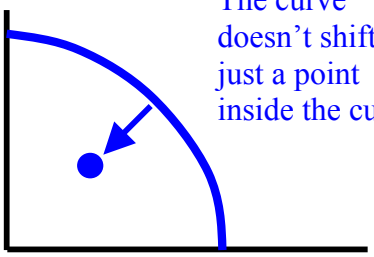
Shifting the PPC

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)

Scenario: Workers loose their jobs due to a recession

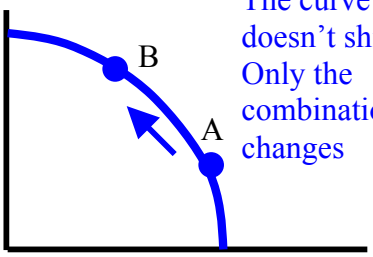
Pizza



The curve doesn't shift. It is just a point inside the curve

Scenario: Increase in consumer demand for pizza

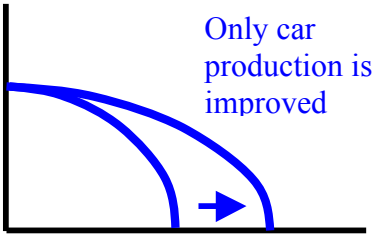
Pizza



The curve doesn't shift. Only the combination changes

Scenario: More resources that improve the production of cars

Pizza



Only car production is improved

Absolute and Comparative Advantage

Output Questions

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

	Sugar (tons)	Cars
Cuba	40 (1S costs ¼ Car)	10 (1C costs 4 Sugar)
Mexico	50 (1S costs 2 Cars)	100 (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 ___1___ Sugar (any number between 4 and ½)

Input Questions

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

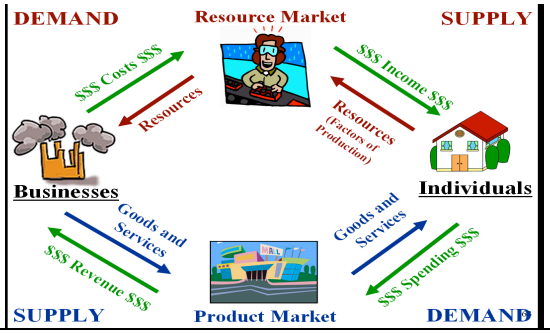
	Sausage	Computers
Canada	2 (1S costs 1/3 comp)	6 (1C costs 3 sausg)
UK	10 (1S costs 1 comp)	10 (1C costs 1 sausg)

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)

Draw the Circular Flow Matrix



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Demand

The Law of Demand:
Inverse relationship between price and quantity demanded

P↑ Qd __↓_
P↓ Qd __↑_

Supply

The Law of Supply:
Direct relationship between price and quantity supplied

P↑ Qs _↑__
P↓ Qs _↓__

What is the different between a change in quantity demanded and a change in demand?

A change in quantity demanded is movement along the curve due to a change in price. A change in demand is when the entire demand curve shifts left or right due to a change in one of the shifters

Changes in Demand and Supply (Shifting the Curve)

What changes demand? (5 Shifters of Demand)

1. Tastes and preferences
2. Number of consumers
3. Price of related goods- Substitutes and complements
4. Income
5. Future expectations

What changes supply? (5 Shifters of Supply)

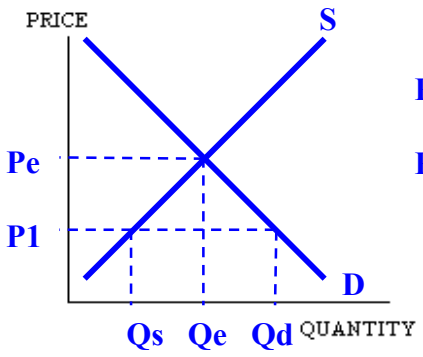
1. Prices/availability of inputs (resources)
2. Number of producers
3. Technology
4. Government action: taxes & subsidies
5. Expectations of future profit

Substitutes: Price of A↑ Demand for B __↑_
Price of A↓ Demand for B __↓_
Complements: Price of A↑ Demand for B __↓_
Price of A↓ Demand for B __↑_

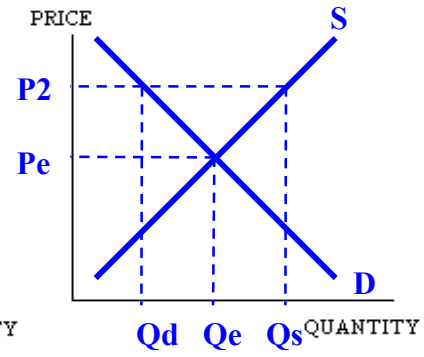
Normal Goods: Income ↑ Demand ___↑_
Income ↓ Demand ___↓_
Inferior Goods: Income ↑ Demand ___↓_
Income ↓ Demand ___↑_

Equilibrium and Disequilibrium

Draw a shortage



Draw a surplus

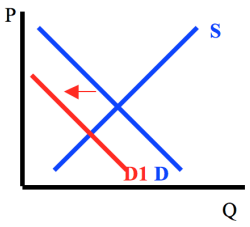


Government Involvement

Price Ceiling- Legal cap on prices designed to keep prices artificially low
When binding, ceilings go _below__ equilibrium and result in a shortage.
Price Floor- Minimum legal price sellers can sell a product
When binding, floors go __above_ equilibrium and result in a surplus.
Subsidy- Government payment to producers designed to encourage them to produce more

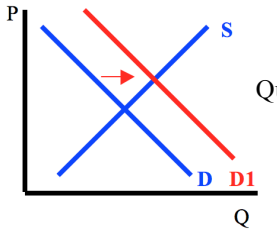
Supply and Demand Practice

Demand Decrease



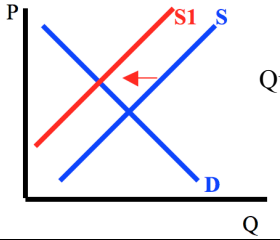
Price _↓_
Quantity _↓_

Demand Increase



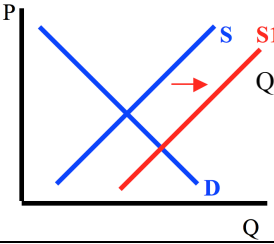
Price _↑_
Quantity _↑_

Supply Decrease



Price _↑_
Quantity _↓_

Supply Increase

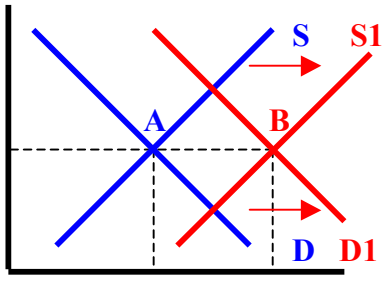


Price _↓_
Quantity _↑_

Double Shift Practice

If demand increases AND supply increases then price _indeterminate_ and quantity __increases__

Price



Quantity

Double Shift Rule: If TWO curves shift at the same time, EITHER price or quantity will be indeterminate.

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Unit 2: Macro Measures

Measuring Economic Growth

Definition of Gross Domestic Product (GDP)-
The dollar value of all final goods and services produced within a country's borders in one year.

What is the expenditures approach?
The expenditure approach adds up all the spending done in the economy by households, businesses, the government, and other countries.

GDP = __C__+__ I__ +__G_+__(X-M)__

What is the income approach?
The income approach adds up all the income earned in the economy including wages, rent, interest, and profit

National Income = __W_ +__ R__+_i__ + _PR__

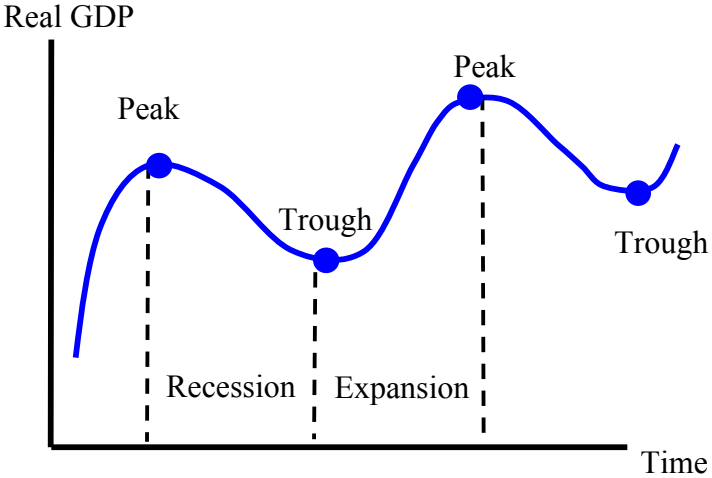
Define Nominal GDP-
GDP measured in current prices. It does not account for inflation from year to year.

Define Real GDP-
GDP adjusted for inflation and expressed in constant, or unchanging, dollars

Three things not included in GDP:
1. Intermediate goods- GDP includes only final goods (ex: price of finished car, not the radio, tires, etc.)
2. Non-production transactions including used goods or financial transactions. (ex: stocks, real estate, social security)
3. Non-market Activities- (ex: illegal production or labor)

Business Cycle

Label peak, recession/contraction, trough, expansion



Measuring Unemployment

1. Frictional Unemployment:
Temporarily unemployed or being between jobs. Individuals are qualified workers with transferable skills but they aren't working.

2. Structural Unemployment
Changes in the structure of the labor force make some skills obsolete. Workers DO NOT have transferable skills and these jobs will never come back.

3. Cyclical Unemployment
Unemployment that results from economic downturns (recessions). As demand for goods and services falls, demand for labor falls and workers are fired.

Unemployment Rate Equation

$$\text{Unemployment rate} = \frac{\#\text{ unemployed}}{\#\text{ in labor force}} \times 100$$

Practice: True or False

1. Investment spending is spending on financial assets like stocks and bonds False
2. Transfer payments are not counted in the calculation of GDP True
3. If the nominal GDP increases then the economy is definitely experiencing inflation False
4. An economy is not at full employment unless there is no unemployment False
5. Countries that have generous unemployment benefits tend to have higher natural rates of unemployment True
6. Lumberjacks are structurally unemployment when they are replaced by machines True

Natural Rate on Unemployment (NRU)

What is the natural rate of unemployment?
The amount of unemployment that exists when the economy is healthy. The economy is at full employment when there is no cyclical unemployment

Problems With Unemployment Rate

What are discouraged job seekers?
People that are no longer looking for a job because they gave up. Since these people are not counted in the labor force, the unemployment rate may be too low.

What are underemployed (part-time) workers?
Someone who wants more hours but can't get them is still considered fully employed. The unemployment rate ignores the plight of such workers.

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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-

$$\text{CPI} = \frac{\text{Price of market basket}}{\text{Price of market basket in base year}} \times 100$$

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-

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

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

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)

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

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

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.

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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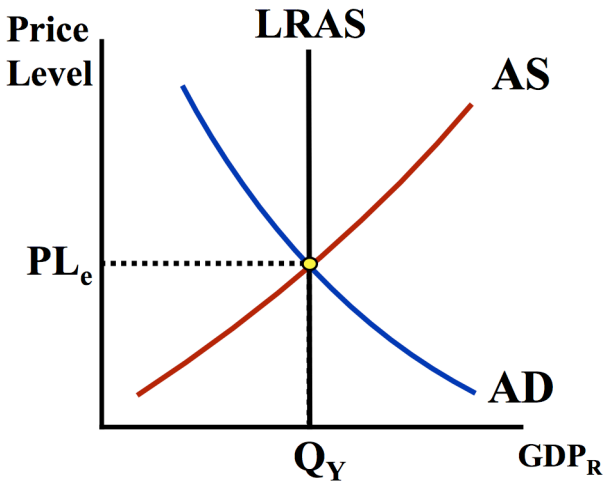
Unit 3: Aggregate Demand, Aggregate Supply, and Fiscal Policy

AD, AS, and LRAS

Draw the economy at full employment



Short Run vs. Long Run Aggregate Supply

1. In the short run, wages and resource prices will NOT increase as price levels increase
2. In the long run, wages and resource prices will increase as price levels increase

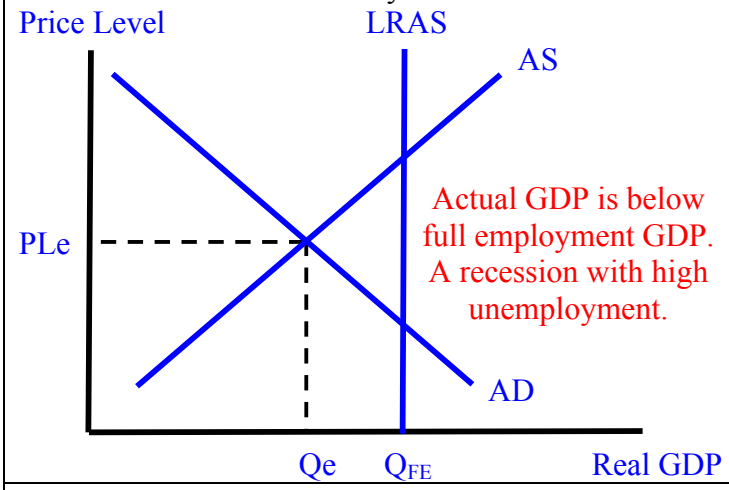
Shifters of AD and AS

Shifters of Aggregate Demand
1. Consumer Spending
2. Investment Spending
3. Government Spending
4. Net Exports (Exports – Imports)

Shifters of Aggregate Supply
1. Resource Prices
2. Actions of the Government (ex: taxes, regulations)
3. Productivity

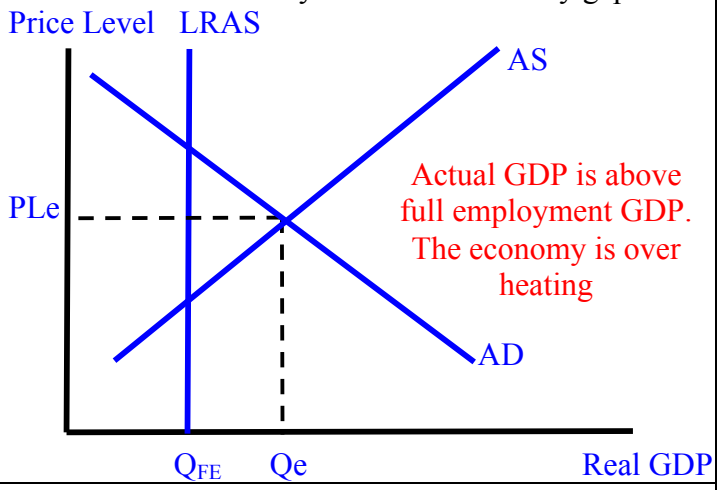
Recessionary Gap

Draw an economy in a recession



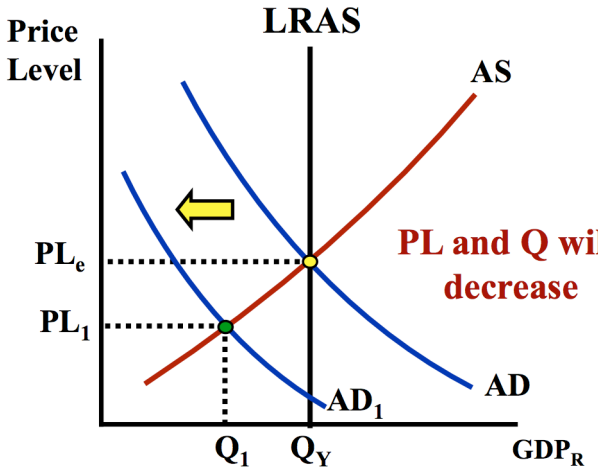
Inflationary Gap

Draw an economy with an inflationary gap



Graphing Practice

Draw an economy at full employment. Show what happens to price level and GDP if consumption falls



Define Key Terms

Negative Supply Shock-
An unexpected decrease in the availability of a key resource that temporarily decreases productivity

Positive Supply Shock-
An unexpected increase in the availability of a key resource that temporarily increases productivity

Stagflation-
When there is high inflation and a sluggish economy. Usually accompanies a negative supply shock.

Autonomous Consumption-
The minimum amount of consumer spending when people have no income

Disposable Income-
The amount of money households have to spend or save after taxes

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Classical vs. Keynesian Economics

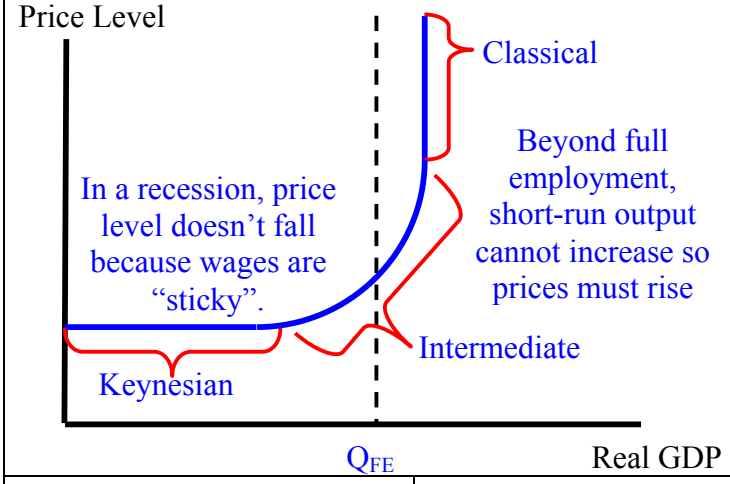
What is classical economic theory?
The belief that the economy self corrects and government intervention will do more harm than good
What is Keynesian economic theory?
The belief that the government should actively manipulate the economy to reach full employment

Fiscal Policy

Define Discretionary Fiscal Policy-
Congress creates a new bill that is designed to change AD through government spending or taxation.
Define Non-Discretionary Fiscal Policy-
Permanent spending or taxation laws enacted to work counter cyclically to stabilize the economy

Three Ranges of the Aggregate Supply Curve

Draw and label the three ranges of the AS curve



Government Spending and Taxation

Expansionary Fiscal Policy- Laws to increase output
1. Increase Government Spending
2. Decrease Taxes (Increases disposable income)

Contractionary Fiscal Policy- Laws to reduce inflation
1. Decrease Government Spending
2. Increase Taxes (Decreases disposable income)

The Multiplier Effect

What is the Multiplier Effect?
The idea that an initial change in spending will set off a spending chain that is magnified in the economy.
The strength of multiplier depends on the amount that consumers spend of new income.
Define Marginal Propensity to Consume (MPC)-
How much people consume rather than save when there is a change in income
Define Marginal Propensity to Save (MPS)-
How much people save rather than consume when there is a change in income

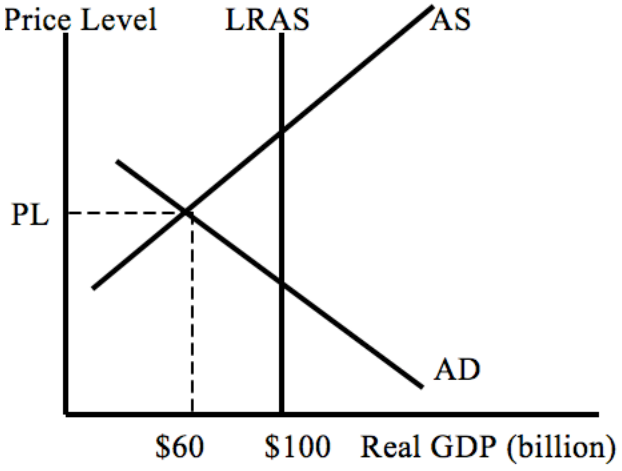
Simple Spending Multiplier

$$\frac{1}{MPS} \text{ OR } \frac{1}{1 - MPC}$$

Tax Multiplier

$$\frac{MPC}{MPS}$$

Policy and Multiplier Practice



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 increase spending or decrease 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

Problem with Fiscal Policy

1. Deficit Spending-if the government increases spending without increasing taxes they will increase the annual deficit and the national debt
2. Time Lags-Congress takes time to write, debate, pass, and implement legislation
3. Crowding out- Government spending might cause unintended effects that weaken the impact of the policy. Ex: deficit spending to increase AD would increase interest rates and decrease investment

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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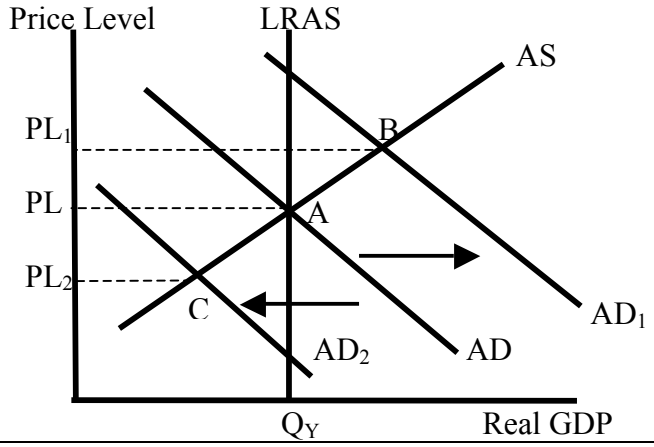
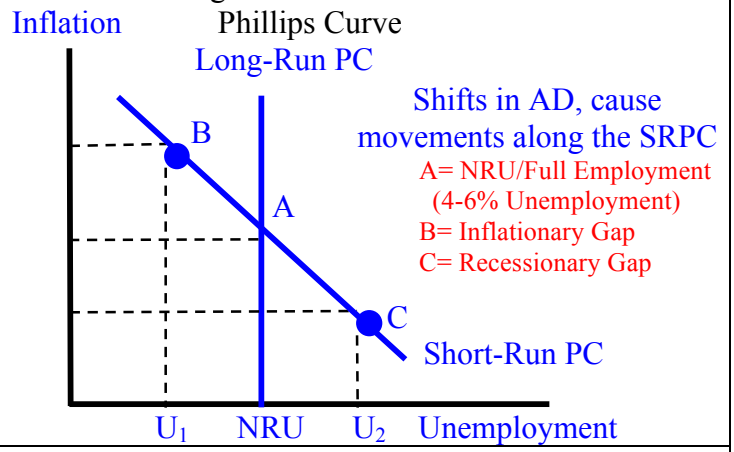
Short Run and Long Run Phillips Curve

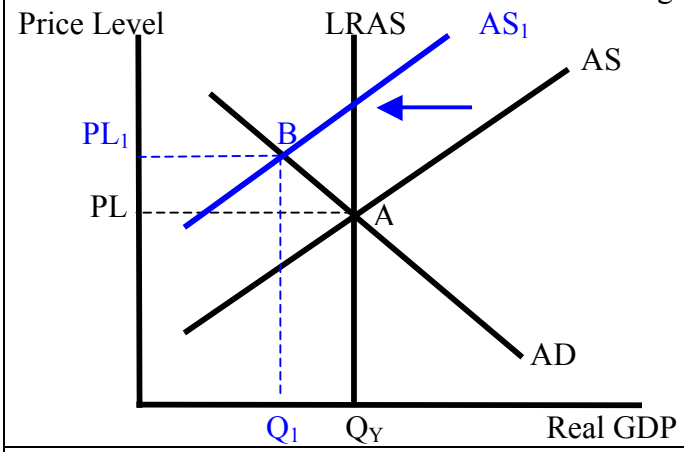
Draw and label the short and long run Phillips curve.
Label points A, B, and C based on the changes in AD

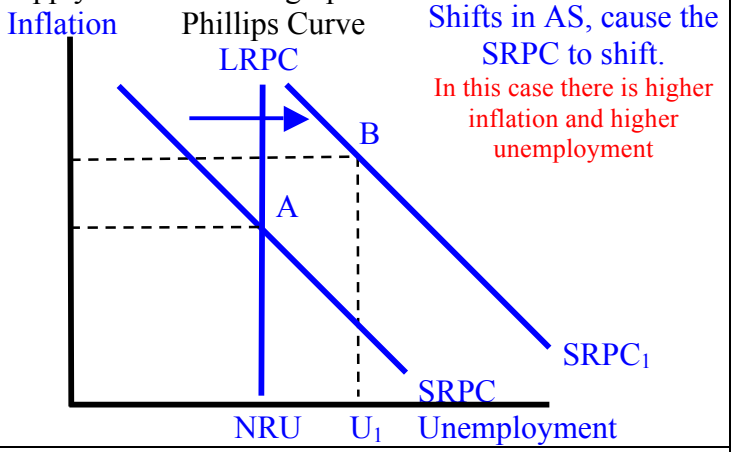




Shifts in AD, cause movements along the SRPC
A= NRU/Full Employment (4-6% Unemployment)
B= Inflationary Gap
C= Recessionary Gap

Draw and label the short and long run Phillips curve and label point A.
Show the result of a negative supply shock on both graphs





Shifts in AS, cause the SRPC to shift.
In this case there is higher inflation and higher unemployment

Economic Growth Practice

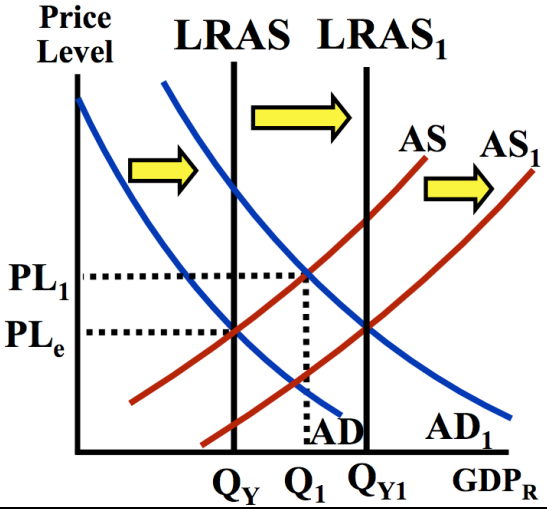
1. If interest rates fall, investment __↑__ causing capital stock to __↑__ and economic growth to __↑__.
2. If interest rates go up, investment __↓__ causing capital stock to __↓__ and economic growth to __↓__.

True or False

3. An increase in consumer spending leads to more economic growth in the long run. False
4. Crowding out due to deficit spending causes less economic growth. True
5. When the long run aggregate supply shifts right the natural rate of unemployment increases. False
6. A sustained increase in productivity causes both the long run aggregate supply curve and production possibilities curve to shift right. True
7. Jacob Clifford is very attractive. Very True ☺

Showing Economic Growth with AD and AS

Draw an economy at full employment. Show what happens in the long run if investment increases



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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 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 Demand for Money

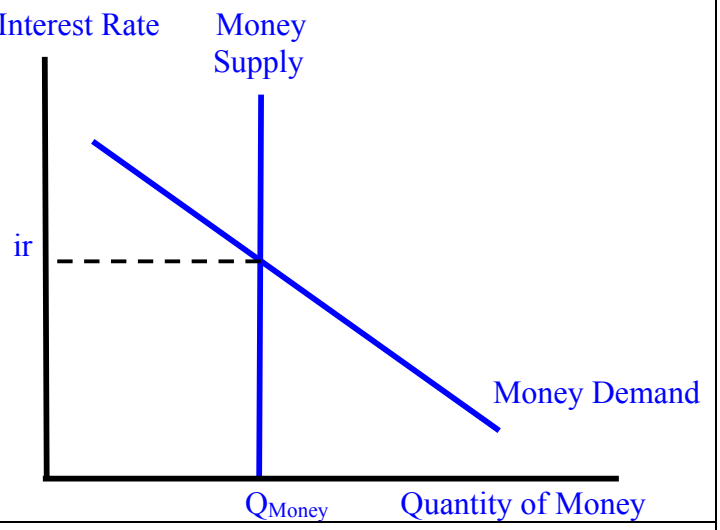
What is the transaction demand for money?
People demand money to make everyday purchases. This is not affected by the interest rate
What is the asset demand for money?
When people demand money as a liquid asset because they prefer it to other non-liquid assets like bonds
Interest rate ↑, the quantity of money demanded __↓__
Interest rate ↓, the quantity of money demanded __↑__

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 Money Market Graph

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



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

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The Federal Reserve (The Fed)

What is the Federal Reserve and what does it do?
The Fed is the central bank of the United States and it regulates commercial banks and adjusts the money supply to adjust interest rates to meet economic goals. This is called Monetary Policy.

Money Multiplier Equation

$$\frac{1}{\text{Reserve Requirement}}$$

Money Multiplier Practice

1. Assume the reserve requirement is .10. If the Fed buys $10 billion worth of bonds the money supply will increase by $100 billion.
2. Assume the reserve requirement is .20. If the Fed sells $10 billion worth of bonds the money supply will decrease by $50 billion.
3. Assume the reserve requirement is .10. If the Fed buys $5 billion worth of bonds the money supply will increase by $50 billion.
4. Assume the reserve requirement is .50. If the Fed sells $5 billion worth of bonds the money supply will decrease by $10 billion.
5. Assume the reserve requirement is .25. If the Fed sells $2 billion worth of bonds the money supply will decrease by $8 billion.

Shifter Practice

1. If the FED increases the reserve requirement the money supply will ↓ and interest rates ↑.
2. If the FED sells bonds the money supply will ↓ interest rates ↑, and investment ↓.
3. If the FED decreases the reserve requirement the money supply will ↑ and interest rates ↓.
4. If the FED decreases the discount rate, the money supply will ↑ and interest rates ↓.
5. If the FED buys bonds the money supply will ↑ interest rates ↓, and investment ↑.

Federal Funds Rate

Federal Funds Rate- The federal funds rate is the interest rate that banks charge each other for loans. The Fed uses open market operations to hit this target rate.

Bonds

What is maturity?
A borrower issues a bond that must be paid back by a certain amount of time. That time is its maturity. A bond can be sold early at an agreed upon price.
If the interest rate increases, bond prices will ↓
If the interest rate decreases, bond prices will ↑

Interest Rates and Inflation

1. If the nominal interest rate is 7% and expected inflation is 3%, what is the real interest rate? 4%
2. If the real interest rate is -2% and the nominal interest rate was 3%, what was the inflation rate? 5%

Real interest rate = nominal rate - expected inflation
Nominal interest rate = real rate + expected inflation

Bank Balance Sheets

Define Fractional Reserve Banking-
Process where banks hold a portion of deposits in reserve and loan the rest of the money out
Define Excess Reserves-
The amount banks are legally free to loan out. Excess reserves and required reserves make up total reserves

Define Demand Deposits-
Bank deposits that can be withdrawn at any time (ex: checking accounts)
Define Owner's Equity-
The amount of money owners have put into a company or bank. It doesn't need to be held in reserve

1. If the reserve requirement is .1 (or 10%) how much is this bank's required reserves and excess reserves? Req =$2,000 Excess = $3,000
2. What is the maximum possible increase in the money supply if the bank loaned out all its excess reserves? $30,000 ($3,000 x 10)
3. Assume a customer deposits $5,000 into this bank, what is the initial change in the money supply? There is no **initial** change
4. If the $5,000 deposit is placed in reserve, how much is demand deposits and excess reserves? Demand deposits=$25,000 Excess = $7,500

Use the bank balance sheet to answer the questions

Assets		Liabilities	
Loans	**$15,000**	Demand Deposits	**$20,000**
Total Reserves	**$5,000**	Owner's Equity	**$10,000**
Treasury Bonds	**$10,000**		
Total	**$30,000**	Total	**$30,000**

5.Assume a customer withdraws $15,000. Identify three options this bank has to avoid defaulting other than asking borrows to pay back loans.
They can sell treasury bonds, borrow money from the Fed, 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

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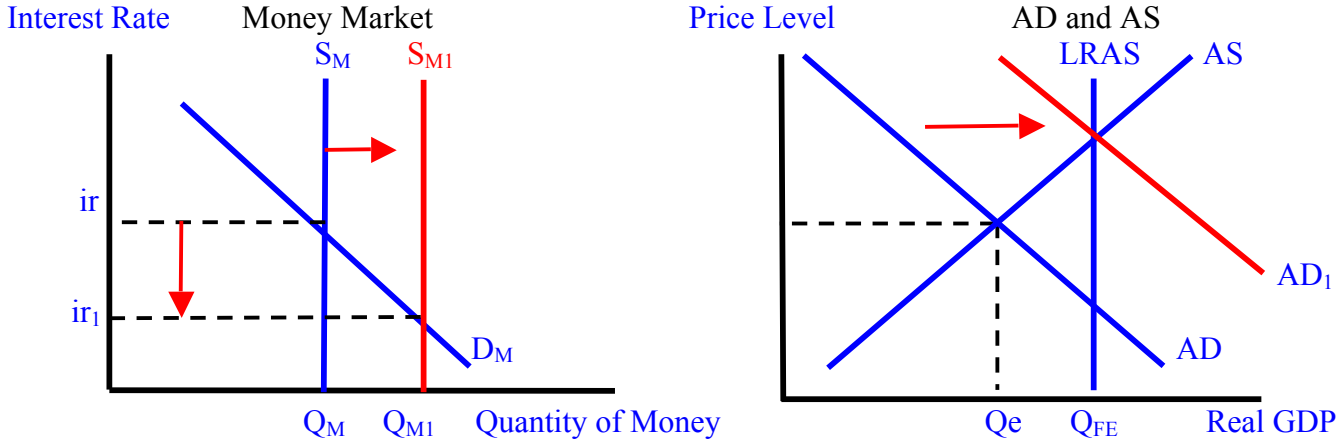
Monetary Policy and AD/AS

Draw and label both graphs and show the economy in a recession.

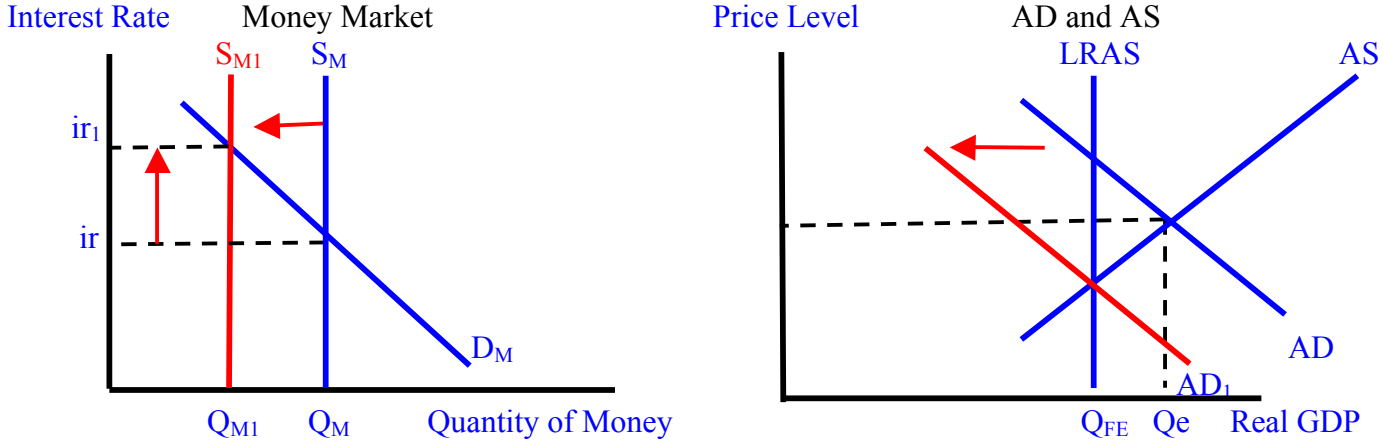
Use the money market graph to show how the FED closes the recessionary gap using monetary policy



Use arrows to explain the process: $S_M\uparrow \rightarrow ir\downarrow \rightarrow I\uparrow$ and $C\uparrow \rightarrow AD\uparrow \rightarrow$ Full Employment

Draw and label both graphs and show the economy with an inflationary gap.

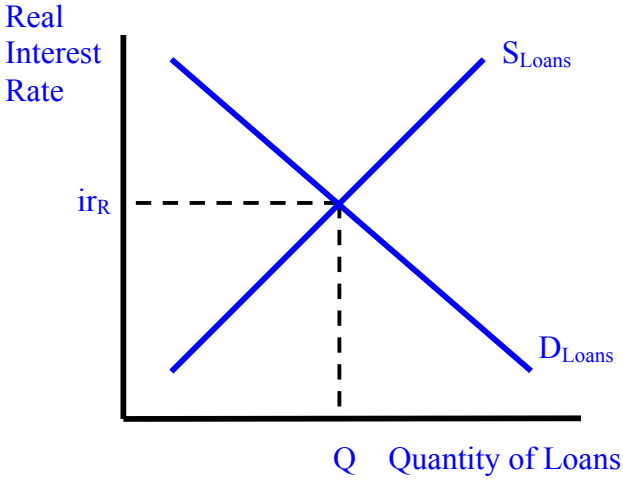
Use the money market graph to show how the FED closes the inflationary gap using monetary policy



Use arrows to explain the process: $S_M\downarrow \rightarrow ir\uparrow \rightarrow I\downarrow$ and $C\downarrow \rightarrow AD\downarrow \rightarrow$ Full Employment

The Loanable Funds Market

Draw the loanable funds market and label the equilibrium real interest rate



Shifters of Demand for Loanable Funds

1. Changes in perceived business opportunities
2. Changes in government borrowing

Shifters of Supply for Loanable Funds

1. Changes in private savings behavior
2. Changes in public savings
3. Changes in foreign personal investment
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 __↓___
3. An increase in savings would cause real interest rates to ___↓___, investment __↑___, and economic growth __↑__

Seriously, Thank you!

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Unit 5: International Trade

Key Terms

Exports- the sale of goods and service created by domestic producers and sold to foreigners

Imports- the purchase of goods and service created by foreigners

Net Exports (X_N)- Exports – Imports. The difference between a nation's exports of goods and services and its imports of goods and services

Trade Deficit- Exporting less than is imported (aka.trade gap)

Trade Surplus-Exporting more than is imported. China has a huge trade surplus with the US.

Balance of Payments

What is the Balance of Payments?

Summary of all international transactions within a given year prepared in the domestic country's currency. It has two accounts, the current account and the financial account.

What is the Current Account?

Measures the international trade in goods and services, investment income, and net transfer payments.

What is the Financial Account?

Measures the international trade of financial assets like stocks, bonds, and real estate.

Interest Rates and Capital Flows

Net Capital Flow-

The difference between the amount of money coming into a country to buy domestic assets and the amount of money leaving a country to buy foreign assets.

What is the difference between capital inflows and capital outflows?

Inflows looks at money coming into the country to buy domestic assets and outflows looks at money going out of the country to buy foreign assets

Interest rate ↑, the capital inflows __↑__

Interest rate ↓, the capital inflows __↓__

Interest rate ↑, the capital outflows __↓__

Interest rate ↓, the capital outflows __↑__

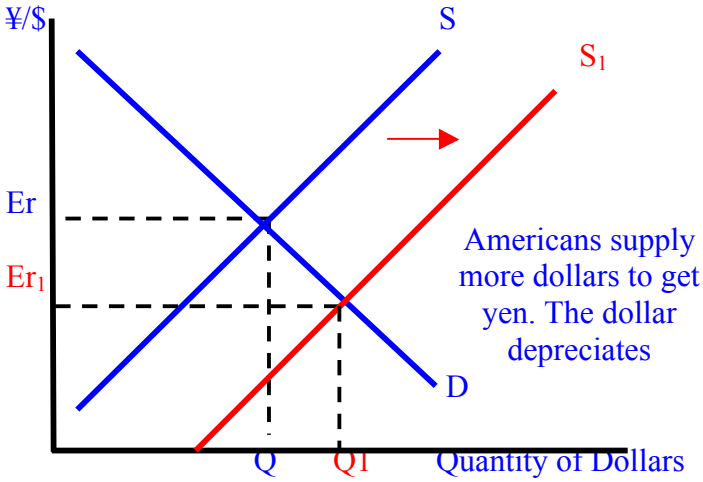
Balance of Payments Practice

Identify if the example would be included in the current account or the financial account for the US

1. A US company sells ten jets in Canada Current
2. An American company buys a beach resort in Mexico Financial
3. A Chinese company sells toys in the US Current
4. An American on vacation buys Japanese government bonds Financial
5. An immigrant living in the US sends his earning to his family overseas Current (called remittance)
6. An American company produces and sells cars in the US Neither
7. An Italian tourists buys souvenirs in the US Current

The Foreign Exchange Market

Draw the foreign exchange market for US dollars ($) relative to Japanese Yen (¥)



Show on the graph what happens to the value of the dollar if American want more Japanese products

Currency Valuation

Define Appreciation-

The increase of value of a country's currency relative to a foreign currency

Define Depreciation-

The decrease of value of a country's currency relative to a foreign currency

FOREX Shifters

1. Changes in Tastes-

Ex: British tourists flock to the U.S

2. Changes in Relative Incomes (Resulting in more imports)- Ex: US growth increase US incomes

3. Changes in Relative Price Level (Resulting in more imports)- Ex: US prices increase relative to Britain

4. Changes in relative Interest Rates- Ex: If the US has a higher interest rate than Britain.

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

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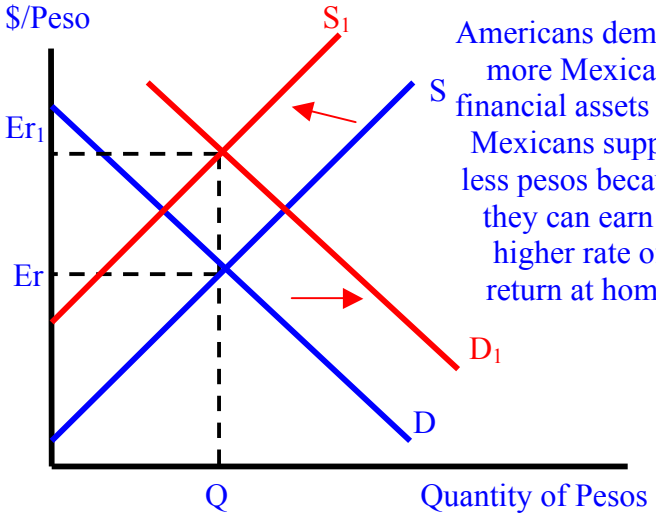
Interest Rates and Foreign Exchange

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



Appreciation and Depreciation Practice

1. If American tourists increase visits to Japan, the supply of US dollars will _increase_ and the demand for Japanese yen will _increase_ . The dollar will depreciate and the yen will appreciate.
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

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 _increases_ or if supply _decreases_ . This will cause US exports to decrease and imports to _increase_ .
2. The US dollar will depreciate relative to another currency if demand for the dollar _decreases_ or if supply _increases_ . This will cause US exports to increase and imports to decrease .

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

Microeconomics Concepts and Videos

Unit 1: Basic Economic Concepts

UNIT 1 Overview- Introduction
- ☐ Scarcity
- ☐ Microeconomics vs. Macroeconomics
- ☐ Positive vs. Normative Economics
- ☐ Self-Interest and Incentives
- ☐ Marginal Analysis
- ☐ Opportunity Cost and Trade-offs
- ☐ Four Factors of Production
- ☐ Capital Goods and Future Growth

VIDEO 1.1- Production Possibilities Curve
- ☐ Efficiency
- ☐ Straight vs. Bowed PPC
- ☐ Law of Increasing Opportunity Costs

VIDEO 1.2- Shifting the PPC
- ☐ Shifters of the PPC

VIDEOS 1.3/1.4- Specialization and Trade
- ☐ Absolute and Comparative Advantage
- ☐ Terms of Trade

VIDEO 1.5- Comparative Advantage
- ☐ Output and Input Questions

VIDEO 1.6- Economic Systems
- ☐ Free-Market Economy
- ☐ Centrally Planned Economy

VIDEO 1.7- Circular Flow Model
- ☐ Product and Factor Markets
- ☐ Private and Public Sector
- ☐ Factor Payments
- ☐ Transfer Payments

Unit 2: Supply, Demand, and Consumer Choice

VIDEO 2.1- Demand
- ☐ Law of Demand
- ☐ Substitution Effect and Income Effect
- ☐ Law of Diminishing Marginal Utility
- ☐ 5 Shifters (Determinants) of Demand
- ☐ Substitutes and Complements
- ☐ Normal Goods vs. Inferior Goods

VIDEO 2.2- Supply and Equilibrium
- ☐ Law of Supply
- ☐ 6 Shifters (Determinants) of Supply
- ☐ Quantity Supplied vs. Supply

VIDEO 2.3/2.4- Shifting Demand and Supply
- ☐ Equilibrium Price and Equilibrium Quantity
- ☐ Disequilibrium: Surplus and Shortage

VIDEO 2.5- Double Shifts
- ☐ Double Shift Rule

VIDEO 2.6- Price Controls and Efficiency
- ☐ Price Floors and Ceilings

VIDEO 2.7- Consumer and Producers Surplus
- ☐ CS, PS, and Deadweight Loss

VIDEO 2.8- Welfare Economics and Trade
- ☐ Benefits of Trade
- ☐ Tariffs and Quotas

VIDEO 2.9- Elasticity
- ☐ Price Elasticity of Demand
- ☐ The Total Revenue Test

VIDEO 2.10- Other Elasticities
- ☐ Income Elasticity of Demand
- ☐ Cross-Price Elasticity of Demand
- ☐ Price Elasticity of Supply

VIDEO 2.11- Excise Taxes
- ☐ Effect of Excise Taxes

VIDEO 2.12- Consumer Choice
- ☐ Marginal Benefit and Marginal Costs
- ☐ Utility Maximizing Rule

Unit 3: Costs of Production and Perfect Competition

VIDEO 3.1- Diminishing Marginal Returns
- ☐ Total Product and Marginal Product
- ☐ Three Stages of Returns

VIDEO 3.2- Long-Run Costs
- ☐ Economies and Diseconomies of Scale

VIDEO 3.3- Short-Run Costs of Production
- ☐ Fixed Costs, Variable Costs, and Total Cost
- ☐ Per-Unit Costs- (AVC, AFC, ATC)
- ☐ Shifts in MC, ATC, AVC, and AFC.
- ☐ Marginal Cost and Marginal Revenue

VIDEO 3.4- Shape of the Cost Curves
- ☐ Why is ATC "U" Shaped

VIDEO 3.6- Revenue and Profit
- ☐ Explicit vs. Implicit Costs
- ☐ Accounting vs. Economic Profit
- ☐ Profit Maximizing Rule (MR=MC)

VIDEO 3.7- The Shut Down Rule
- ☐ Shut Down Rule (P<AVC)

VIDEO 3.8/3.9- Perfect Competition- Short-Run
- ☐ Price Takers, Graph for Market and Firm

VIDEO 3.10/3.11- Perfect Competition- Long-Run
- ☐ No Barrier to Entry
- ☐ Normal Profit

VIDEO 3.12- Perfect Comp and Efficiency
- ☐ Productive Efficiency (P=Min ATC)
- ☐ Allocative Efficiency (P= MC)

Unit 4: Imperfect Competition

VIDEO 4.1- Demand and Marginal Revenue
- ☐ MR < Demand

VIDEO 4.2 and 4.7- Monopoly Practice
- ☐ Profit-Maximizing Price and Quantity

VIDEO 4.3- Deadweight loss caused by monopoly
- ☐ CS, PS, and Deadweight loss

VIDEO 4.4- Elastic vs. Inelastic Range
- ☐ Maximizing revenue and elastic range

VIDEO 4.5- Regulating a Monopoly
- ☐ Natural Monopoly
- ☐ Fair Return Price
- ☐ Socially Optimal Price

VIDEO 4.6- Lump Sum vs. Per Unit
- ☐ Lump Sum taxes and Per Unit taxes

VIDEO 4.8- Price Discrimination
- ☐ Graph for Price Discriminating Monopoly

VIDEO 4.9- Oligopolies and Game Theory
- ☐ Game Theory Matrix

VIDEO 4.10- Game Theory Practice
- ☐ Dominant Strategy
- ☐ Nash Equilibrium

VIDEO 4.11- Kinked Demand Curve Theory
- ☐ Kinked Demand Model

VIDEO 4.12 Monopolistic Competition
- ☐ Differentiated Products
- ☐ Long-Run Equilibrium
- ☐ Excess Capacity

Unit 5: Resource Market

VIDEO 5.1-Demand and Supply for Labor
- ☐ Derived demand
- ☐ Shifters of Labor Demand
- ☐ Shifters of Labor Supply

VIDEO 5.2- Minimum Wage
- ☐ Minimum Wage

VIDEO 5.2- Perfectly Competitive Market and Firm
- ☐ Wage Takers
- ☐ Marginal Revenue Product (MRP)
- ☐ Marginal Resource Cost (MRC)

VIDEO 5.3- Profit Maximizing
- ☐ Profit Maximizing Rule for Labor

VIDEO 5.4- Combining Resources
- ☐ Least Cost Rule

VIDEO 5.5- Monopsonies
- ☐ Wage Makers
- ☐ Monopsony Wage and Quantity

Unit 6: Market Failures and Government Involvement

VIDEO 6.1- Public Goods
- ☐ Public Goods
- ☐ Free-Rider Problem
- ☐ Non-Exclusion
- ☐ Non-Rivalry (Shared Consumption)

VIDEO 6.2- Marginal Social Benefit and Cost
- ☐ MSB = MSC

VIDEO 6.3- Negative Externalities
- ☐ Negative Externalities (Spillover Costs)
- ☐ Marginal Private Cost

VIDEO 6.4- Positive Externalities
- ☐ Positive Externalities (Spillover Benefits)
- ☐ Marginal Private Benefit

VIDEO 6.5- Income Distribution
- ☐ Lorenz Curve
- ☐ Gini Coefficient
- ☐ Government Transfer Payments

VIDEO 6.6- Types of Taxes
- ☐ Progressive Taxes
- ☐ Regressive Taxes
- ☐ Proportional Taxes

Micro Key Graphs

- ☐ Production Possibilities Curve
- ☐ Demand and Supply
- ☐ Demand and Supply: Price Controls
- ☐ Demand and Supply: Excise Tax
- ☐ Demand and Supply: Trade and Tariffs
- ☐ Side-by-Side Product Market and Firm
- ☐ Monopoly
- ☐ Price Discriminating Monopoly
- ☐ Monopolistic Competition
- ☐ Game Theory Matrix
- ☐ Side-by-Side Resource Market and Firm
- ☐ Monopsony
- ☐ Negative Externality
- ☐ Positive Externality
- ☐ Lorenz Curve

Microeconomics Unit 1: Basic Economics Concepts

Key Terms- Define the following:	**3 Economic Systems**
1. Scarcity 2. Consumer Goods vs. Capital Goods 3.Trade-offs 4. Opportunity Cost	1. Centrally Planned Economies 2. Free-Market Economies (Capitalism) 3. Mixed Economies

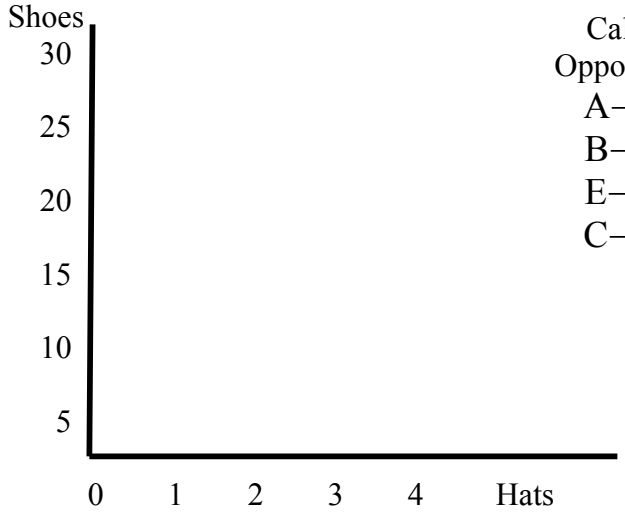
Production Possibilities Curve (Frontier)

Use the chart to create a PPC to the right.

	A	**B**	**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



Calculate the Opportunity Cost:

A→B: _____
B→C: _____
E→D: _____
C→A: _____

Constant Opportunity Cost	**Increasing Opportunity Cost**
Why does this occur? Draw the graph below Bicycles Tricycles	Why does this occur? Draw the graph below Bikes iPhones

Efficiency	**Shifting the PPC**
Difference between allocative and productive efficiency:	Identify the three shifters of the PPC

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

Scenario: Workers loose their jobs due to a recession

Pizza

Cars

Scenario: Increase in consumer demand for pizza

Pizza

Cars

Scenario: More resources that improve the production of cars

Pizza

Cars

Absolute and Comparative Advantage

Output Questions

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
Mexico	50	100

1. Which country has an absolute advantage in sugar? How about cars?
2. What is Cuba's opportunity cost for producing one car?
3. Which country has a comparative advantage in cars? How about sugar?
4. For both countries to benefit from trade, how much sugar can be traded for each car? 1 Car for ______ Sugar

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	6
UK	10	10

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

Circular Flow Matrix (Model)

Product Market-

Factor (Resource) Market-

Factor Payments-

Transfer Payments-

Draw the Circular Flow Matrix

People that put this online are jerks

Microeconomics Unit 2: Demand, Supply, and Consumer Choice

Demand

The Law of Demand:

P↑ Qd ___

P↓ Qd ___

Supply

The Law of Supply:

P↑ Qs ___

P↓ Qs ___

What is the different between a change in quantity demanded and a change in demand?

Changes in Demand and Supply (Shifting the Curve)

What changes demand? (5 Shifters of Demand)

What changes supply? (5 Shifters of Supply)

Substitutes: Price of A↑ Demand for B ___
Price of A↓ Demand for B ___

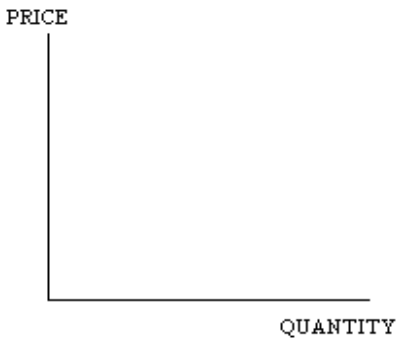
Complements: Price of A↑ Demand for B ___
Price of A↓ Demand for B ___

Normal Goods: Income ↑ Demand ____
Income ↓ Demand ____

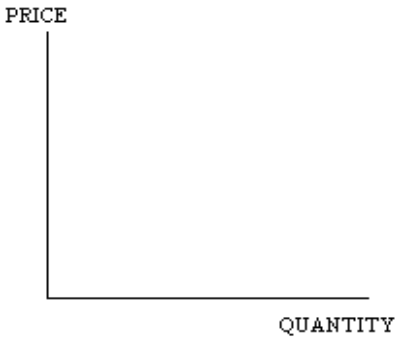
Inferior Goods: Income ↑ Demand ____
Income ↓ Demand ____

Equilibrium and Disequilibrium

Draw a shortage



Draw a surplus



Government Involvement

Price Ceiling-

When binding, ceilings go _____ equilibrium and result in a _____

Price Floor-

When binding, floors go _____ equilibrium and result in a _____

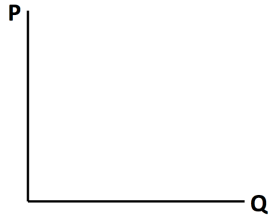
Subsidy-

Supply and Demand Practice

Demand Decrease

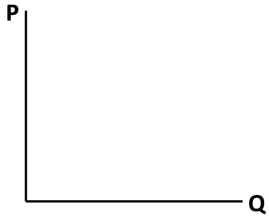
Price __
Quantity __

Demand Increase



Price __
Quantity __

Supply Decrease



Price __
Quantity __

Supply Increase

Price __
Quantity __

Double Shift Practice

If demand increases AND supply increases then price _____ and quantity _____

Price

Quantity

Double Shift Rule:

Thanks for supporting Jacob Clifford and ACDC Econ!

People that put this online are jerks

Inelastic Demand	Elastic Demand	Total Revenue Test
PRICE QUANTITY Characteristics 1. 2. 3.	PRICE QUANTITY Characteristics 1. 2. 3.	Inelastic Demand Price ↑, TR ____ Price ↓, TR ____ Elastic Demand Price ↑, TR ____ Price ↓, TR ____

Elasticity of Demand Coefficient	Elasticity of Supply Coefficient
Equation- Perfectly Inelastic = Relatively Inelastic = Unit Elastic = Relatively Elastic = Perfectly Elastic =	Equation- Perfectly Inelastic = Relatively Inelastic = Unit Elastic = Relatively Elastic = Perfectly Elastic =
Cross-Price Elasticity of Demand	**Income Elasticity of Demand**
Definition- Equation- Positive: _____ Negative: _____	Definition- Equation- Positive _____ Negative _____

Consumer Surplus (CS) and Producer Surplus (PS)

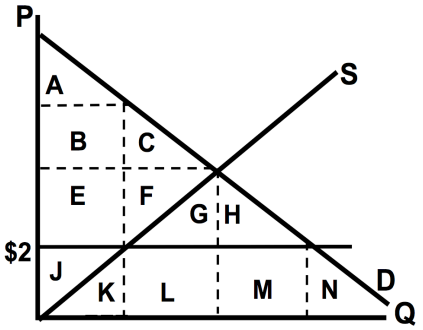
Consumer Surplus (CS)-

Producer Surplus (PS)-

Deadweight Loss (DWL)-

Identify at equilibrium
1. CS-
2. PS-
3. DWL-

Identify when there is a price ceiling at $2
4. CS-
5. PS-
6. DWL-

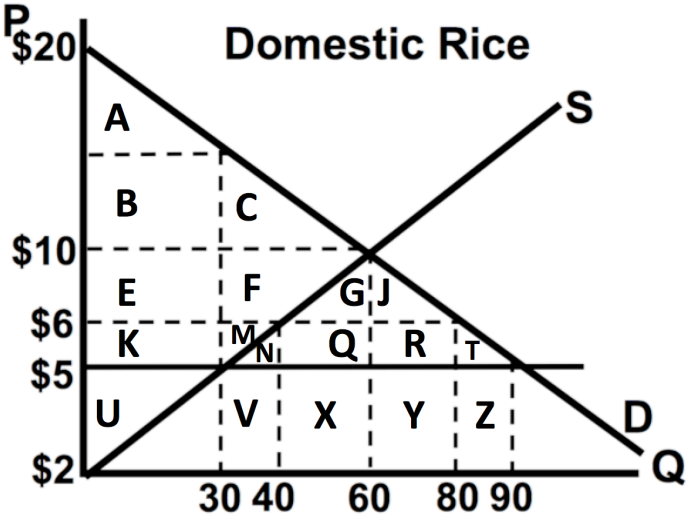


Welfare Economics and International Trade

The graph shows the domestic market for rice.
Identify and calculate the following at equilibrium
1. Consumer surplus-
2. Producer surplus-
3. Total surplus-

Identify the following if this country buys rice from other countries for $5
4. Quantity produced domestically-
5. Quantity imported-
6. Consumer surplus-
7. Producer surplus-

Identify if the government places a tariff of $1
8. Consumer surplus-
9. Tariff revenue-
10. Deadweight Loss-



If your friend gave you this, punch them in the gut and say, "that's from Clifford!"

People that put this online are jerks

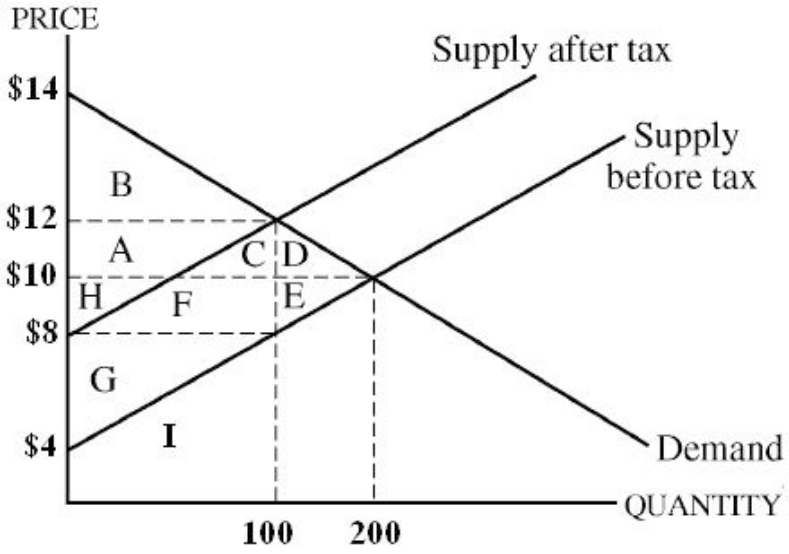
Excise Tax Practice

Before tax

1. CS before tax:
2. PS before tax:

After Tax

3. Tax per unit:
4. CS after tax:
5. PS after tax:
6. Dead weight loss:
7. Total tax revenue to gov:
8. Total spending by buyers:
9. Total revenue to sellers:
10. Total amount of tax buyer pay:
11. Total amount of tax sellers pay:
12. Is the demand curve between $12 and $10 elastic, inelastic, or unit elastic?



Consumer Choice and Maximizing Utility

Utility Maximizing Rule:

You can choose any combination of two different activities, the movies ($10) or riding go carts ($5).

1. If you only have $25, what combination maximizes your utility?

2. What combo is best if you have $40?

# Times Going	Marginal Utility (Movies)	MU/P	Marginal Utility (Go Carts)	MU/P
1st	30		10	
2nd	20		5	
3rd	10		2	
4th	5		1	

3. What is the total utility from consuming 3 movies and 2 go carts?

…on second thought, don't punch them. E-mail me their name and address. I'll take care of it.

Unit 3: Costs of Production and Perfect Competition

Production and the Law of Diminishing Marginal Returns

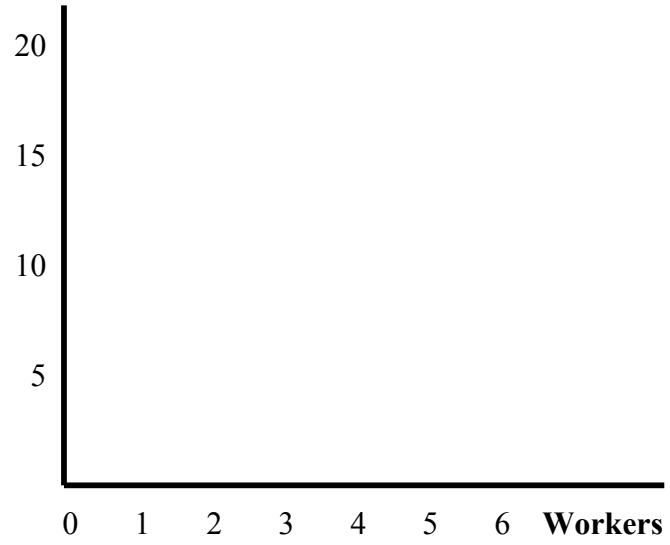
Calculate MP. Plot TP and MP on Graph

Number of Workers	Total Product	Marginal Product
0	0	-
1	5	
2	15	
3	19	
4	20	
5	20	
6	18	

Define the Law of Diminishing Marginal Returns

After which worker does diminishing marginal returns set in?

Output



Identify the three stages of returns: increasing, decreasing, and negative marginal returns

Revenue and Costs (Define the following)

Total Revenue-

Accounting Profit-

Economic Profit-

Normal Profit-

Fixed Cost (FC)-

Variable Cost (VC)-

Total Cost (TC)-

Marginal Cost (MC)-

Short Run Cost Curves (at least one fixed resource)

Draw and label ATC, AVC, and MC

Costs

Long-Run Cost Curves (all resources are variable)

Costs

Economies of Scale-

Diseconomies of Scale-

Calculating ATC, AVC, AFC, and MC

Fill in the blanks for a firm producing boxes of oranges:

Output (boxes)	Variable Cost	Total Cost	AVC	AFC	ATC	MC
0	$0	$10	-	-	-	-
1	20					
2	30					
3	60			$3.3	$23	
4	100			$2.5	$27	

Assume this firm is in a perfectly competitive market and the price is $35 for each box.

1. How many boxes should they produce? Why?

2. Calculate the profit at that quantity

Shut Down Point*

Shut Down Rule:

Short-Run Supply Curve:

Per-Unit vs. Lump-Sum

1. A per unit tax shifts _____so quantity will _____.
2. A lump sum tax shifts _____ so quantity will _____ _____.

Characteristics of Perfect Competition

Graphing Perfect Competition

Draw side-by-side graphs showing a perfectly competitive market and firm. Draw the firm making profit

Market

Firm

Draw a perfectly competitive market and a firm with the firm making a loss

Market

Firm

Calculation Practice

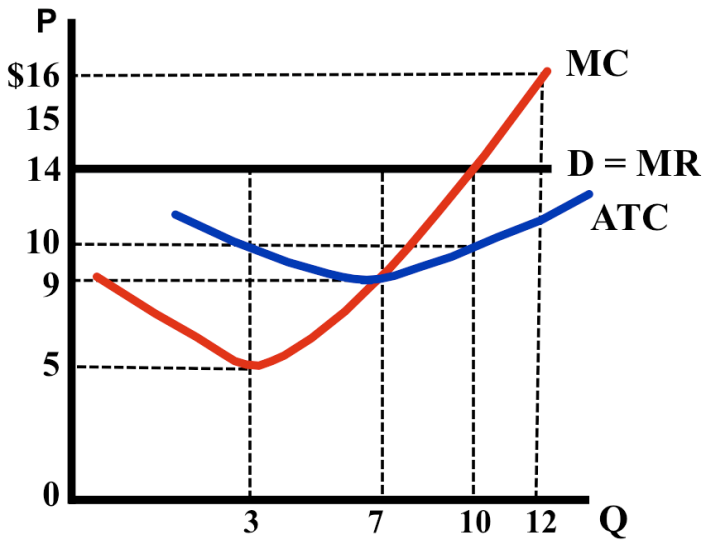
Assume the price is $14 and the firm produces the profit maximizing quantity. Identify the following:

1. Quantity-
2. Total revenue-
3. Total cost-
4. Economic profit-
5. What will happen to the number of firms in the market in the long run?

Assume the market adjust to the long run. Identify:

6. Price-
7. Quantity-
8. What will happen to number of firms in the market?

If the price was $5, should the firm shut down in the short run?



Perfect Competition in the Long Run

Draw side-by-side graphs showing a perfectly competitive market and firm in long run equilibrium

Price Market

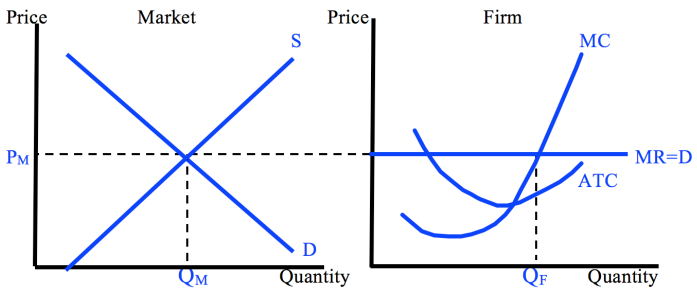
Quantity

Price Firm

Quantity

From Short Run to Long Run

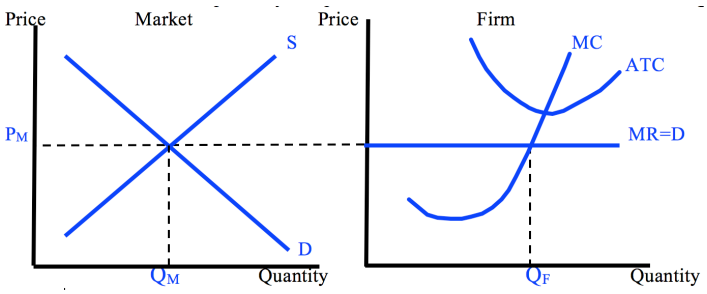
Draw what happens to each graph in the long run



Market:
Price__ Quantity __

Firm:
Price__ Quantity__

Draw what happens to each graph in the long run



Market:
Price__ Quantity __

Firm:
Price__ Quantity__

Efficiency in the Long Run

In the long run, perfectly competitive firms have both types of efficiency:

1.
2.

Did you buy this packet? You did! Ok, we're cool

Unit 4: Imperfect Competition

List the Characteristics of the Four Market Structures

Perfect Competition	Monopolistic Competition	Oligopoly	Monopoly

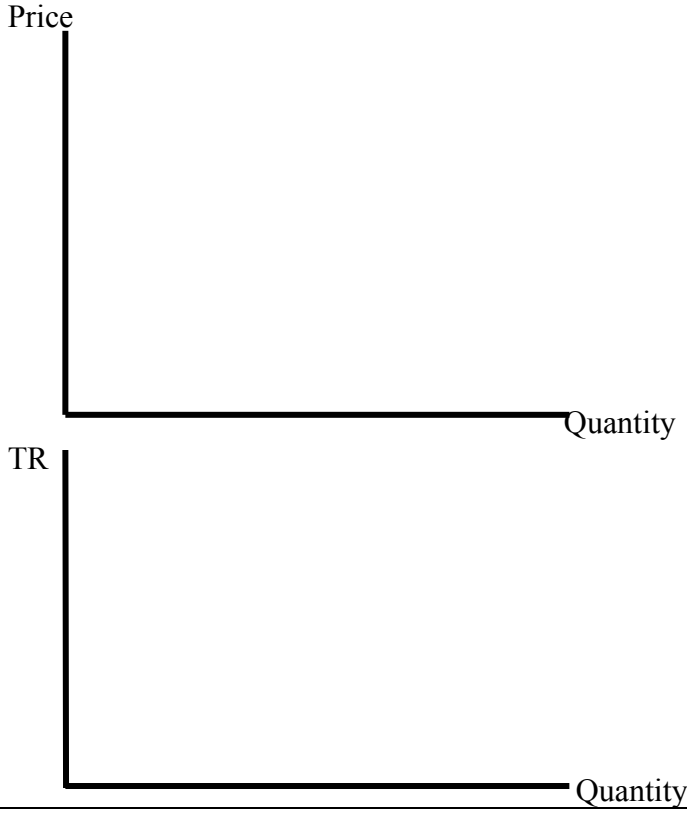
Demand and Marginal Revenue

Why is demand greater than marginal revenue for all imperfectly competitive firms?

Why are monopolies inefficient?

Elastic and Inelastic Range

Draw a monopoly's demand, MR, and total revenue
Identify the elastic and inelastic ranges



Monopoly Graph (profit)

Draw and label a monopoly making profit

Monopoly Graph (loss)

Draw and label a monopoly making a loss

Barriers to Entry

Identify four common barriers that allow companies to gain and maintain market power

Natural Monopolies

What is a natural monopoly?

If your teacher gave you this without paying, they are a jerk

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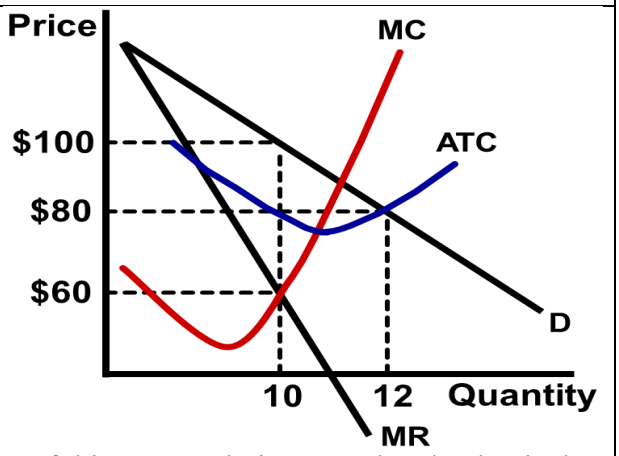
Regulating Monopolies

Draw a natural monopoly. Identify: unregulated quantity (Q_M), socially optimal quantity (Q_{SO}) and fair return quantity (Q_{FR})

Price

Quantity

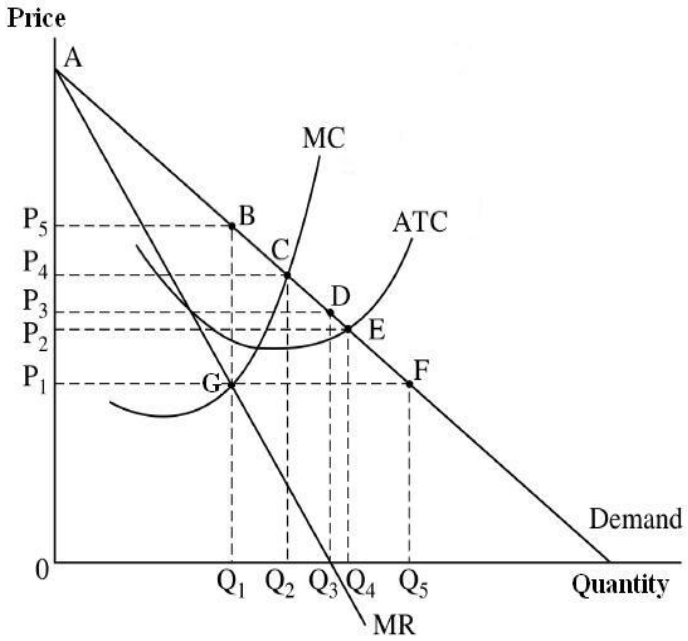
Calculation Practice



1. If this monopoly is unregulated, what is the total revenue, total cost, and profit?

2. Shade in Deadweight loss

Monopoly Practice



If this was competitive market

1. Price and quantity:
2. Consumer surplus:

If this is an unregulated monopoly

3. Price and quantity:
4. Consumer surplus:
5. Deadweight loss:
6. Quantity total revenue maximized:
7. Quantity if it perfectly price discriminates:
8. Elastic range of the demand curve:
9. If the government placed a per unit tax on this monopoly then price ___ and quantity ___
10. If the government placed a lump sum subsidy on this monopoly then price ____and quantity ____.

Price Discrimination

Identify the three conditions necessary for a firm to price discriminate

If a regular unregulated monopoly started perfectly price discriminating, what would happen to consumer surplus and deadweight loss?

Perfectly Price Discriminating Monopoly

Draw and label a price discriminating monopoly

Price

Quantity

Did you buy this packet? You did! Ok, we're cool

Oligopolies and Game Theory

1. If David decides to advertise now and Lindsey decides to do it later, what is David's expected profit?
2. What is Lindsey's dominant strategy?
3. What is David's dominant strategy?
4. If both owners have the information but do not actively collude, what will be the outcome?

Assume the advertising company offers a deal that increases the profit for both owners by $2,000 but only if they advertise later. Based on these changes:

5. What is Lindsey's dominant strategy?
6. What is David's dominant strategy?

Assume that two business owners are deciding between advertising now and advertising later. The chart shows expected profit with Lindsey's on the left

		David: Now	David: Later
Lindsey	Now	$5,000, $4,000	$3,000, $3,500
	Later	$900, $1,000	$1,500, $1,800

Kinked Demand Curve

Draw non-colluding oligopoly

Nash Equilibrium

Definition of Nash Equilibrium-

		Firm 2: High	Firm 2: Low
Firm 1	High	**$100, $50**	**$60, $90**
	Low	**$50, $40**	**$20, $10**

Assume these two firms can choose between pricing high and pricing low. What is the Nash Equilibrium?

Monopolistic Competition

Draw a Mono. Comp. firm in long-run equilibrium

Excess Capacity (define below and label on graph)

If a monopolistically competitive firm is making a profit in the short-run, what will happen to the demand and number of firms in the long run?

What are examples of non-price competition?

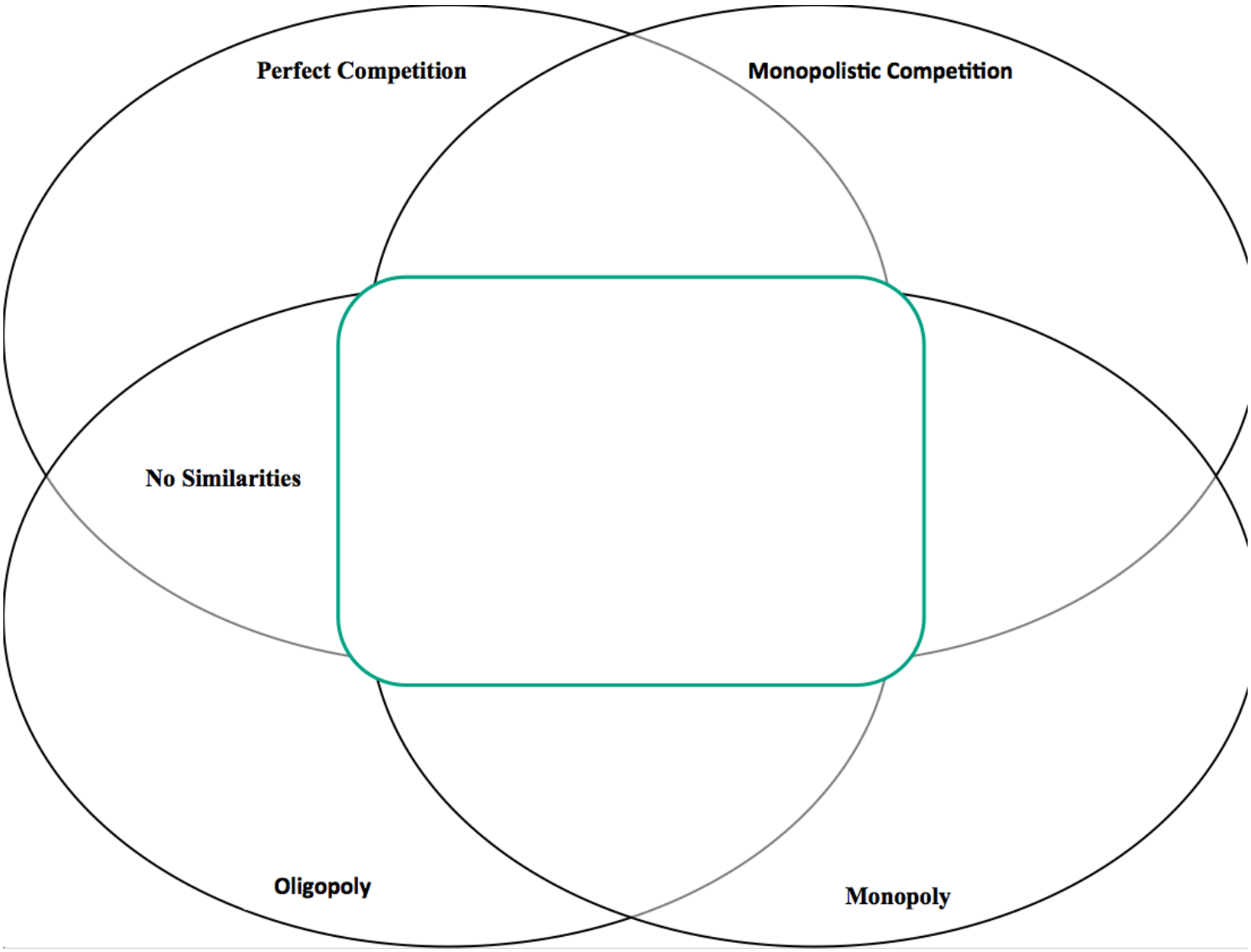
What are the two goals of advertising?

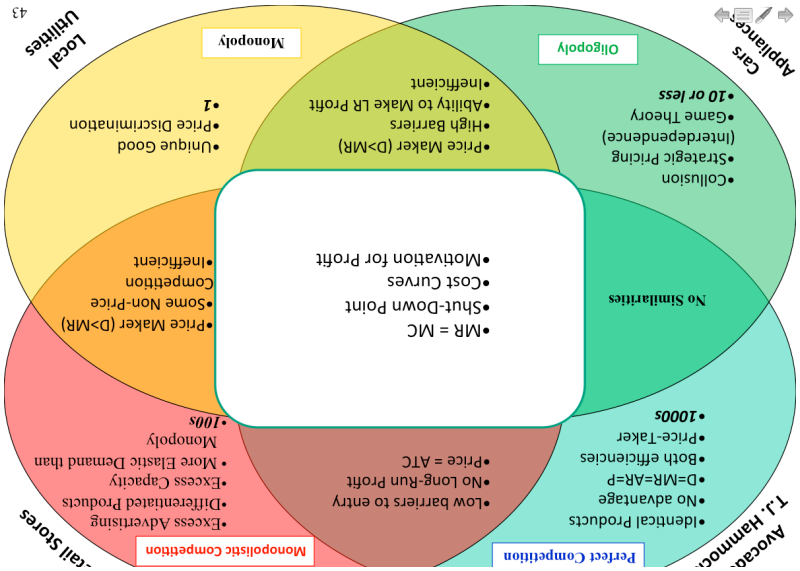
Dude, please don't post this online

Did you buy this packet? You did! Ok, we're cool

Market Structures Venn Diagram

Fill in the areas with the different characteristics of the four market structures.
Many characteristics are shared.





⇦ **Answers**

Unit 5: The Resource Market

Define Key Terms

The Resource (Factor) Market-

Demand for Labor-

Supply for Labor-

Derived Demand-

Marginal Revenue Product (MRP)-

Marginal Resource Cost (MRC)-

Demand and Supply for Labor

Draw a competitive market for plumbers. Label the equilibrium wage and quantity

Assume the government establishes a certification process that makes it harder to be a plumber. Show on the graph what will happen to the wage and quantity

Resource Shifters and Equilibrium

Shifters of Labor Demand-

Shifters of Labor Supply-

If the equilibrium wage for electricians is $15 an hour and the government established a minimum wage of $10 an hour, what will happen to the wage and quantity?

Minimum Wage

Draw the results of a minimum wage. Label the quantity supplies (Qs) & the quantity demanded (Qd)

Wage

Quantity of Labor

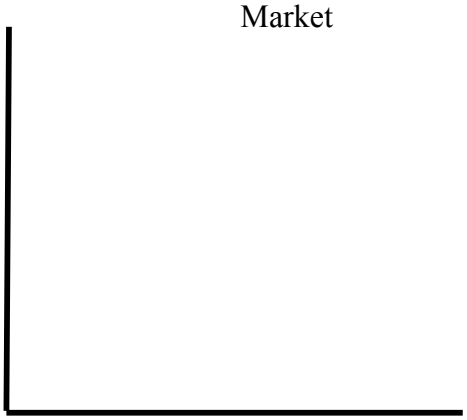
Labor Market Practice

1. If the demand for houses increases, the wage of carpenters will ____ and the quantity will ____.
2. Assume bricks and wood are substitute resources. If the price of bricks increases, the price of wood _____ and the quantity _____.
3. If the government removes all regulations for becoming a dentist. The wages for dentists will ____ and the quantity will _____.
4. If demand for accountants falls at the same time that the supply increases, the wage will ____ and the quantity will _____.
5. Will a binding minimum wage lead to relatively less unemployment when the demand for labor is inelastic or when it is elastic?

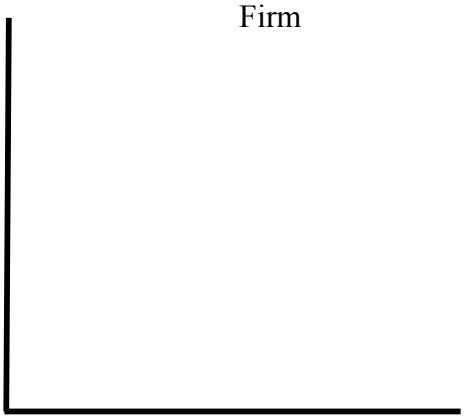
Perfectly Competitive Labor Market and Firm

Draw side-by-side graphs showing a perfectly competitive market and firm hiring workers

Market



Firm



Calculating MRP and MRC

Number of Workers	Total Product	Marginal Product	Marginal Revenue Product
0	0	-	-
1	5		
2	13		
3	18		
4	21		
5	20		

1. Assume perfectly competitive product and labor markets. If the price of the product is $5 and the wage is $20, how many workers should be hired?
2. How much is the profit or loss?
3. Assume that this firm develops a process that makes only their workers more productive. The wage will _____ and the quantity will _____.

Plot the MRP and MRC for the firm

Combining Resources

Least cost rule when combing resources-

Profit maximizing rule for combing resources-

Assume a company uses two resources, workers and robots, and the MRC for each is $20. Currently the MRP of the last worker hired is $30 and the MRP of the last robot is $10. The company should ____ the number of workers and ____ the number of robots.

Monopsony

Draw a monopsony and label the unregulated wage and quantity

Unit 6: Market Failures and the Role of the Government

Public Goods

Why are public goods a market failure?

Two Characteristic of Public Goods:
1. Nonexclusion-

2. Shared consumption-

Maximizing Rule for Public Goods-

Externalities

Negative Externality-

Positive Externality-

Why are externalities a market failure?

Tragedy of the Commons-

Negative Externalities

Draw a negative externality. Label the free market quantity, optimal quantity, and deadweight loss

Positive Externalities

Draw a positive externality. Label the free market quantity, optimal quantity, and deadweight loss

Correcting Externalities

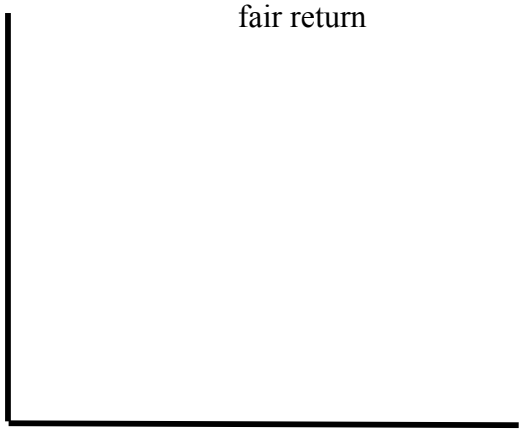
Solutions to solve a negative externality-

Solutions to solve a positive externality-

How does Coase Theorem seek to solve negative externalities?

Regulating Monopolies

Label a monopoly unregulated, socially optimal, and fair return



Thanks for buying this packet. Seriously. Thank you!

Income Inequality

What are transfer payments?

What is the Gini Coefficient?

What would happen to the Gini Coefficient if the government increased the amount it taxes wealthier citizens and increase transfer payments to the poor?

Draw and label the Lorenz Curve showing equal distribution of income and the actual distribution

Types of Taxes

1. Progressive Tax-
2. Proportional Tax-
3. Regressive Tax-

Income Distribution Practice

1. What is the difference between income inequality and wealth inequality?
2. An increase in job training for low-skilled workers would likely _____ income inequality and cause the Gini coefficient to _____.

Tax Incidence

Draw a competitive market with relatively inelastic demand and relatively elastic supply. Draw an excise tax and label the amount consumers and producers pay of tax

Who pays more of the tax:

1. If demand is elastic and supply is inelastic?
2. If demand is inelastic and supply is elastic?
3. If demand is perfectly inelastic?

Congratulations! You're done with microeconomics

Microeconomics 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
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

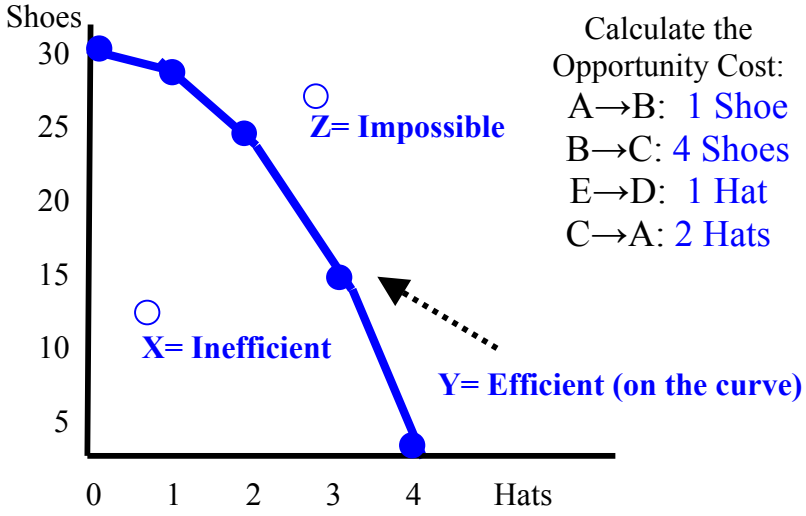
1. Centrally Planned Economies
Economic system where the government owns the resources and decides what to make, how to make it, and who gets it. Total government control of the economy
2. Free-Market Economies (Capitalism)
Economic system where individual citizens own the resources and decides what 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.

	A	B	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

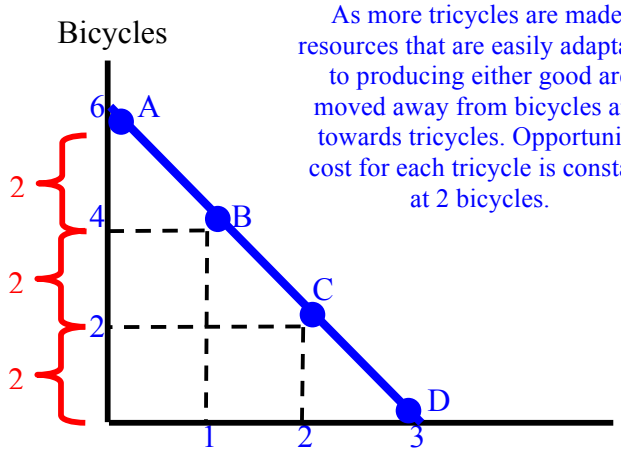


Calculate the Opportunity Cost:
A→B: 1 Shoe
B→C: 4 Shoes
E→D: 1 Hat
C→A: 2 Hats

Constant Opportunity Cost

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

Draw the graph below

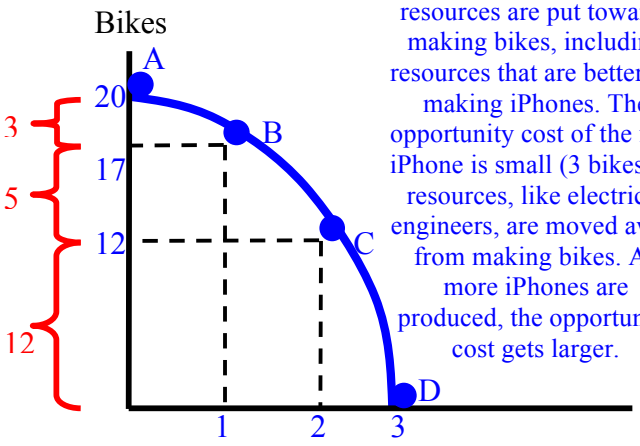


As more tricycles are made, resources that are easily adaptable to producing either good are moved away from bicycles and towards tricycles. Opportunity cost for each tricycle is constant at 2 bicycles.

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 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 cost gets larger.

Efficiency

Difference between allocative and productive efficiency:

Productive Efficiency- Products are being produced in the least costly way (any point ON the curve)

Allocative Efficiency- The products being produced are the ones most desired by society. *Optimal* point depends on the desires of society.

Shifting the PPC

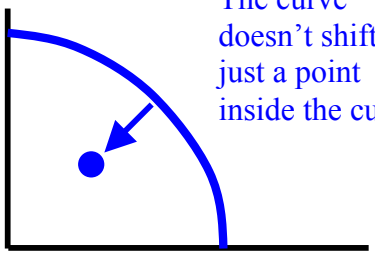
Identify the three shifters of the PPC

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)

Scenario: Workers loose their jobs due to a recession

Pizza

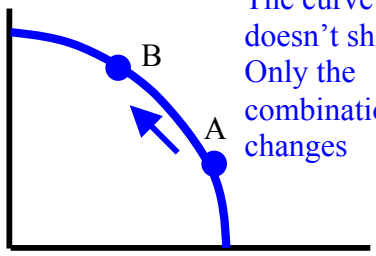


Cars

The curve doesn't shift. It is just a point inside the curve

Scenario: Increase in consumer demand for pizza

Pizza

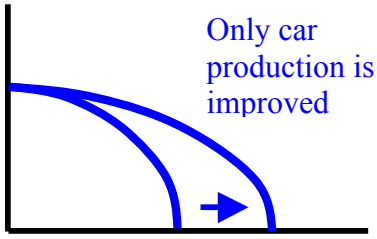


Cars

The curve doesn't shift. Only the combination changes

Scenario: More resources that improve the production of cars

Pizza



Cars

Only car production is improved

Absolute and Comparative Advantage

Output Questions

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

	Sugar (tons)	Cars
Cuba	40 (1S costs ¼ Car)	10 (1C costs 4 Sugar)
Mexico	50 (1S costs 2 Cars)	100 (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 ___1___ Sugar (any number between 4 and ½)

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)

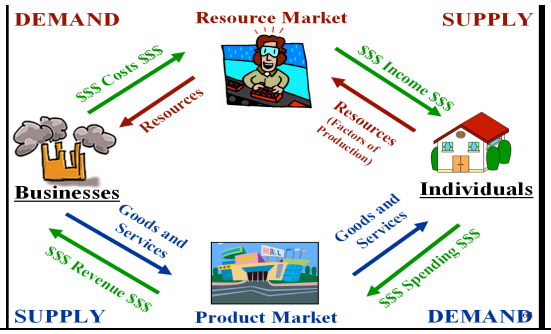
Product Market- Places where individuals buy goods and services from businesses

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)

Draw the Circular Flow Matrix



People that put this online are jerks

Microeconomics Unit 2: Demand, Supply, and Consumer Choice

Demand

The Law of Demand:
Inverse relationship between price and quantity demanded

P↑ Qd __↓_
P↓ Qd __↑_

Supply

The Law of Supply:
Direct relationship between price and quantity supplied

P↑ Qs _↑__
P↓ Qs _↓__

What is the different between a change in quantity demanded and a change in demand?

A change in quantity demanded is movement along the curve due to a change in price. A change in demand is when the entire demand curve shifts left or right due to a change in one of the shifters

Changes in Demand and Supply (Shifting the Curve)

What changes demand? (5 Shifters of Demand)

1. Tastes and preferences
2. Number of consumers
3. Price of related goods- Substitutes and complements
4. Income
5. Future expectations

What changes supply? (5 Shifters of Supply)

1. Prices/availability of inputs (resources)
2. Number of producers
3. Technology
4. Government action: taxes & subsidies
5. Expectations of future profit

Substitutes: Price of A↑ Demand for B __↑_
Price of A↓ Demand for B __↓_

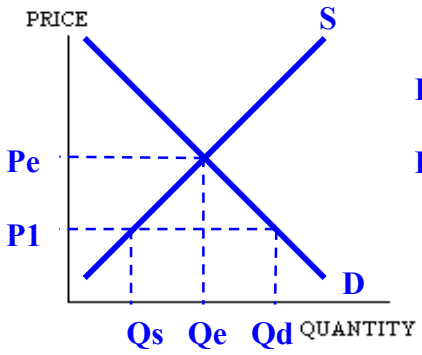
Complements: Price of A↑ Demand for B __↓_
Price of A↓ Demand for B __↑_

Normal Goods: Income ↑ Demand ___↑_
Income ↓ Demand ___↓_

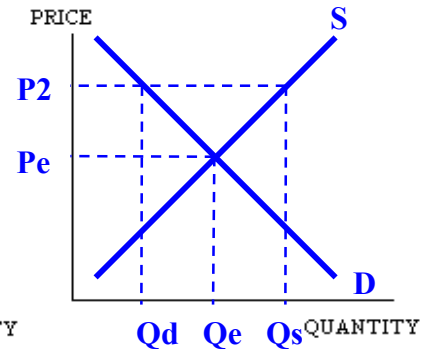
Inferior Goods: Income ↑ Demand ___↓_
Income ↓ Demand ___↑_

Equilibrium and Disequilibrium

Draw a shortage



Draw a surplus



Government Involvement

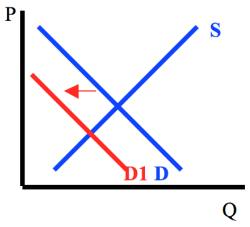
Price Ceiling- Legal cap on prices designed to keep prices artificially low
When binding, ceilings go _below__ equilibrium and result in a shortage.

Price Floor- Minimum legal price sellers can sell a product
When binding, floors go __above_ equilibrium and result in a surplus.

Subsidy- Government payment to producers designed to encourage them to produce more

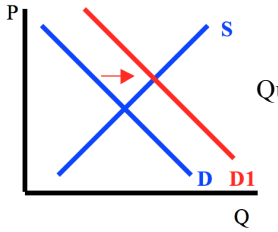
Supply and Demand Practice

Demand Decrease



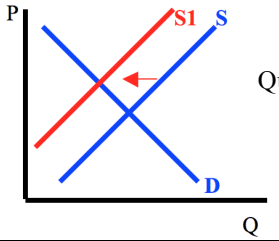
Price _↓_
Quantity _↓_

Demand Increase



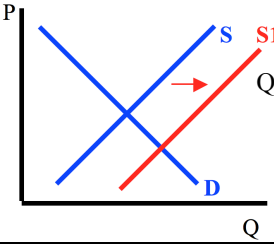
Price _↑_
Quantity _↑_

Supply Decrease



Price _↑_
Quantity _↓_

Supply Increase

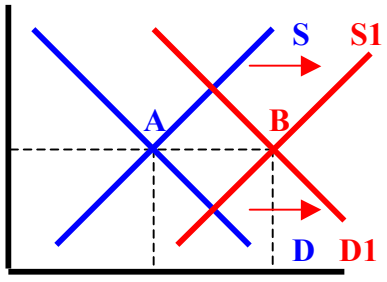


Price _↓_
Quantity _↑_

Double Shift Practice

If demand increases AND supply increases then price _indeterminate_ and quantity __increases__

Price



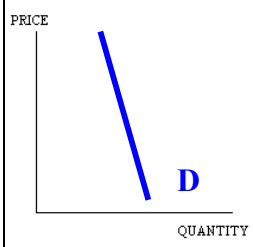
Quantity

Double Shift Rule: If TWO curves shift at the same time, EITHER price or quantity will be indeterminate.

Thanks for supporting Jacob Clifford and ACDC Econ!

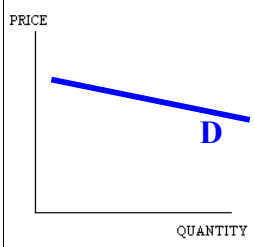
People that put this online are jerks

Inelastic Demand



Characteristics
1. Necessity
2. Few Substitutes
3. Elasticity coefficient less than 1

Elastic Demand



Characteristics
1. Luxury
2. Many Substitutes
3. Elasticity coefficient greater than 1

Total Revenue Test

Inelastic Demand
Price ↑, TR __↑__
Price ↓, TR __↓__
Elastic Demand
Price ↑, TR __↓__
Price ↓, TR__↑ __

Elasticity of Demand Coefficient

Equation-
Percent change in quantity demanded
Percent change in price
Perfectly Inelastic = **0**
Relatively Inelastic = **Less than 1**
Unit Elastic = **1**
Relatively Elastic = **Greater than 1**
Perfectly Elastic = **∞**

Elasticity of Supply Coefficient

Equation-
Percent change in quantity supplied
Percent change in price
Perfectly Inelastic = **0**
Relatively Inelastic = **Less than 1**
Unit Elastic = **1**
Relatively Elastic = **Greater than 1**
Perfectly Elastic = **∞**

Cross-Price Elasticity of Demand

Definition- Shows what happens to one product when the price changes for a different product
Equation- Percent change in quantity of product A / Percent change in price of product B
Positive: _Substitute_ Negative: _Complement_

Income Elasticity of Demand

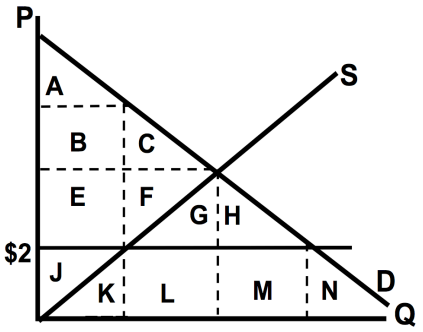
Definition- Shows what happens to a product when there is a change in income
Equation- Percent change in quantity / Percent change in income
Positive _Normal good_ Negative _Inferior good_

Consumer Surplus (CS) and Producer Surplus (PS)

Consumer Surplus (CS)- Difference between how much people are willing to pay and the price they do pay
Producer Surplus (PS)- Difference between the price and how much the seller is willing to sell the product for
Deadweight Loss (DWL)- Lost efficiency when the optimal quantity is not being produced

Identify at equilibrium
1. CS- ABC
2. PS- EFJ
3. DWL- None

Identify when there is a price ceiling at $2
4. CS- ABE
5. PS- J
6. DWL- CF

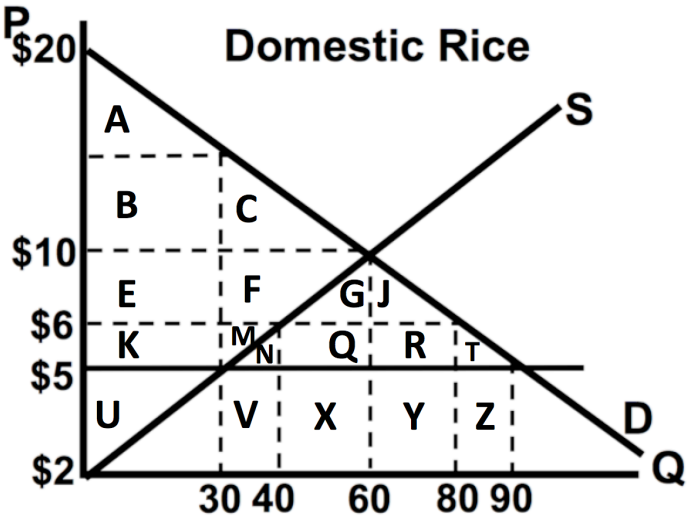


Welfare Economics and International Trade

The graph shows the domestic market for rice.
Identify and calculate the following at equilibrium
1. Consumer surplus- ABC = $300 = ($10 x 60)/2
2. Producer surplus- EFKMU = $240
3. Total surplus- ABCEFKMU= $540

Identify the following if this country buys rice from other countries for $5
4. Quantity produced domestically- 30 units
5. Quantity imported- 60 units = (90 – 30)
6. Consumer surplus- ABCEFGJKMNQRT
7. Producer surplus- U

Identify if the government places a tariff of $1
8. Consumer surplus- ABCEFGJ
9. Tariff revenue- QR = $40 ($1 x 40 units)
10. Deadweight Loss- NT



People that put this online are jerks

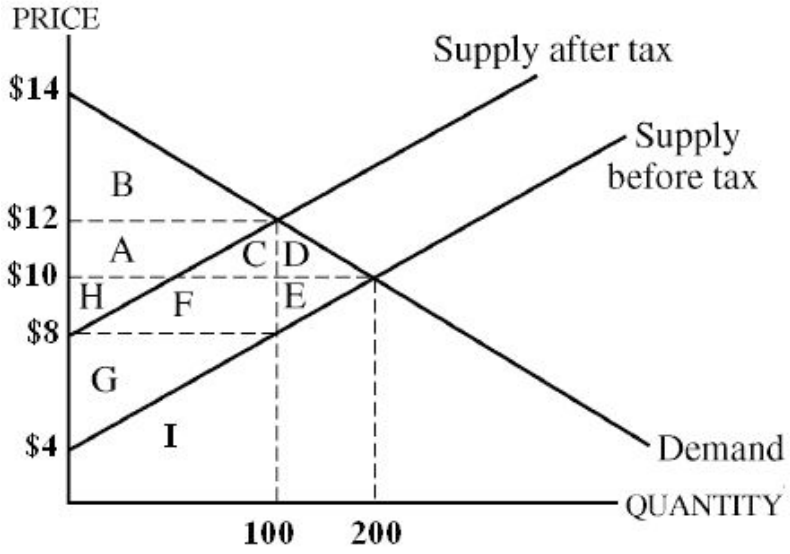
Excise Tax Practice

Before tax

1. CS before tax: BACD
2. PS before tax: GHFE

After Tax

3. Tax per unit: $4 Per Unit
4. CS after tax: B
5. PS after tax: G
6. Dead weight loss: DE
7. Total tax revenue to gov: ACHF
8. Total spending by buyers: ACHFGI
9. Total revenue to sellers: GI
10. Total amount of tax buyer pay: AC
11. Total amount of tax sellers pay: HF
12. Is the demand curve between $12 and $10 elastic, inelastic, or unit elastic?
Elastic. Price fell and total revenue went up



Consumer Choice and Maximizing Utility

Utility Maximizing Rule:

$$\frac{\text{Marginal Utility A}}{\text{Price of A}} = \frac{\text{Marginal Utility B}}{\text{Price of B}}$$

You can choose any combination of two different activities, the movies ($10) or riding go carts ($5).

1. If you only have $25, what combination maximizes your utility? **2 movies and 1 go cart because you pick the one that gives you the most additional utility per dollar until all the money is spent.**
2. What combo is best if you have $40?
3 Movies and 2 Go Cart

# Times Going	Marginal Utility (Movies)	MU/P	Marginal Utility (Go Carts)	MU/P
1st	30	**3**	10	**2**
2nd	20	**2**	5	**1**
3rd	10	**1**	2	**.4**
4th	5	**.5**	1	**.2**

3. What is the total utility from consuming 3 movies and 2 go carts? 75 utils = 30+20+10+10+5

…on second thought, don't punch them. E-mail me their name and address. I'll take care of it.

Unit 3: Costs of Production and Perfect Competition

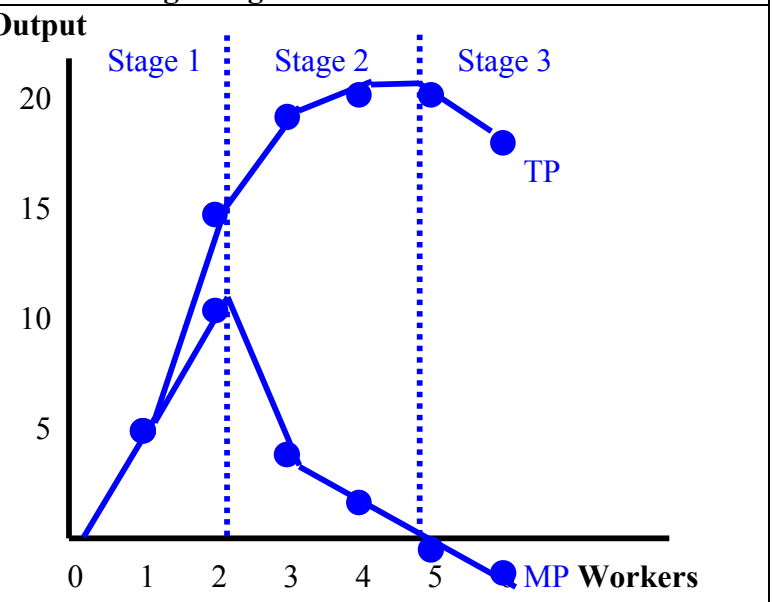
Production and the Law of Diminishing Marginal Returns

Calculate MP. Plot TP and MP on Graph

Number of Workers	Total Product	Marginal Product
0	0	-
1	5	5
2	15	10
3	19	4
4	20	1
5	20	0
6	18	-2

Define the Law of Diminishing Marginal Returns
As variable resources are added to fixed resources, the additional output from each new worker will eventually fall.

After which worker does diminishing marginal returns set in? After the 2nd Worker



Identify the three stages of returns: increasing, decreasing, and negative marginal returns

Revenue and Costs (Define the following)

Total Revenue-
Price x Quantity

Accounting Profit-
Total Revenue – Explicit Costs

Economic Profit-
Total Revenue – Explicit and Implicit Costs

Normal Profit-
Zero Economic Profit (breaking even)

Fixed Cost (FC)- Costs that DON'T change as you produce more (ex: rent, insurance, etc.)

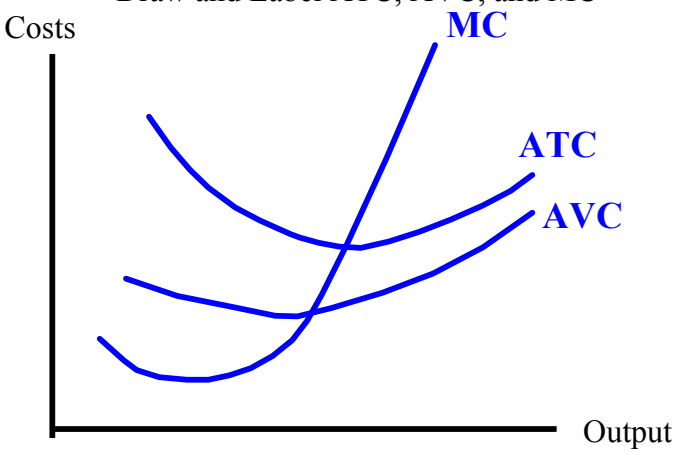
Variable Cost (VC)- Costs that DO change as you produce more (wages to workers, raw materials, etc.)

Total Cost (TC)- Fixed Costs + Variable Costs

Marginal Cost (MC)- Additional cost to produce one additional output.

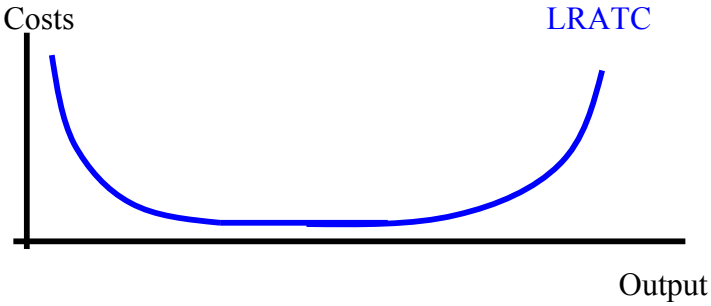
Short Run Cost Curves (at least one fixed resource)

Draw and Label ATC, AVC, and MC



Vertical distance between ATC and AVC is AFC

Long-Run Cost Curves (all resources are variable)



Economies of Scale- Long run average total cost (LRATC) falls because mass production techniques are used.

Diseconomies of Scale- Long run average total cost (LRATC) increase as the firm gets too big and difficult to manage.

Calculating ATC, AVC, AFC, and MC

Fill in the blanks for a firm producing boxes of oranges:

Output (boxes)	Variable Cost	Total Cost	AVC	AFC	ATC	MC
0	$0	$10	-	-	-	-
1	20	$30	$20	$10	$30	$20
2	30	$40	$15	$5	$20	$10
3	60	$70	$20	$3.3	$23	$30
4	100	$110	$25	$2.5	$27	$40

Assume this firm is in a perfectly competitive market and the price is $35 for each box.

1. How many boxes should they produce? Why? 3 Boxes of Oranges, Firms should produce as long as the additional revenue of a unit is greater than the additional cost. To maximize profit, produce where MR = MC
2. Calculate the profit at that quantity
   TR= $105 and TC =$70, Profit = $35

Shut Down Point

Shut Down Rule: A firm should shut down if the price fall below the minimum AVC

Short-Run Supply Curve: The MC curve above minimum AVC

Per-Unit vs. Lump-Sum

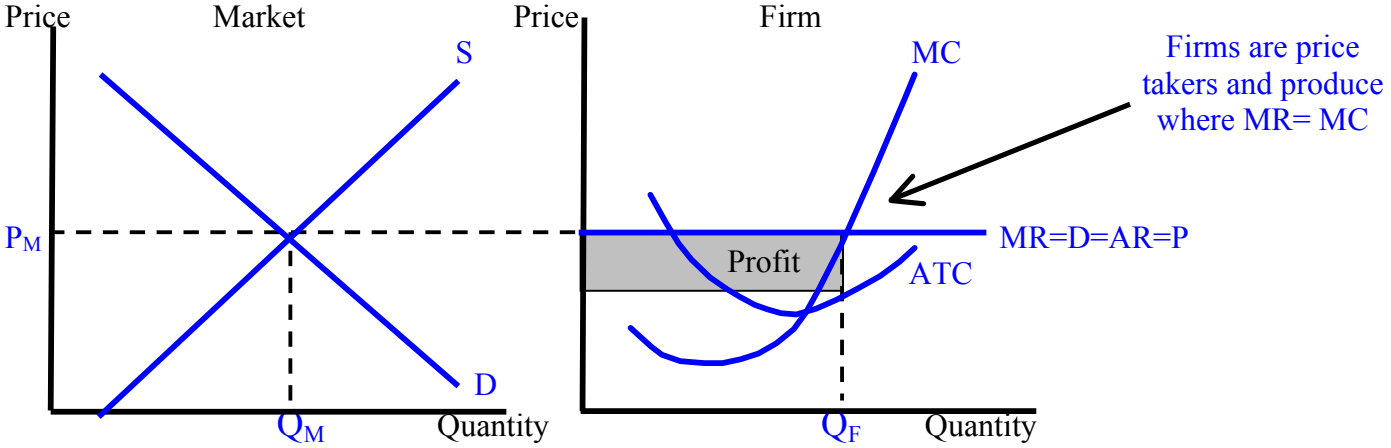
1. A per unit tax shifts _MC, AVC, and ATC_ so quantity will _____Change (decrease)____.
2. A lump sum tax shifts __AFC and ATC__ so quantity will _____NOT change_____.

Characteristics of Perfect Competition

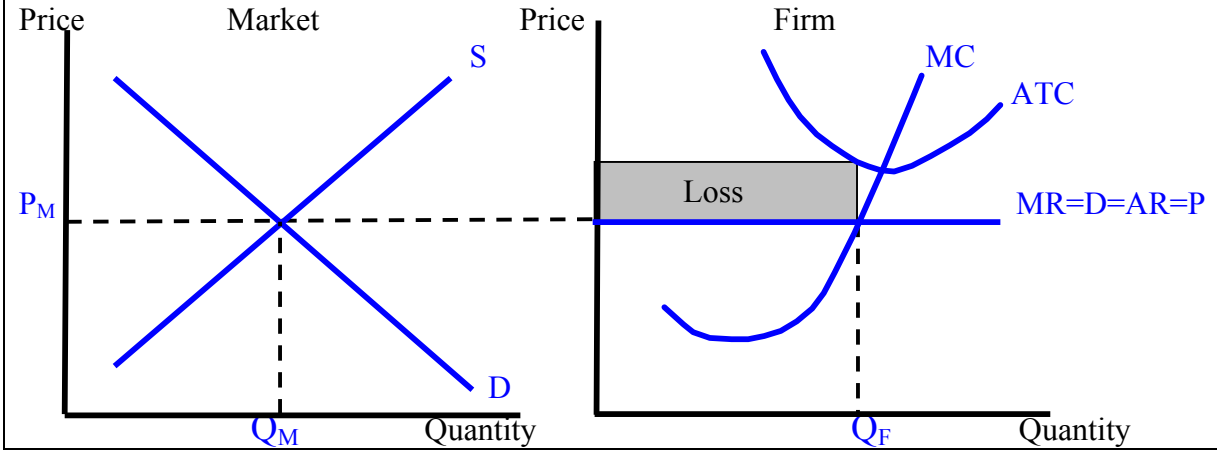
1. Many small firms
2. Identical products
3. No barriers to entry
4. No control over the price
5. No economic profit in long run
6. Efficient

Graphing Perfect Competition

Draw side-by-side graphs showing a perfectly competitive market and firm. Draw the firm making profit



Draw a perfectly competitive market and a firm with the firm making a loss



Calculation Practice

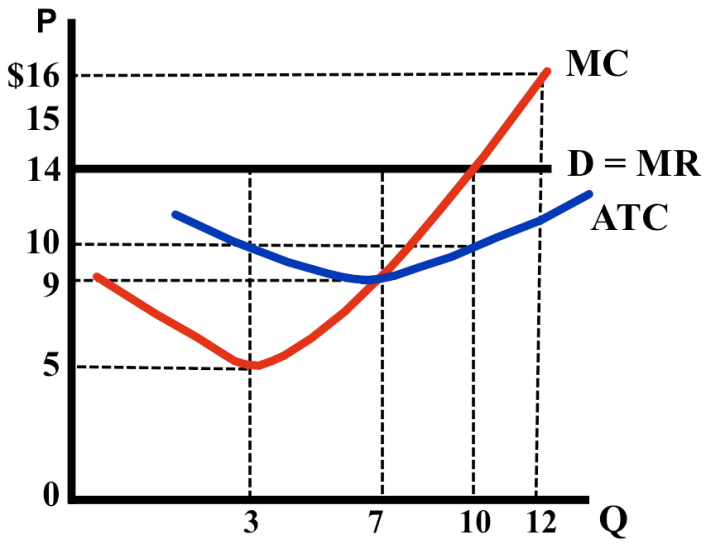
Assume the price is $14 and the firm produces the profit maximizing quantity. Identify the following:

1. Quantity- 10 units (MR=MC)
2. Total revenue- $140 = $14 x 10 units
3. Total cost- $100 = $10 x 10 units
4. Economic profit- $40 = $140 - $100
5. What will happen to the number of firms in the market in the long run? Increase, firms will enter

Assume the market adjust to the long run. Identify:

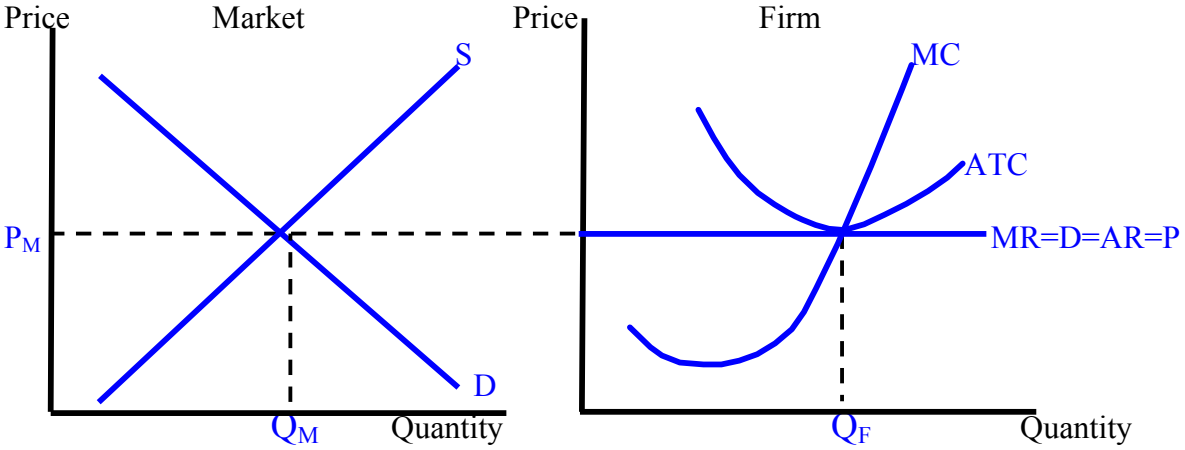
6. Price- $9 (No economics profit, minimum ATC)
7. Quantity- 7 Units (MR=MC)
8. What will happen to number of firms in the market? Not change. No incentive to enter or leave

If the price was $5, should the firm shut down in the short run? Can't tell, need an AVC curve to know



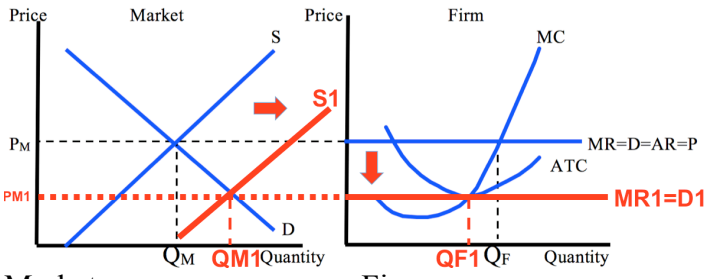
Perfect Competition in the Long Run

Draw side-by-side graphs showing a perfectly competitive market and firm in long run equilibrium



From Short Run to Long Run

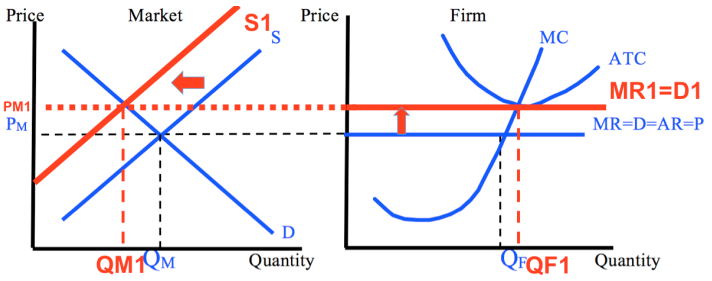
Draw what happens to each graph in the long run



Market: Price_↓_ Quantity _↑_

Firm: Price_↓_ Quantity_↓_

Draw what happens to each graph in the long run



Market: Price_↑_ Quantity _↓_

Firm: Price_↑_ Quantity_↑_

Efficiency in the Long Run

In the long run, perfectly competitive firms have both types of efficiency:

1. Productive Efficiency: they produce the quantity that is the lowest cost (Minimum ATC)
2. Allocative Efficiency: they produce the optimal quantity that society wants (Price = MC)

Did you buy this packet? You did! Ok, we're cool

Unit 4: Imperfect Competition

Characteristics of the Four Market Structures

Perfect Competition	Monopolistic Competition	Oligopoly	Monopoly
• Many small firms • Identical products • Easy to enter and exit • No need to advertise • Firms are "Price Takers"	• Large number of sellers • Differentiated products • Easy to enter and exit • A lot of non-price competition • Some control over price	• A Few Large Firms (Less than 10) • High Barriers • Control Over Price • Mutual Interdependence	• One firm • Unique product • High barriers to enter and exit • Price Maker

Demand and Marginal Revenue

Why is demand greater than marginal revenue for all imperfectly competitive firms?

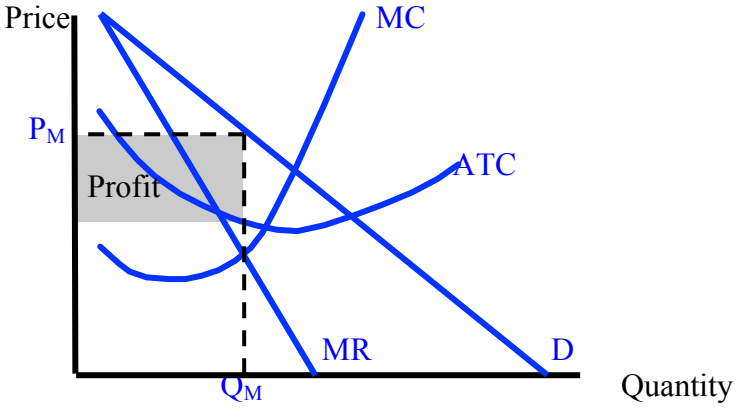
To sell another unit, the firm must lower the price of the next unit and the units it could have sold at a higher price. (It cannot price discriminate)

Why are monopolies inefficient?

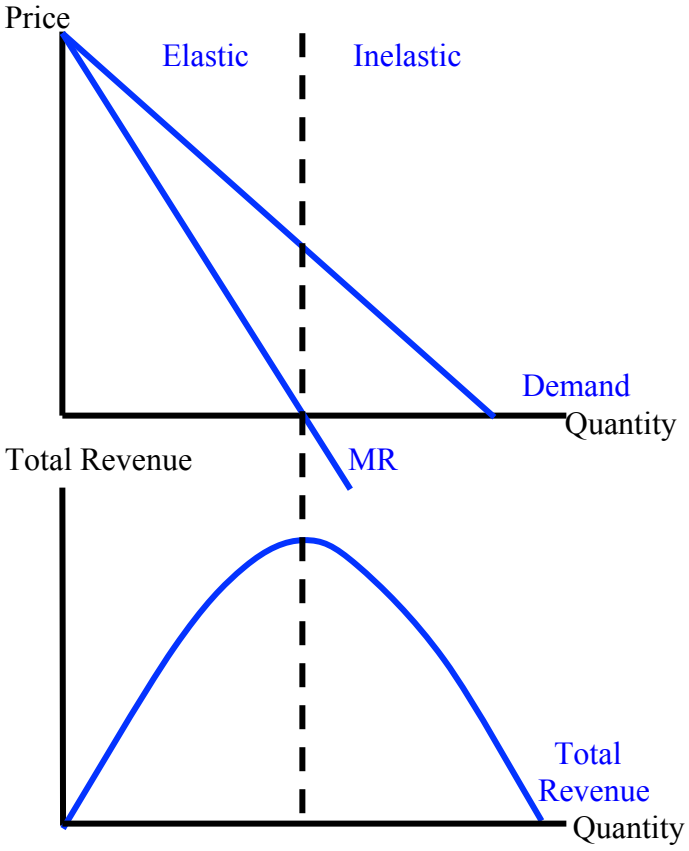
1. Price is too high
2. Quantity is too low
3. They cause deadweight loss (P > MC)

Monopoly Graph (profit)

Draw and label a monopoly making profit

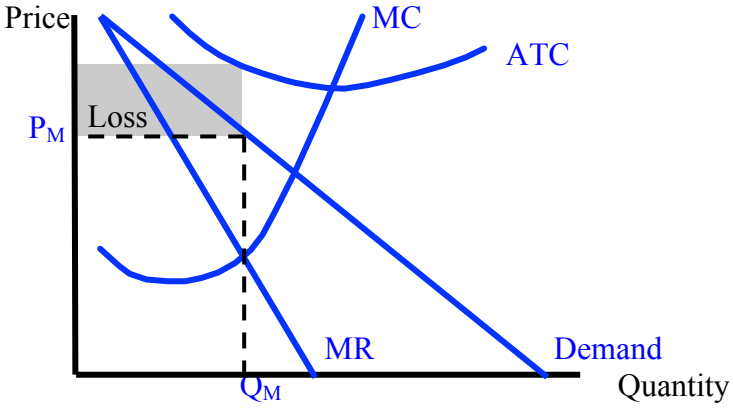


Elastic and Inelastic Range



Monopoly Graph (loss)

Draw and label a monopoly making a loss



Barriers to Entry

Identify four common barriers that allow companies to gain and maintain market power

1. Economies of Scale
2. Control of Scare Resources
3. Governmental or Legal Barriers
4. Technological Superiority

Natural Monopolies

What is a natural monopoly?

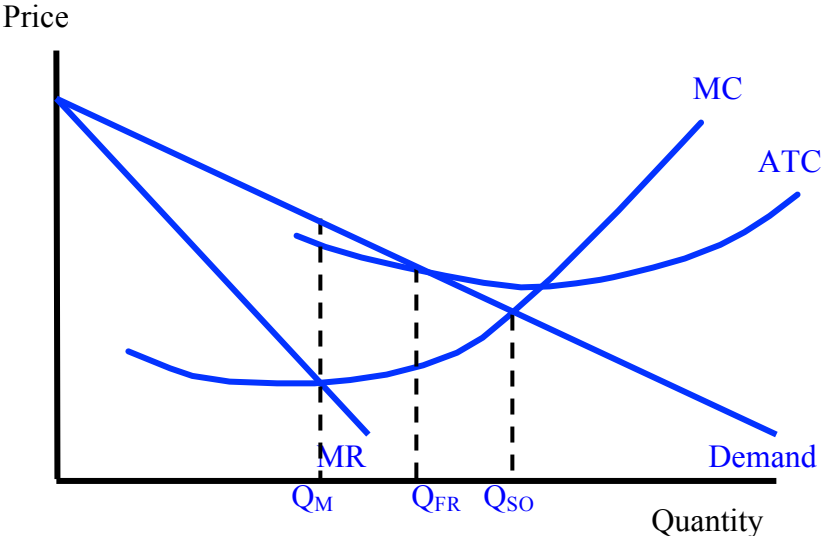
An industry where it is cheaper and more efficient to have a monopoly rather than several smaller competing firms. Example: electric companies

If your teacher gave you this without paying, they are a jerk

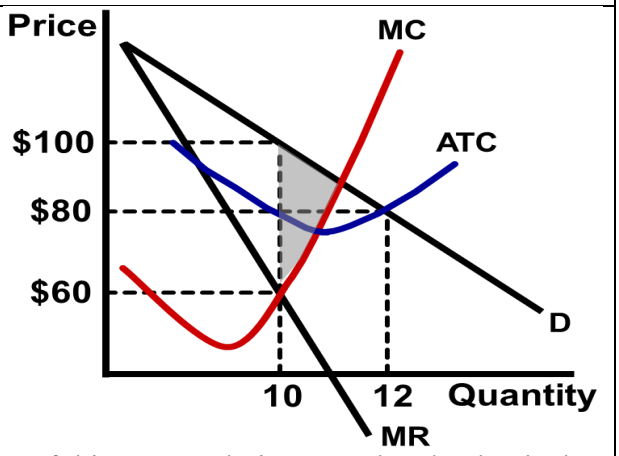
Did you buy this packet? You did! Ok, we're cool

Regulating Monopolies

Draw a natural monopoly. Identify: unregulated quantity (Q_M), socially optimal quantity (Q_{SO}) and fair return quantity (Q_{FR})

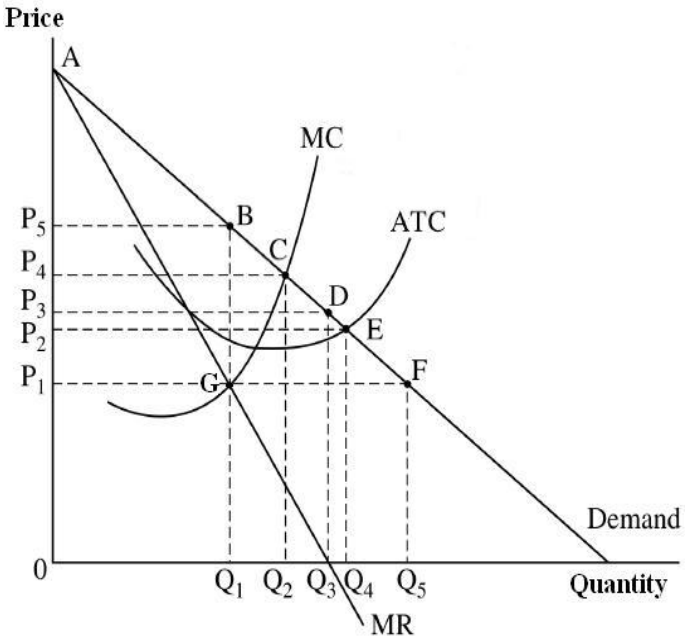


Calculation Practice



1. If this monopoly is unregulated, what is the total revenue, total cost, and profit?
TR= $1000, TC = $800, Profit =$200
2. Shade in Deadweight loss
See above

Monopoly Practice



If this was competitive market

1. Price and quantity: P_4, Q_2
2. Consumer surplus: ACP_4

If this is an unregulated monopoly

3. Price and quantity: P_5, Q_1
4. Consumer surplus: ABP_5
5. Deadweight loss: BCG
6. Quantity total revenue maximized: Q_3 MR=0
7. Quantity if it perfectly price discriminates: Q_2
8. Elastic range of the demand curve: AD
9. If the government placed a per unit tax on this monopoly then price __↑_ and quantity __↓_
10. If the government placed a lump sum subsidy on this monopoly then price same and quantity same. (Lump sum subsidies don't shift MC)

Price Discrimination

Identify the three conditions necessary for a firm to price discriminate

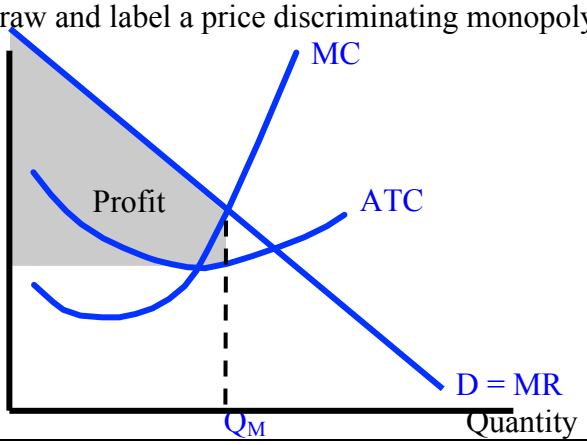
1. The firm must not be a price taker
2. The firm must be able to segregate the market and identify consumers that are willing to pay more
3. The firm must be able to make sure consumers cannot resell the product to other consumers

If a regular unregulated monopoly started perfectly price discriminating, what would happen to consumer surplus and deadweight loss?

There would be no consumer surplus and no deadweight loss

Perfectly Price Discriminating Monopoly

Draw and label a price discriminating monopoly



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Oligopolies and Game Theory

1. If David decides to advertise now and Lindsey decides to do it later, what is David's expected profit? $1000
2. What is Lindsey's dominant strategy? Now
3. What is David's dominant strategy? None
4. If both owners have the information but do not actively collude, what will be the outcome?
   Both will choose Now

Assume the advertising company offers a deal that increases the profit for both owners by $2,000 but only if they advertise later. Based on these changes:

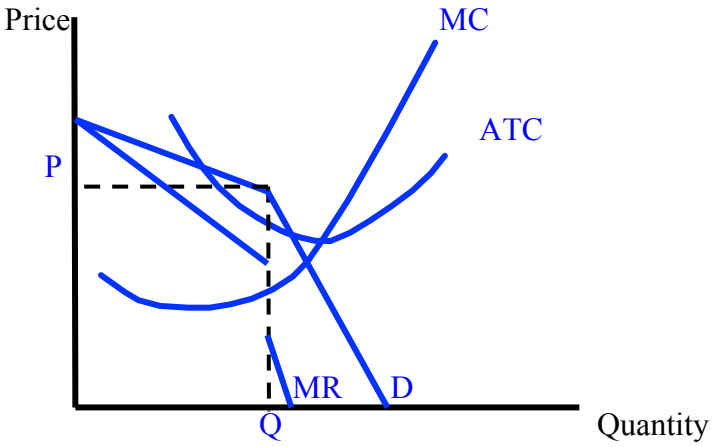
5. What is Lindsey's dominant strategy? None
6. What is David's dominant strategy? Later

Assume that two business owners are deciding between advertising now and advertising later. The chart shows expected profit with Lindsey's on the left

		David: Now	David: Later
Lindsey	Now	$5,000, $4,000	$3,000, $3,500
	Later	$900, $1,000	$1,500, $1,800

Kinked Demand Curve

Draw non-colluding oligopoly



Nash Equilibrium

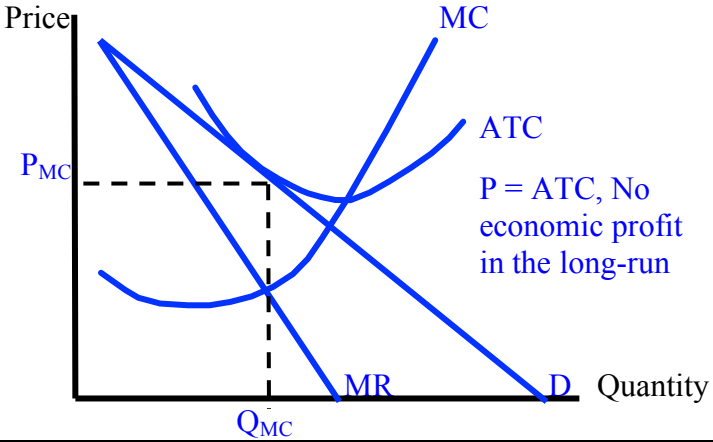
Definition of Nash Equilibrium-
The optimal outcome where neither player can make themselves better off by deviating from the current strategy

		Firm 2: High	Firm 2: Low
Firm 1	High	**$100, $50**	**$60, $90**
	Low	**$50, $40**	**$20, $10**

Assume these two firms can choose between pricing high and pricing low. What is the Nash Equilibrium?
Firm 1 High, Firm 2 Low ($60, $90)

Monopolistic Competition

Draw a Mono. Comp. firm in long-run equilibrium



Excess Capacity (define below and label on graph)
The gap between the minimum ATC output and the profit maximizing output.
Given current resources, the firm can produce at the lowest costs (minimum ATC) but they decide not to.

If a monopolistically competitive firm is making a profit in the short-run, what will happen to the demand and number of firms in the long run?

- New firms enter to make profit
- Firms must share same amount of consumers
- Demand for each firm falls until each firm makes no economic profit

What are examples of non-price competition?

- Brand names or packaging
- Product attributes
- Service
- Location

What are the two goals of advertising?

1. Increase the demand for the product or service
2. Make the demand more inelastic

Dude, please don't post this online

Unit 5: The Resource Market

Define Key Terms

The Resource (Factor) Market-
All markets where the factors of production (land, labor, capital) are sold by households to businesses

Demand for Labor-
The number of workers that businesses are willing and able to hire at different wages

Supply for Labor-
The number of workers that are willing and able to sell their labor at different wages

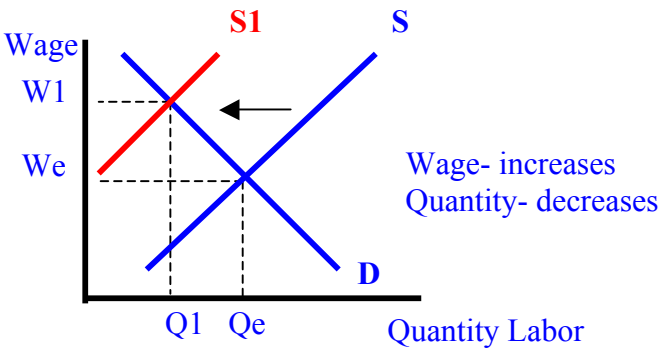
Derived Demand-
The demand for resources is determined (derived) by the products they help produce. (ex: the demand for carpenters is derived by the demand of homes)

Marginal Revenue Product (MRP)-
The additional revenue generated by an additional resource (worker).

Marginal Resource Cost (MRC)-
The additional cost of an additional resource (worker)

Demand and Supply for Labor

Draw a competitive market for plumbers. Label the equilibrium wage and quantity



Wage- increases
Quantity- decreases

Assume the government establishes a certification process that makes it harder to be a plumber. Show on the graph what will happen to the wage and quantity

Resource Shifters and Equilibrium

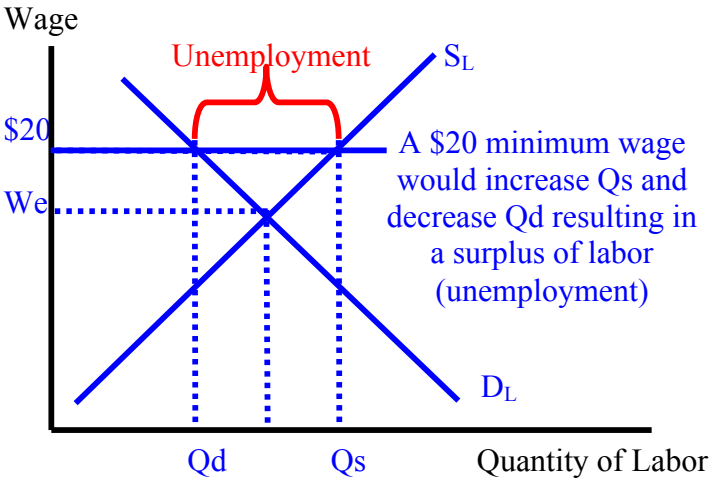
Shifters of Labor Demand-
1. Change in the demand for the product
2. Change in the productivity of the resource
3. Change in the price of related resources (substitute and complementary resources)

Shifters of Labor Supply-
1. Number of qualified workers
2. Government regulation/licensing
3. Personal values regarding leisure and societal roles

If the equilibrium wage for electricians is $15 an hour and the government established a minimum wage of $10 an hour, what will happen to the wage and quantity?
They will stay the same. The minimum wage is below equilibrium and is not binding for electricians

Minimum Wage

Draw the results of a minimum wage. Label the quantity supplies (Qs) & the quantity demanded (Qd)



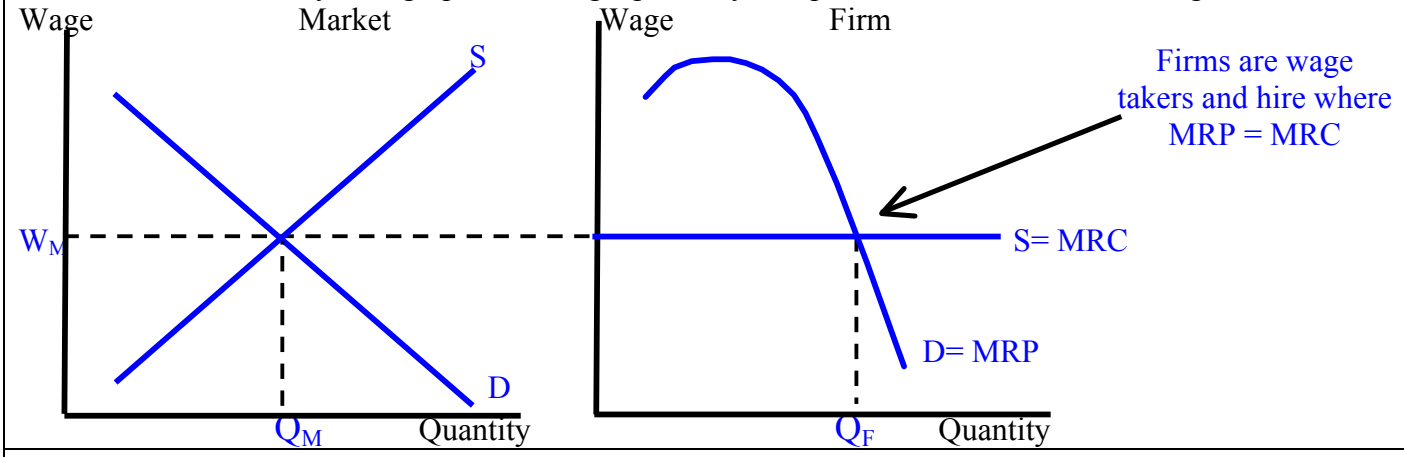
A $20 minimum wage would increase Qs and decrease Qd resulting in a surplus of labor (unemployment)

Labor Market Practice

1. If the demand for houses increases, the wage of carpenters will __↑__ and the quantity will __↑__.
2. Assume bricks and wood are substitute resources. If the price of bricks increases, the price of wood __↑___ and the quantity __↑___.
3. If the government removes all regulations for becoming a dentist. The wages for dentists will __↓__ and the quantity will __↑___.
4. If demand for accountants falls at the same time that the supply increases, the wage will __↓__ and the quantity will __be indeterminate___.
5. Will a binding minimum wage lead to relatively less unemployment when the demand for labor is inelastic or when it is elastic? When the demand is inelastic there will be less unemployment. The quantity demanded will decrease a little since employers still need these workers

Perfectly Competitive Labor Market and Firm

Draw side-by-side graphs showing a perfectly competitive market and firm hiring workers

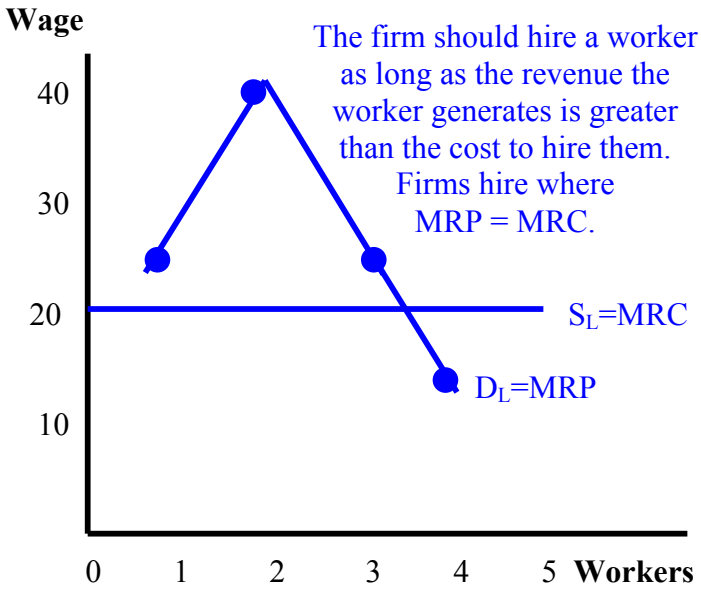


Calculating MRP and MRC

Number of Workers	Total Product	Marginal Product	Marginal Revenue Product
0	0	-	-
1	5	5	$25
2	13	8	$40
3	18	5	$25
4	21	3	$15
5	20	-1	$-5

1. Assume perfectly competitive product and labor markets. If the price of the product is $5 and the wage is $20, how many workers should be hired? 3
2. How much is the profit or loss? $90 - $60 = $30
3. Assume that this firm develops a process that makes only their workers more productive. The wage will __stay the same___ and the quantity will ___↑___.

Plot the MRP and MRC for the firm



Combining Resources

Least cost rule when combing resources-

$$\frac{\text{Marginal Product Labor}}{\text{Price of Labor}} = \frac{\text{Marginal Product of Capital}}{\text{Price of Capital}}$$

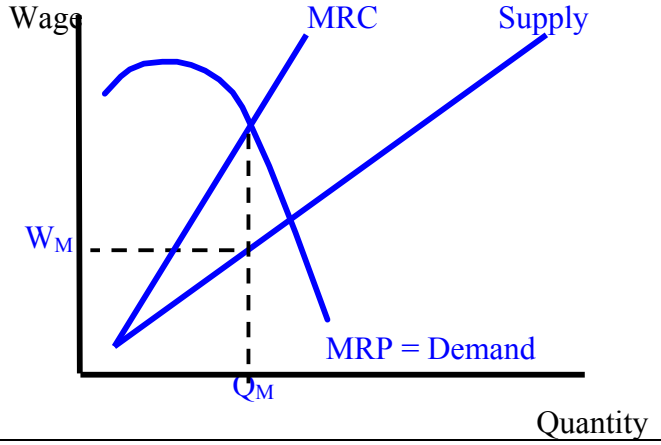
Profit maximizing rule for combing resources-

$$\frac{MRP_X}{MRC_X} = \frac{MRP_Y}{MRC_Y} = 1$$

Assume a company uses two resources, workers and robots, and the MRC for each is $20. Currently the MRP of the last worker hired is $30 and the MRP of the last robot is $10. The company should __↑__ the number of workers and __↓__ the number of robots.

Monopsony

Draw a monopsony and label the unregulated wage and quantity



Unit 6: Market Failures and the Role of the Government

Public Goods

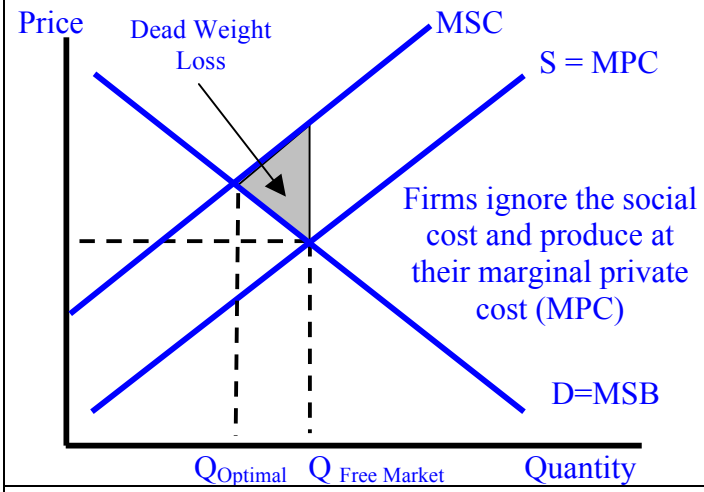
Why are public goods a market failure?
Businesses in the free-market won't provide public goods and service since they can't earn profit. If society wants them, the government needs to step in
Two Characteristic of Public Goods:
1. Nonexclusion-Cannot exclude benefits of the good. Everyone can use the good, even those that don't pay.
2. Shared consumption-One person's consumption of a good does not reduce the usefulness to others.
Maximizing Rule for Public Goods-
Public goods should be produced as long as the additional benefit to society is greater than the additional cost. Produce where MSB = MSC

Externalities

Negative Externality-
A situation that results in external costs on others causing the marginal social cost to be higher than the marginal private cost
Positive Externality-
A situation that results in external benefits on others causing the marginal social benefit to be higher than the marginal private benefit
Why are externalities a market failure?
They cause markets to produce the wrong output
Tragedy of the Commons-
A lack of property rights causes individuals to uses resources in a way that is contrary to the benefits of society (example- overfishing)

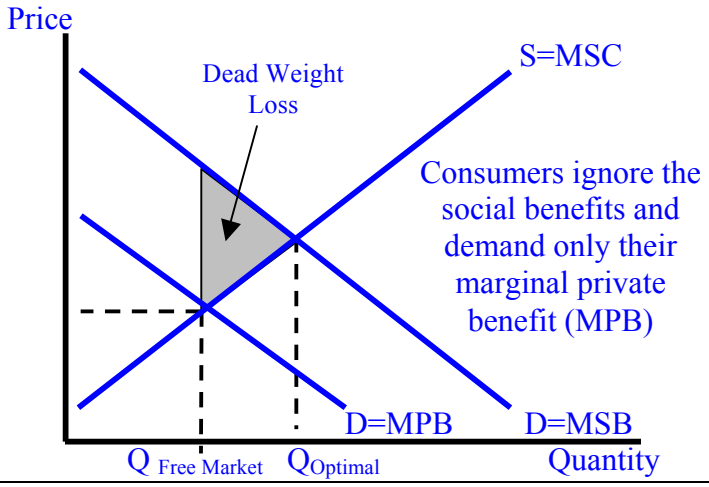
Negative Externalities

Draw a negative externality. Label the free market quantity, optimal quantity, and deadweight loss



Positive Externalities

Draw a positive externality. Label the free market quantity, optimal quantity, and deadweight loss

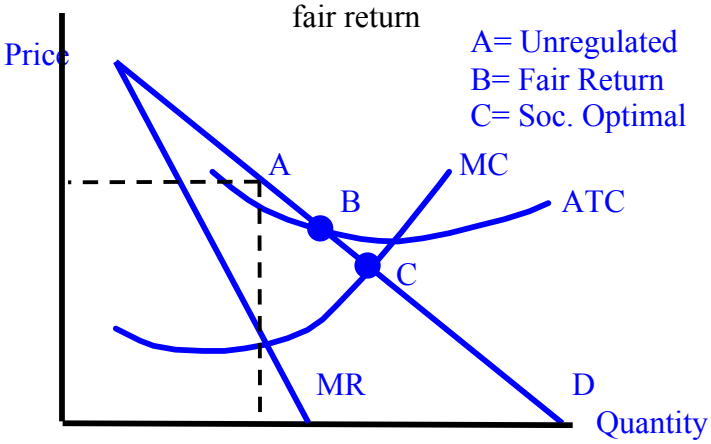


Correcting Externalities

Solutions to solve a negative externality-
Per unit tax
Government regulation decreasing output
Solutions to solve a positive externality-
Per unit subsidy
Government regulation that increases output
How does Coase Theorem seek to solve negative externalities?
Coase Theorem suggests that establishing property rights and allowing the parties involved to negotiate alternatives leads to a more efficient solution (Ex: businesses buy the right to pollute up to a set limit)

Regulating Monopolies

Label a monopoly unregulated, socially optimal, and fair return



Thanks for buying this packet. Seriously. Thank you!

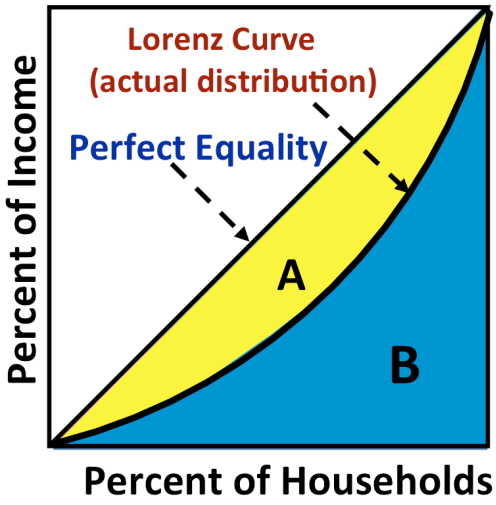
Income Inequality

What are transfer payments?
Government payments to individuals or businesses designed to meet a specific objective rather than pay for goods or resources. (Ex: Welfare)

What is the Gini Coefficient?
A statistical measurement of income equality where perfect equality is 0 and perfect inequality is 1. On the graph, it is Area A divided by the sum of areas A and B.

What would happen to the Gini Coefficient if the government increased the amount it taxes wealthier citizens and increase transfer payments to the poor?
The Gini coefficient would get smaller.

Draw and label the Lorenz Curve showing equal distribution of income and the actual distribution



Types of Taxes

1. Progressive Tax- takes a larger percent of income from high income groups (takes more percent from rich people).
2. Proportional Tax- takes the same percent of income from all income groups.
3. Regressive Tax- takes a larger percentage from low income groups (takes more percent from poor people).

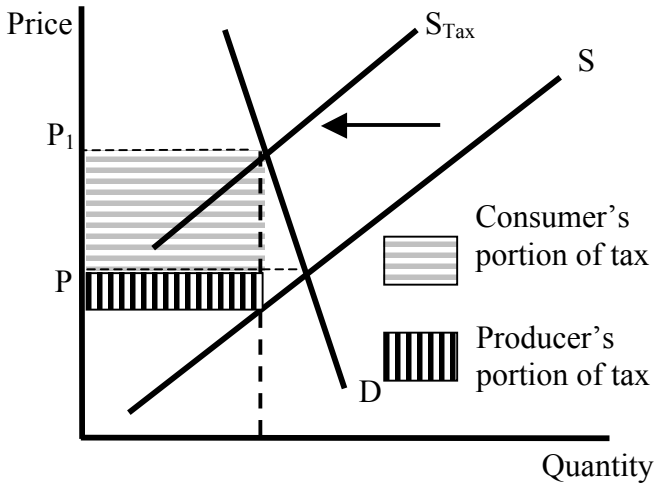
Income Distribution Practice

1. What is the difference between income inequality and wealth inequality?
Income looks at how earnings are distributed and wealth inequality looks at how assets are distributed

2. An increase in job training for low-skilled workers would likely ___↓___ income inequality and cause the Gini coefficient to ___↓___.

Tax Incidence

Label the amount consumers and producers pay of tax



Who pays more of the tax:
1. If demand is elastic and supply is inelastic? Producers
2. If demand is inelastic and supply is elastic? Consumers
3. If demand is perfectly inelastic? Consumers pay all

Congratulations! You're done with microeconomics