Name: _____
Team: _____

Unit 1: Basic Economics Concepts

Key Terms (Define the following)

1. Scarcity

2. Positive vs. Normative Economics

3. Trade-offs

4. Opportunity Cost

3 Economic Systems

1. Centrally Planned Economies (Communism)

2. Free-Market Economies (Capitalism)

3. Mixed Economies

Production Possibilities Curve (Frontier)*

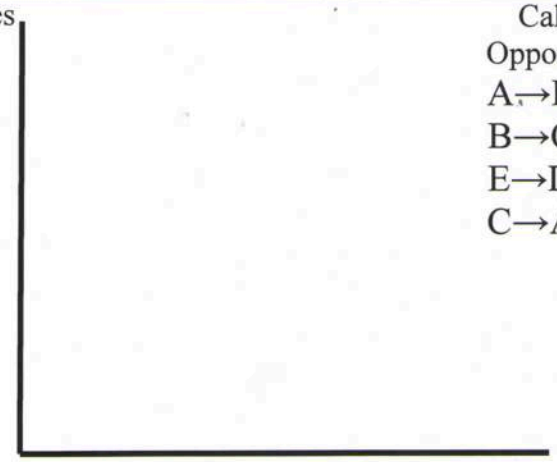
Use the chart to create a PPC to the right.

	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

Shoes



Hats

Calculate the Opportunity Cost:

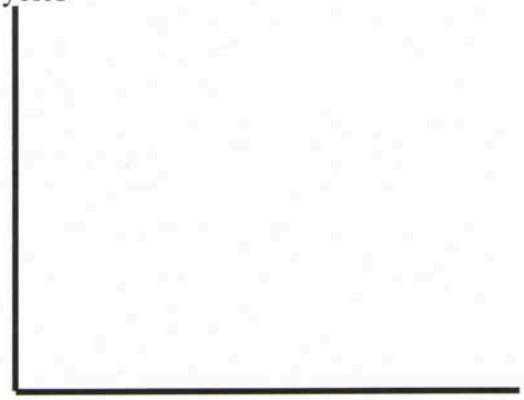
A→B: _____
B→C: _____
E→D: _____
C→A: _____

Constant Opportunity Cost*

Why does this occur?

Draw the graph below

Bicycles



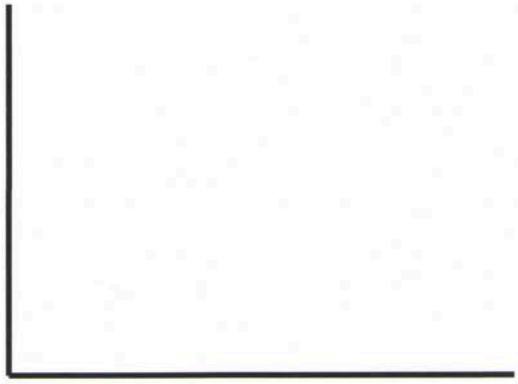
Tricycles

Increasing Opportunity Cost*

Why does this occur?

Draw the graph below

Bikes



iPhones

Name: _____
Team: _____

Efficiency	Shifting the PPC
Difference between allocative and productive efficiency:	Identify the three shifters of the PPC 1. 2. 3.

Shifting and Changes Practice (draw 3 PPCs with pizza and cars)

Scenario: Better resources for both products	Scenario: Increase in consumer demand for pizza	Scenario: Improvements in technology for only cars

Trade: Absolute and Comparative Advantage*

	Sugar (tons)	Cars
Cuba	40	10
Mexico	50	100

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

Circular Flow Model*

Resource Market

Businesses Government Individuals

Product Market

*See videos on YouTube channel ACDCLeadership

Name: _____
Team: _____

Unit 2: Demand, Supply, and Consumer Choice

Demand*	Supply*
The Law of Demand: P _____ Qd _____ P _____ Qd _____	The Law of Supply: P _____ Qs _____ P _____ Qs _____
Why is demand downward sloping? 1. 2. 3.	Why is supply upward sloping?

Changes in Quantity (Moving Along the Curve)

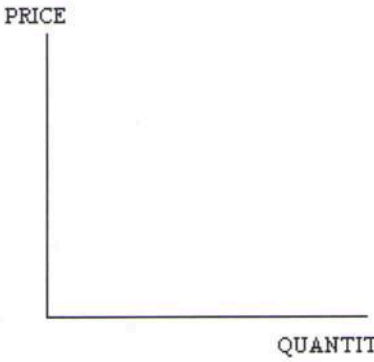
What changes quantity demanded?	What changes quantity supplied?

Changes in Demand and Supply (Shifting the Curve)

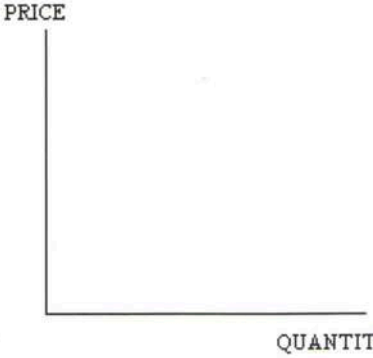
What changes demand? (5 Shifters of Demand)	What changes supply? (6 Shifters of Supply)
Substitutes : Price of A↑ Demand for B ____ Price of A↓ Demand for B ____ Complements: Price of A↑ Demand for B ____ Price of A↓ Demand for B ____	Normal Goods: Income ↑ Demand _____ Income ↓ Demand _____ Inferior Goods: Income ↑ Demand _____ Income ↓ Demand _____

Equilibrium and Disequilibrium*

Shortage



Surplus



Equilibrium- Qd____Qs

Shortage- Qd____Qs

Surplus- Qd____Qs

Government Controls*

Price FLOORS go _____ equilibrium and result in a _____.

Price CEILINGS go _____ equilibrium and result in a _____.

Name: _____

Team: _____

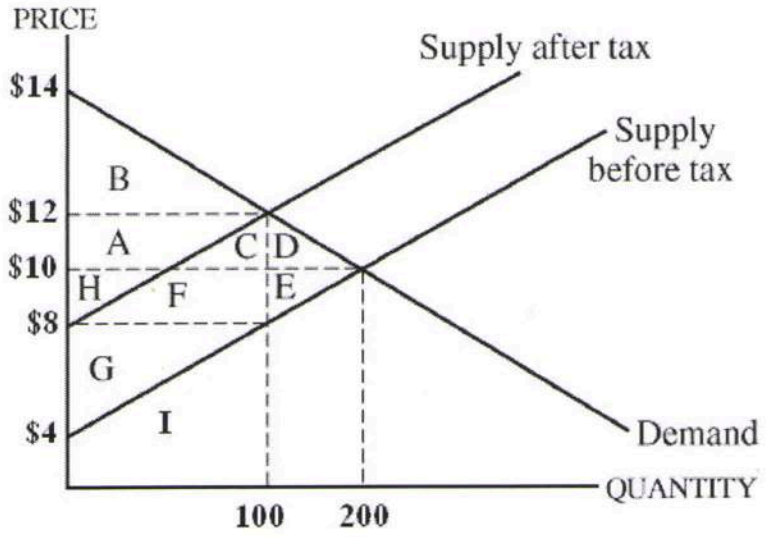
Consumer Surplus (CS), Producer Surplus (PS), and Efficiency*

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. Amount of tax buyer pay:
11. Amount of tax sellers pay:



Double Shifts in Demand and Supply*

If demand increase AND supply increases, what happens to P _____ Q_____?

Rule:

Elasticity of Demand*

Inelastic Demand (ex: gas)

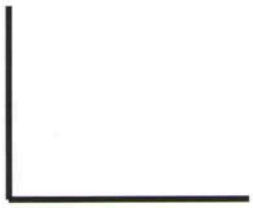
Characteristics:

1.
2.
3.

Elastic Demand (ex: soda)

Characteristics:

1.
2.
3.



Elasticity of Demand Coefficients*

- Perfectly Inelastic =
- Relatively Inelastic =
- Unit Elastic =
- Relatively Elastic =
- Perfectly Elastic =

Total Revenue Test*

Inelastic Demand

When price ↑, TR ____

When price ↓, TR ____

Elastic Demand

When price ↑, TR ____

When price ↓, TR ____

Consumer Choice and Maximizing Utility*

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

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

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	

*See videos on YouTube channel ACDCLeadership

Name: _____
Team: _____

Unit 3: Costs of Production and Perfect Competition

Production and the Law of Diminishing Marginal Returns*

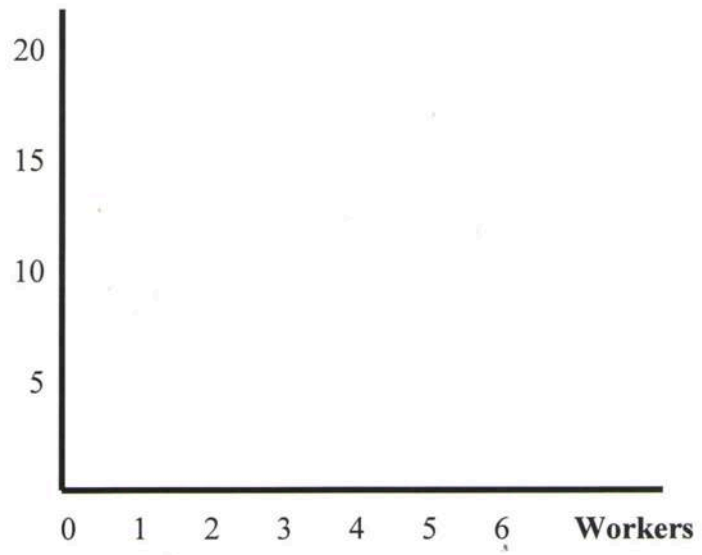
Calculate MP. Plot TP and MP on Graph

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)-

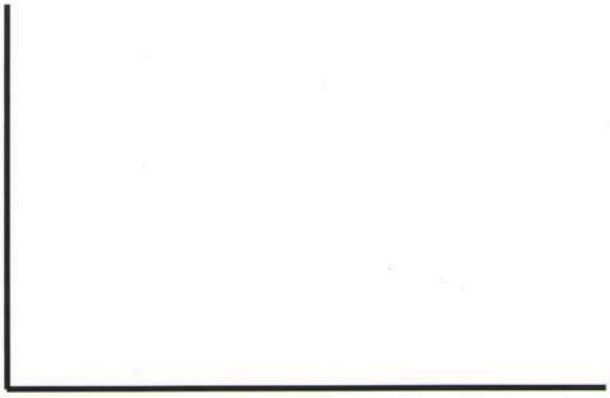
Total Cost (TC)-

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-

Name: _____
Team: _____

Calculating ATC, AVC, AFC, and MC

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

Output (box)	Variable Cost	Total Cost	AVC	AFC	ATC	MC
0	$0	$10	-	-	-	-
1	20					
2	30					
3	60			3.33	23.3	
4	100			2.5	27.5	

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 _____.

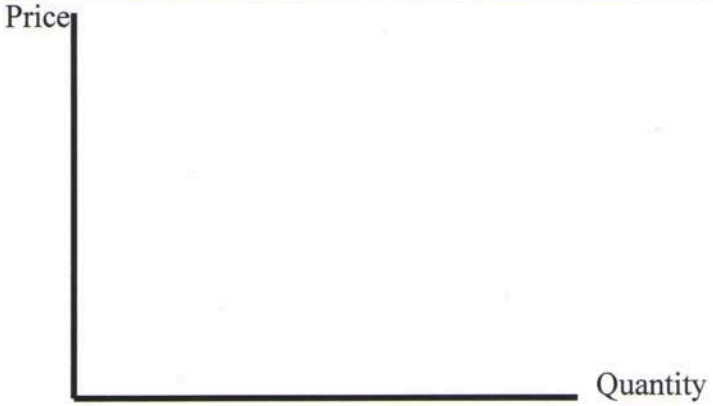
Graphing Perfect Competition*

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

List (in order) what will happen in the long-run

Market
P___ Q___
Firm
P___ Q___

Perfectly Competitive Firm Making a Loss



Perfectly Competitive Firm in Long-Run*

This firm has both type of efficiency:
1.
2.

*See videos on YouTube channel ACDCLeadership

Name: _____
Team: _____

Unit 4: Imperfect Competition

Characteristics of the Four Market Structures

Perfect Competition	MonopolisticCompetition	Oligopoly	Monopoly

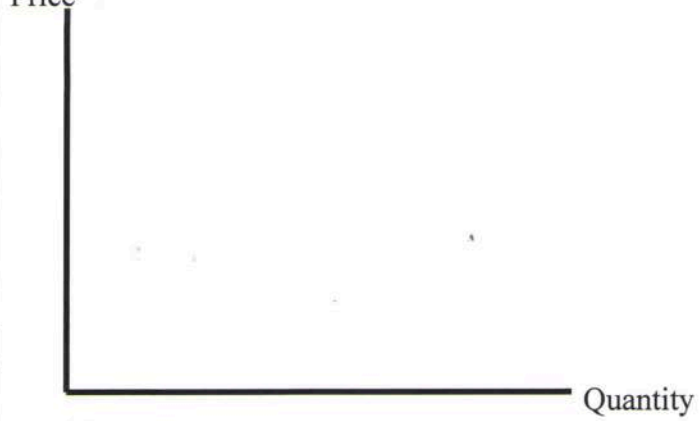
Demand and Marginal Revenue*

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

Why are monopolies inefficient?

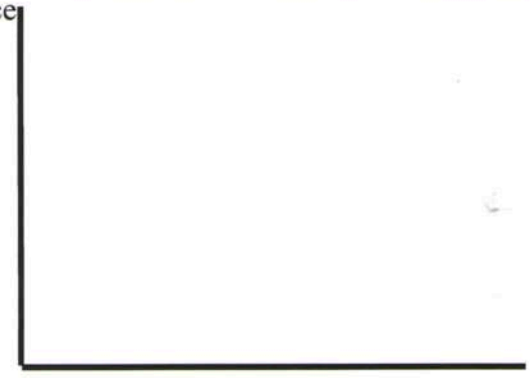
1.
2.
3.

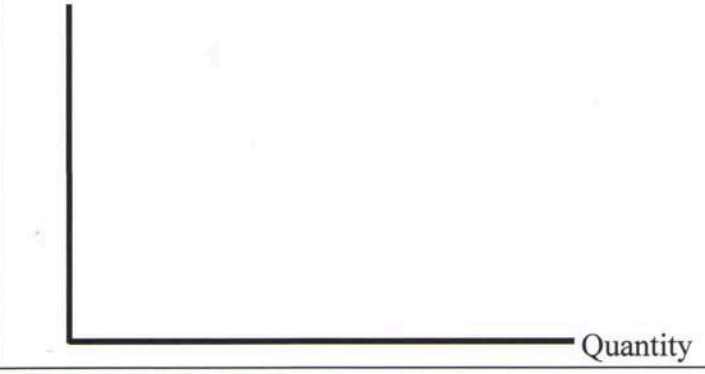
Elastic and Inelastic Range*



Monopoly Graph (profit)*

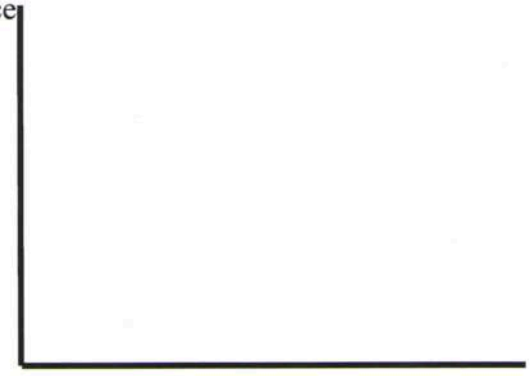
Draw and label a Monopoly making profit





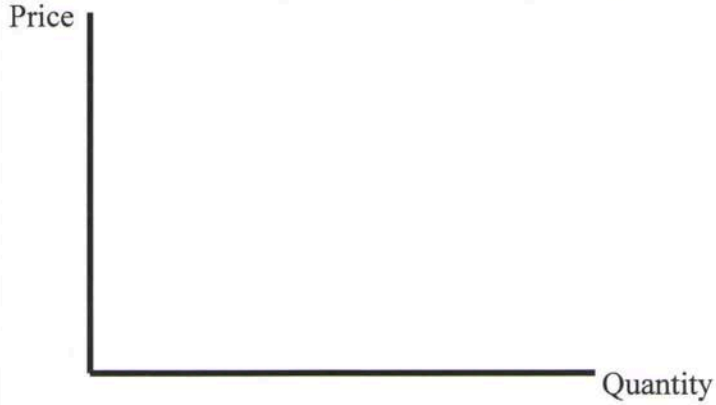
Monopoly Graph (loss)

Draw and label a Monopoly making profit



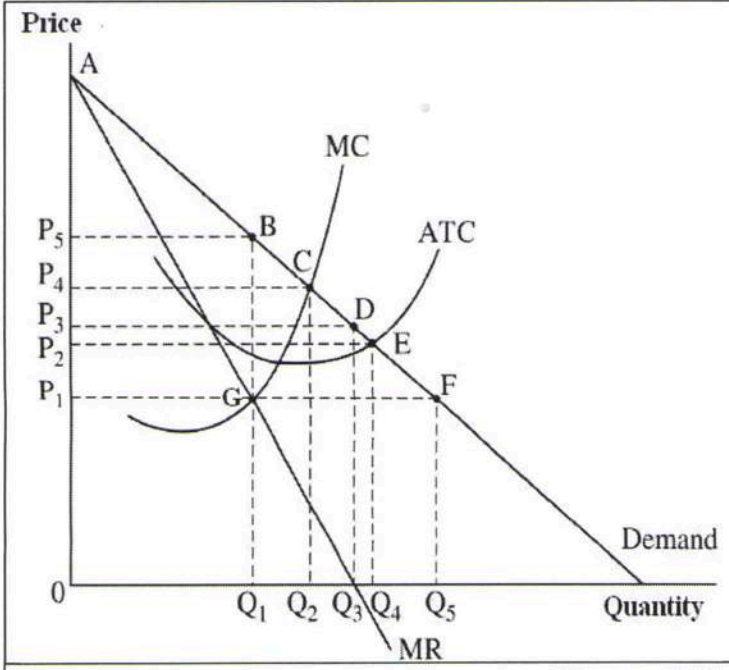
Price Discriminating Monopoly*

Draw and label a price discriminating monopoly



Name: _____

Team: _____



Monopoly Practice*

For a Competitive Market

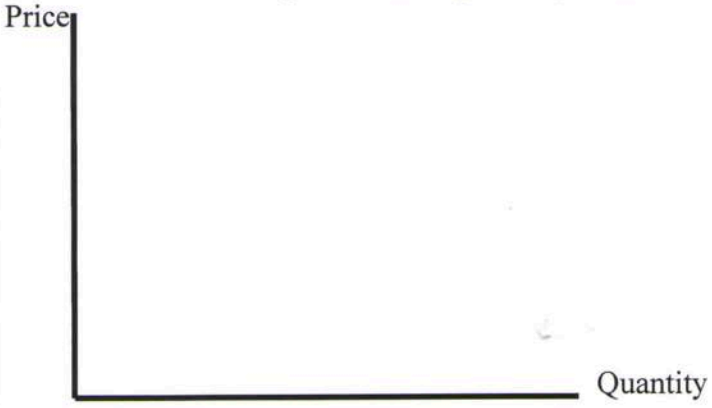
1. P and Q
2. Consumer Surplus

For a Monopoly

3. P and Q Unregulated
4. P and Q Socially Optimal
5. P and Q Fair Return
6. Consumer Surplus
7. Dead Weight Loss
8. Q where TR is Maximized
9. Q if it price discriminates
10. Elastic Range of the Demand Curve
11. Per unit tax causes P ____ and Q ____
12. Lump sum subsidy causes P ____ and Q ____

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?

Oligopoly

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

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

*See videos on YouTube channel ACDCLeadership

Name: _____
Team: _____

Unit 5: The Resource Market

Key Terms

1. Derived Demand-

2. Marginal Revenue Product (MRP)-

3. Marginal Resource Cost (MRC)-

Resource Shifters

Shifters of Labor Demand-

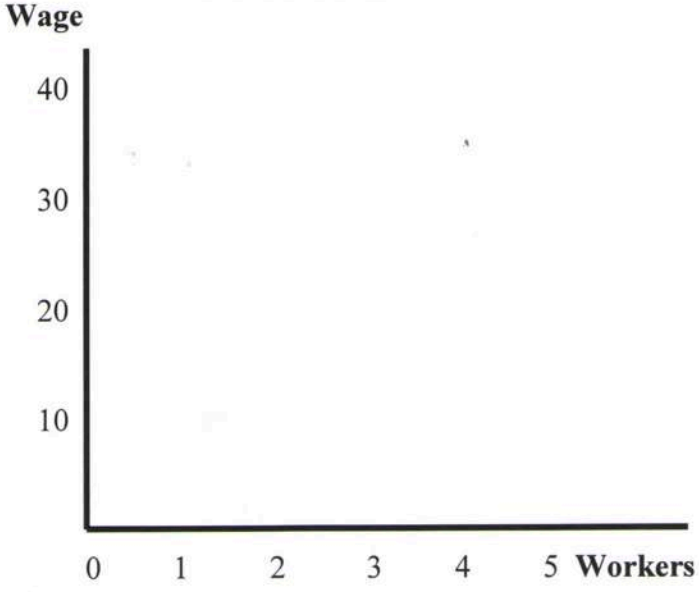
Shifters of Labor Supply-

Calculating MRP and MRC and Hiring Workers*

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

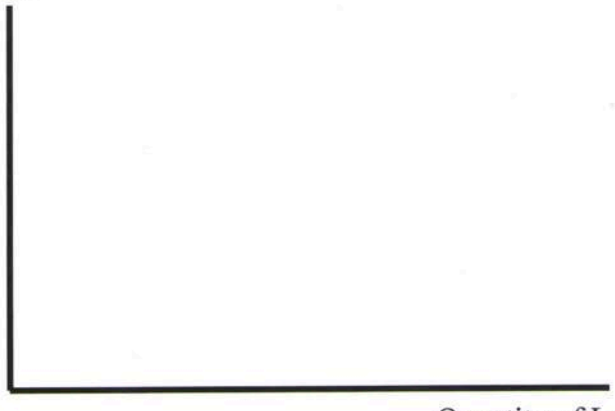
1. Assume perfectly competitive product and labor markets. If the price of the product is $5 and the wage is $20, how many workers should be hired?
2. How much is the profit or loss?
3. Assume that this firm develops a process that makes only their workers more productive. The wage will _____ and the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

Plot the MRP and MRC for the firm



Minimum Wage*

Draw the results of a minimum wage. Label Qs & Qd



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. 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.

*See videos on YouTube channel ACDCLeadership

Name: _____
Team: _____

Unit 6: Four Market Failures

Public Goods

Why are public goods a market failure?

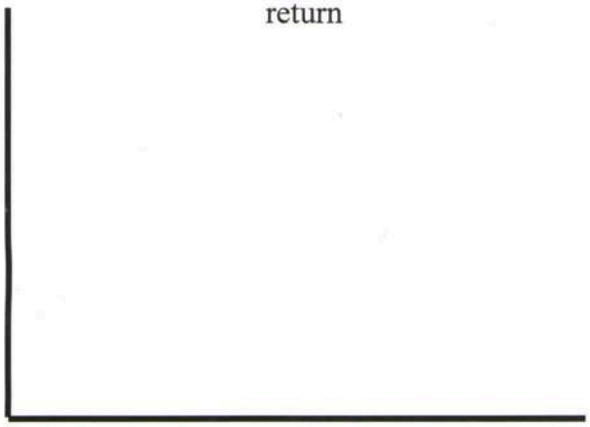
Two Characteristic of Public Goods:
1. Nonexclusion-

2. Shared consumption-

Maximizing Rule for Public Goods:

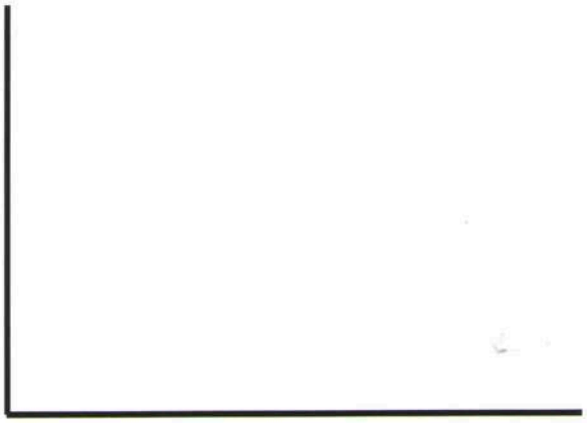
Monopolies

Label monopoly unregulated, socially optimal, and fair return



Negative Externalities

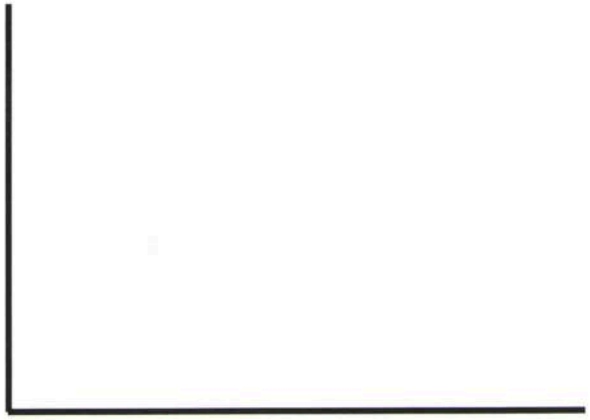
Draw a negative externality



Solution:

Positive Externalities

Draw a positive externality



Solution:

Distribution of Income and Taxes

1. Progressive Tax-

2. Proportional Tax-

3. Regressive Tax-

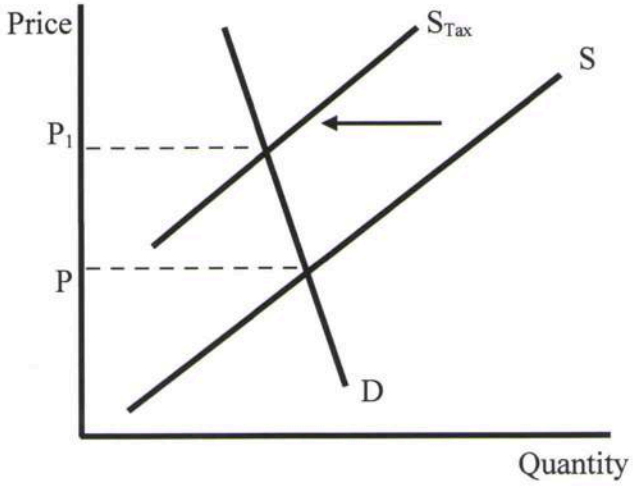
Who pays more of the tax:
4. If demand is elastic and supply is inelastic?

5. If demand is inelastic and supply is elastic?

6. If demand is perfectly inelastic?

Tax Incidence

Label the amount consumers and producers pay of tax



Unit 1: Basic Economics Concepts

Key Terms (Define the following)

1. Scarcity
Individuals, businesses, and Governments have unlimited wants but limited resources.
2. Positive vs. Normative Economics
Positive refers to facts. No opinions
Normative includes opinion. "What out to be done".
3.Trade-offs
ALL the 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

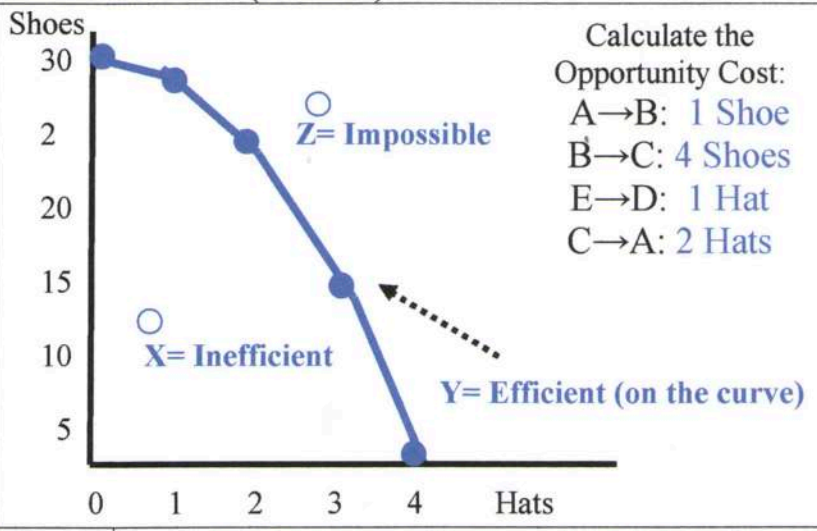
1. Centrally Planned Economies (Communism)
Economic system where the government owns the resources and decides what to make, how to make it , and who gets it. Total government control of the economy
2. Free-Market Economies (Capitalism)
Economic system where individual citizens own the resources and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

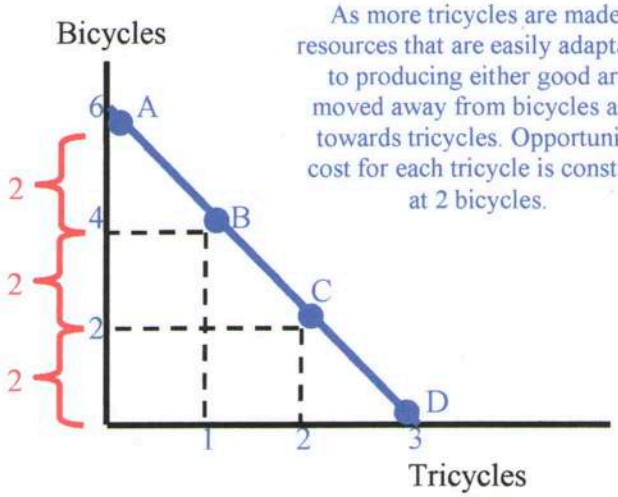


Calculate the Opportunity Cost:
A→B: 1 Shoe
B→C: 4 Shoes
E→D: 1 Hat
C→A: 2 Hats

Constant Opportunity Cost*

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

Draw the graph below

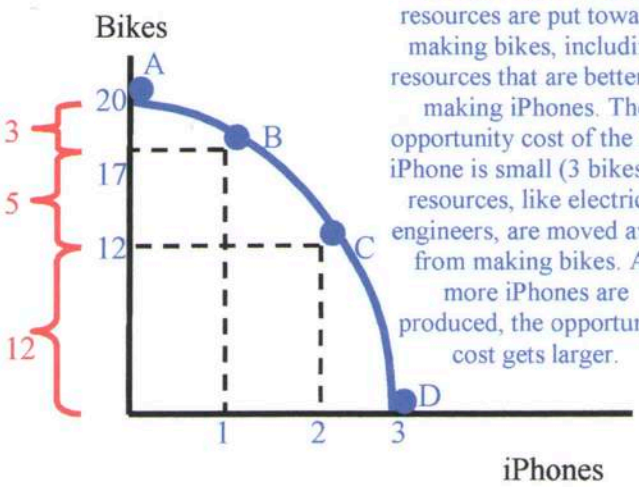


As more tricycles are made, resources that are easily adaptable to producing either good are moved away from bicycles and towards tricycles. Opportunity cost for each tricycle is constant at 2 bicycles.

Increasing Opportunity Cost*

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

Draw the graph below



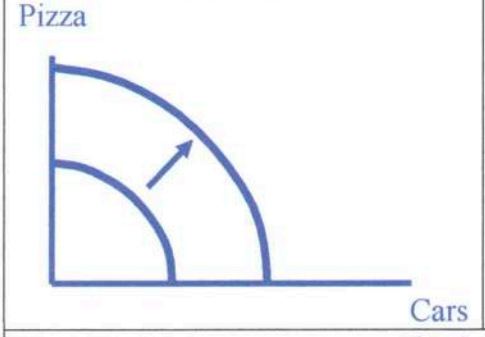
At combination A, all resources are put towards making bikes, including resources that are better for making iPhones. The opportunity cost of the first iPhone is small (3 bikes) as resources, like electrical engineers, are moved away from making bikes. As more iPhones are produced, the opportunity cost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

*See videos on YouTube channel ACDCLeadership

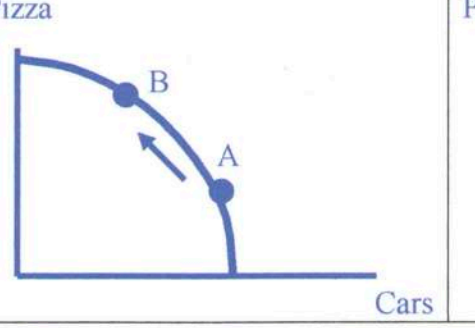
Efficiency	Shifting the PPC
Difference between allocative and productive efficiency: Productive Efficiency- Products are being produced in the least costly way (any point ON the curve) Allocative Efficiency- The products being produced are the ones most desired by society.(*optimal* point depends on the desires of society.)	Identify the three shifters of the PPC 1. Change in resource quantity or quality 2. Change in Technology 3. Change in Trade

Shifting and Changes Practice (draw 3 PPCs with pizza and cars)

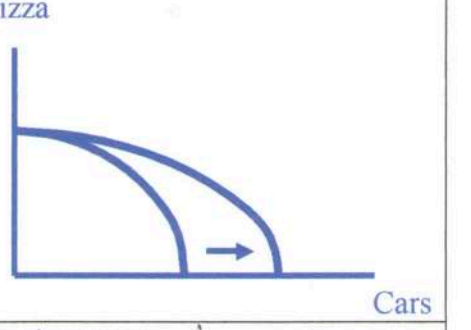
Scenario: Better resources for both products



Scenario: Increase in consumer demand for pizza



Scenario: Improvements in technology for only cars



Trade: Absolute and Comparative Advantage*

	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? Mexico
2. Which country has an absolute advantage in cars? Mexico
3. What is Cuba's opportunity cost for producing one car? 4 Sugar
4. Which country has a comparative advantage in cars? Mexico
5. Which country has a comparative advantage in sugar? Cuba
6. 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)

Circular Flow Model*

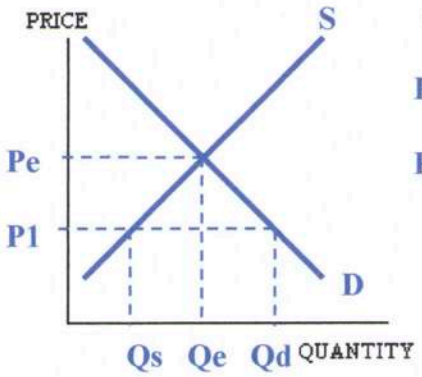
*See videos on YouTube channel ACDCLeadership

Unit 2: Demand, Supply, and Consumer Choice

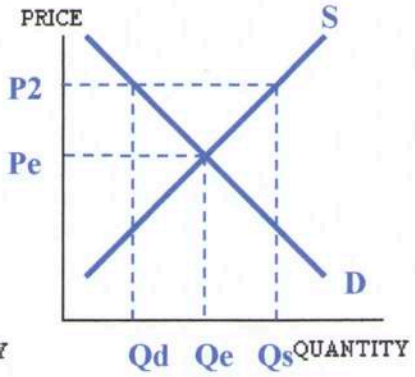
Demand*	Supply*
The Law of Demand: P ↑ Qd ↓ P ↓ Qd ↑	The Law of Supply: P ↑ Qs ↑ P ↓ Qs ↓
Why is demand downward sloping? 1. Substitution Effect- When price goes up, consumers buy more of a substitute product 2. Income Effect- If the price goes down for a product, the purchasing power increases for consumers -allowing them to purchase more 3. Law of Diminishing Marginal Utility- Since you eventually get less satisfaction from each new unit, the price must fall to increase quantity demanded	Why is supply upward sloping? 1. Opportunity Cost-At higher prices, profit seeking firms have an incentive to produce more. 2. Law of Diminishing Marginal Returns- Since the additional cost of each new unit will eventually increase, the firm must increase the price to increase quantity supplied.
Changes in Quantity (Moving Along the Curve)	
What changes quantity demanded? Change in Price	What changes quantity supplied? Change in Price
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 • Normal and Inferior Goods 5. Future Expectations	What changes supply? (6 Shifters of Supply) 1. Prices/Availability of inputs (resources) 2. Number of Sellers 3. Technology 4. Government Action: Taxes & Subsidies 5. Opportunity Cost of Alternative Production 6. 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*

Shortage



Surplus



Equilibrium- Qd = Qs

Shortage- Qd > Qs

Surplus- Qd < Qs

Government Controls*

Price FLOORS go ABOVE equilibrium and result in a SURPLUS.

Price CEILINGS go BELOW equilibrium and result in a SHORTG.

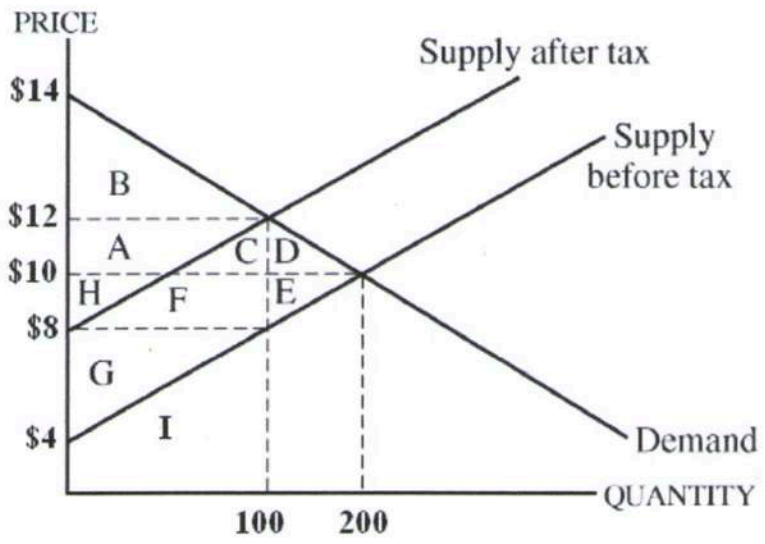
Consumer Surplus (CS), Producer Surplus (PS), and Efficiency*

Before tax

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

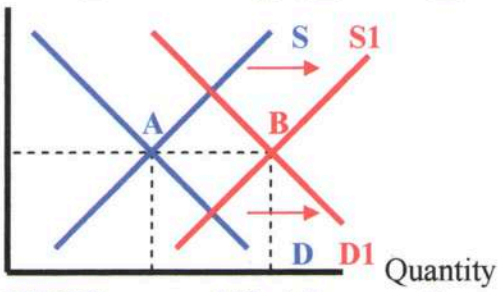
After Tax

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. Amount of tax buyer pay: AC
11. Amount of tax sellers pay: HF



Double Shifts in Demand and Supply*

If demand increase AND supply increases, what happens to P _Indeterminate_ Q__Increase__?



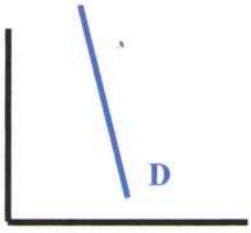
Rule: If TWO curves shift at the same time, EITHER price or quantity will be indeterminate.

Elasticity of Demand*

Inelastic Demand (ex: gas)

Characteristics:

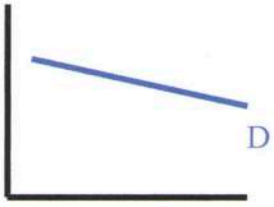
1. Few Substitutes
2. Necessities
3. Elasticity coefficient less than 1



Elastic Demand (ex: soda)

Characteristics:

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



Elasticity of Demand Coefficients*

- Perfectly Inelastic = **0**
- Relatively Inelastic = **Less than 1**
- Unit Elastic = **1**
- Relatively Elastic = **Greater than 1**
- Perfectly Elastic = **Undefined**

Total Revenue Test*

Inelastic Demand

When price ↑, TR __↑__

When price ↓, TR __↓__

Elastic Demand

When price ↑, TR __↓__

When price ↓, TR __↑__

Consumer Choice and Maximizing Utility*

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

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**

*See videos on YouTube channel ACDCLeadership

Unit 3: Costs of Production and Perfect Competition

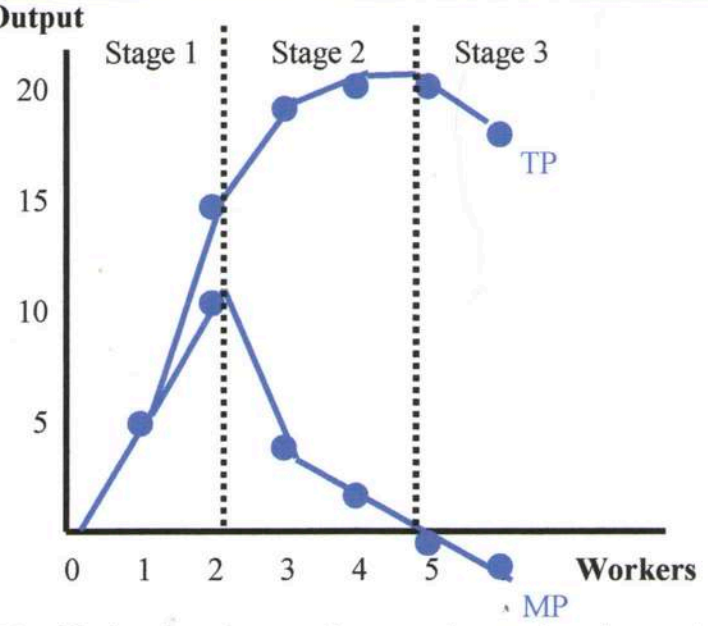
Production and the Law of Diminishing Marginal Returns*

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.)

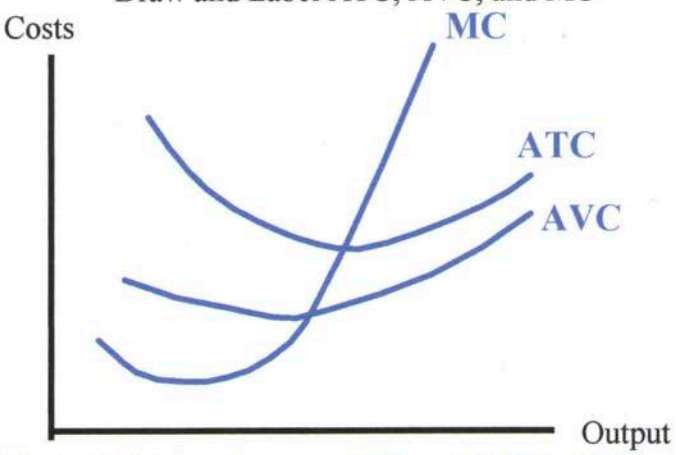
Variable Cost (VC)- Costs that DO change as you produce more (wages to workers, raw materials, etc.)

Total Cost (TC)- Fixed Costs + Variable Costs

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

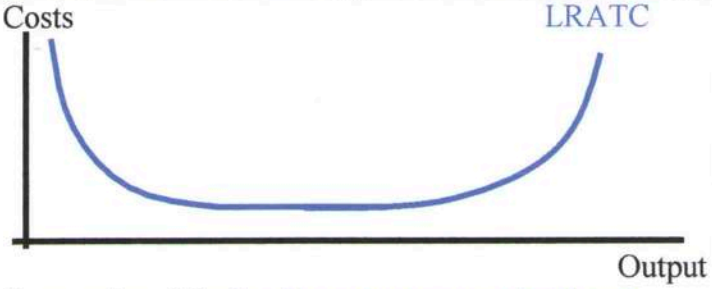
Short Run Cost Curves* (at least one fixed resource)

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 (box)	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

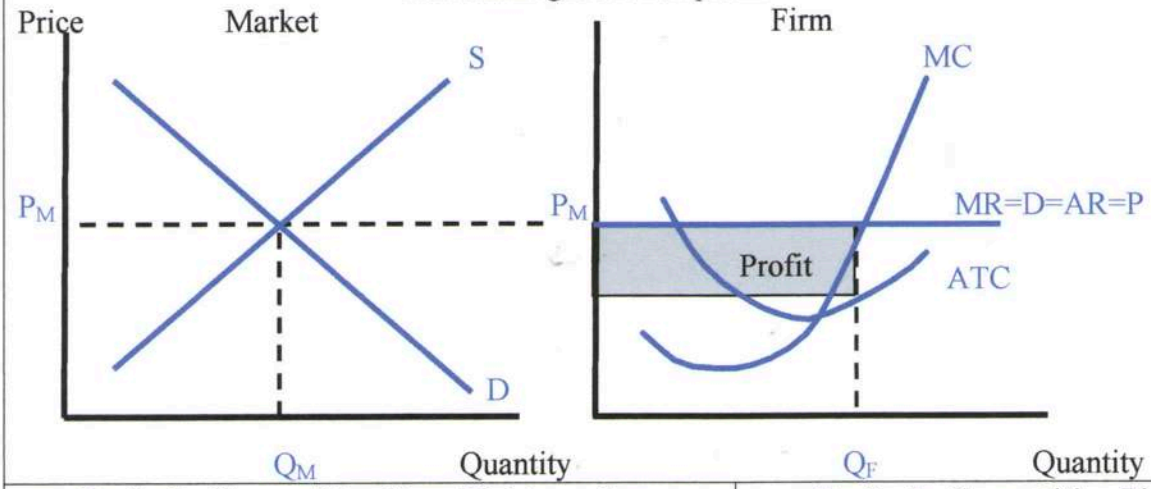
Per-Unit vs. Lump-Sum*

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_____.

Graphing Perfect Competition*

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

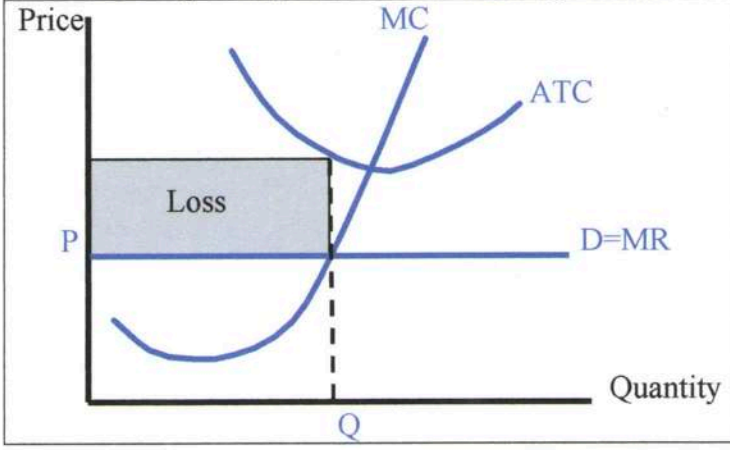


List (in order) what will happen in the long-run

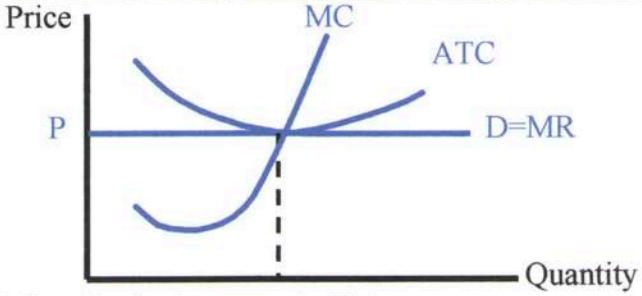
1. More firms will enter to get profit
2. The market supply will increase (shift right)

Market
P_↓__ Q__↑_
Firm
P_↓__ Q__↓_

Perfectly Competitive Firm Making a Loss



Perfectly Competitive Firm in Long-Run*



This firm has both types of efficiency:
1.Productive Efficiency: Minimum ATC
2.Allocative Efficiency: Price = MC

*See videos on YouTube channel ACDCLeadership

Unit 4: Imperfect Competition

Characteristics of the Four Market Structures

Perfect Competition	MonopolisticCompetition	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*

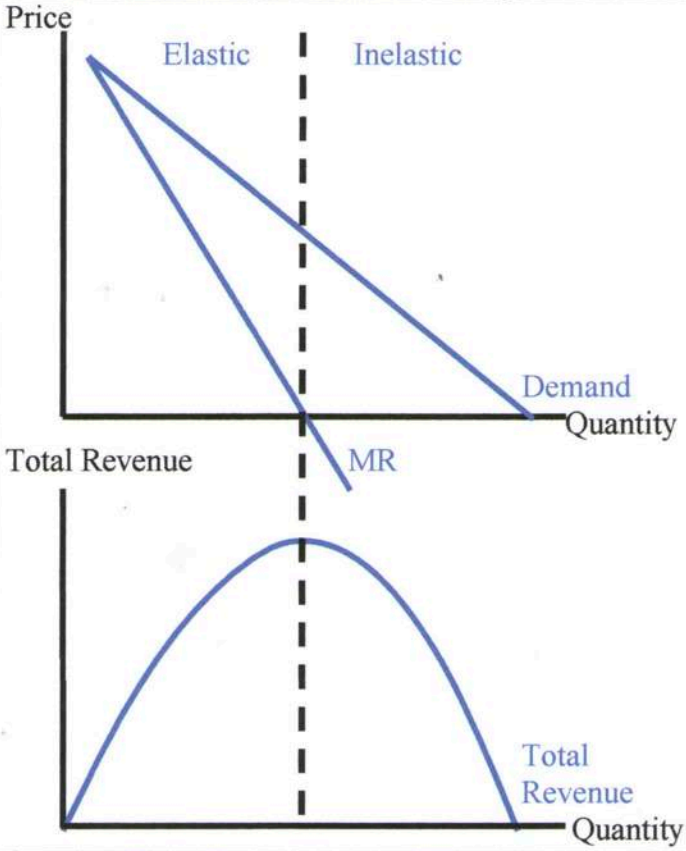
Why is demand greater than marginal revenue for all imperfectly competitive firms?

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?

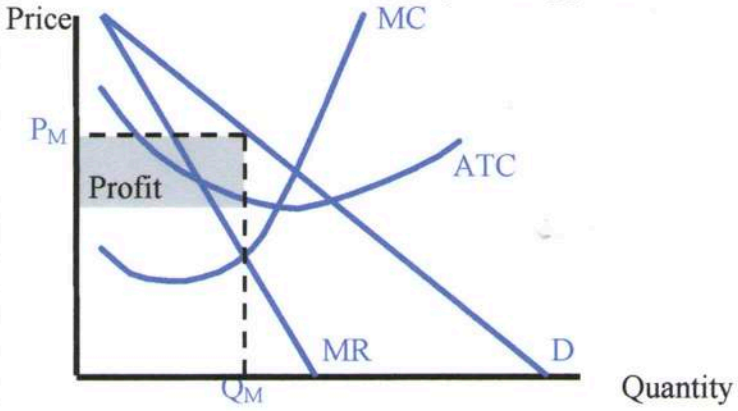
1. Price is too high
2. Quantity is too low
3. Inefficient (Dead Weight Loss)

Elastic and Inelastic Range*



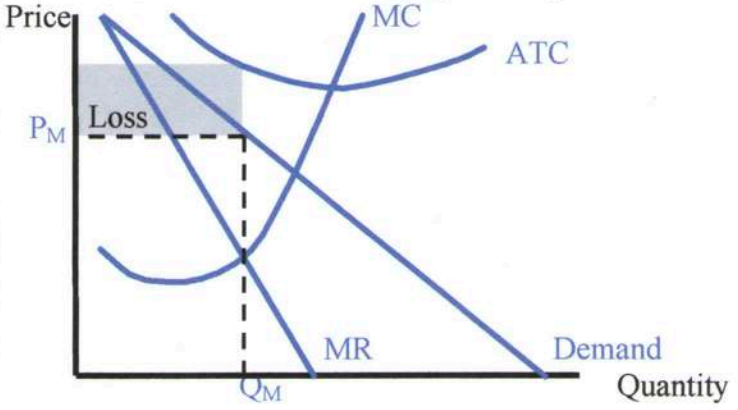
Monopoly Graph (profit)*

Draw and label a Monopoly making profit



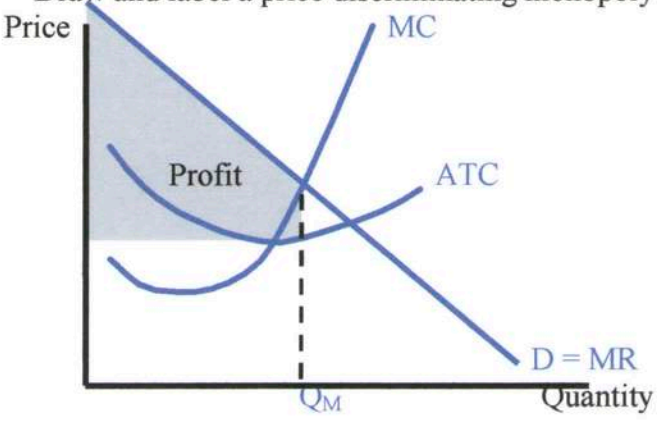
Monopoly Graph (loss)

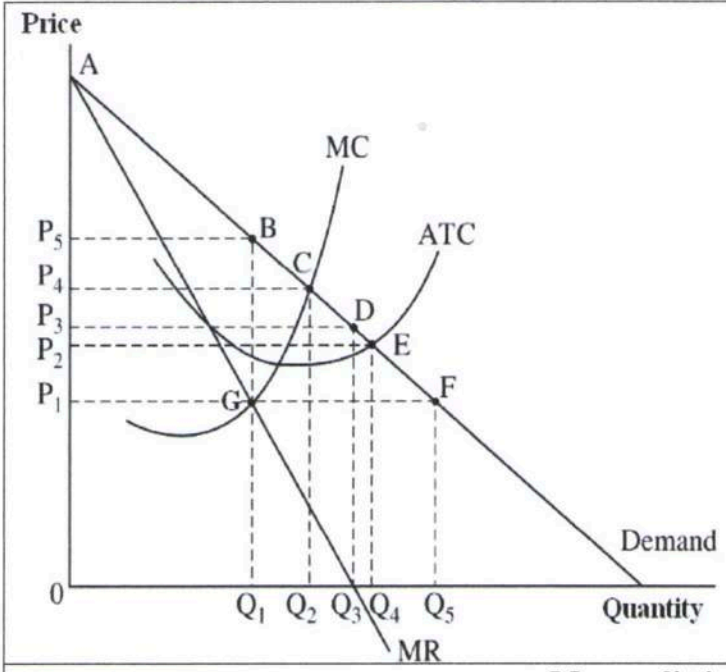
Draw and label a Monopoly making a loss



Price Discriminating Monopoly*

Draw and label a price discriminating monopoly





Monopoly Practice*

For a Competitive Market

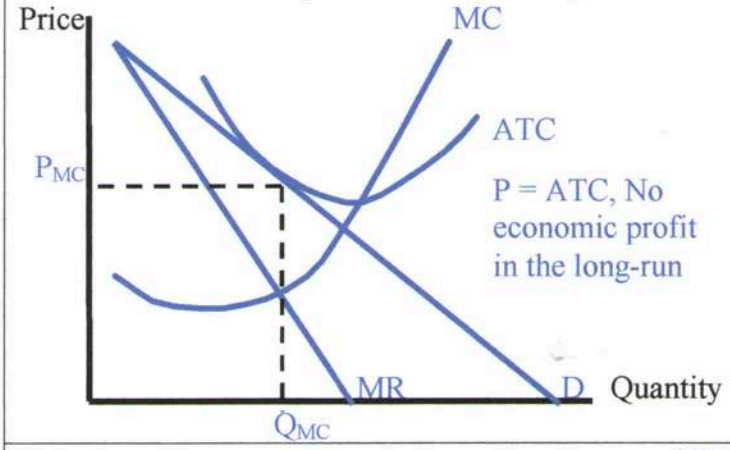
1. P and Q: P_4, Q_2
2. Consumer Surplus: ACP_4

For a Monopoly

3. P and Q Unregulated: P_5, Q_1
4. P and Q Socially Optimal: P_4, Q_2
5. P and Q Fair Return: P_2, Q_4 (No profit)
6. Consumer Surplus: ABP_5
7. Dead Weight Loss: BCG
8. Q where TR is Maximized: Q_3
9. Q if it price discriminates: Q_2
10. Elastic Range of the Demand Curve AD
11. Per unit tax causes P __↑__ and Q __↓__
12. Lump sum subsidy causes P same and Q same

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

Oligopoly

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

*See videos on YouTube channel ACDCLeadership

Unit 5: The Resource Market

Key Terms

1. 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)
2. Marginal Revenue Product (MRP)-
The additional revenue generated by an additional resource (worker).
3. Marginal Resource Cost (MRC)-
The additional cost of an additional resource (worker)

Resource Shifters

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)

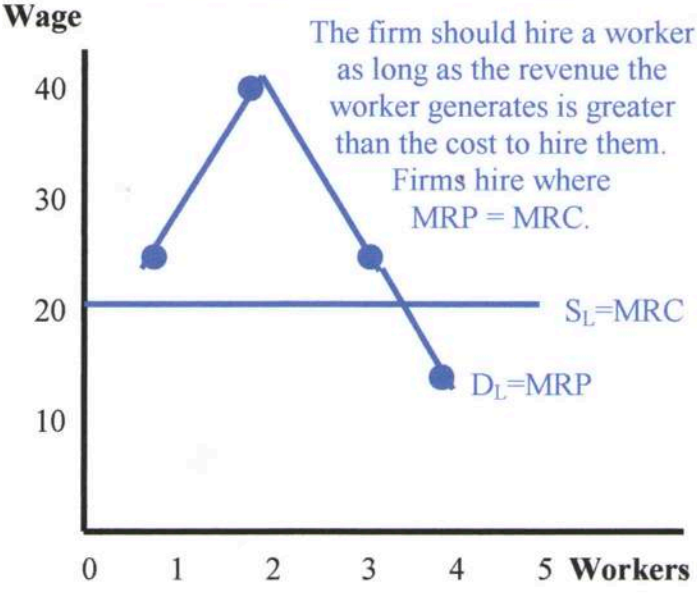
Shifters of Labor Supply-
1. Number of qualified workers
2. Government regulation/licensing
3. Personal values regarding leisure and societal roles

Calculating MRP and MRC and Hiring Workers*

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

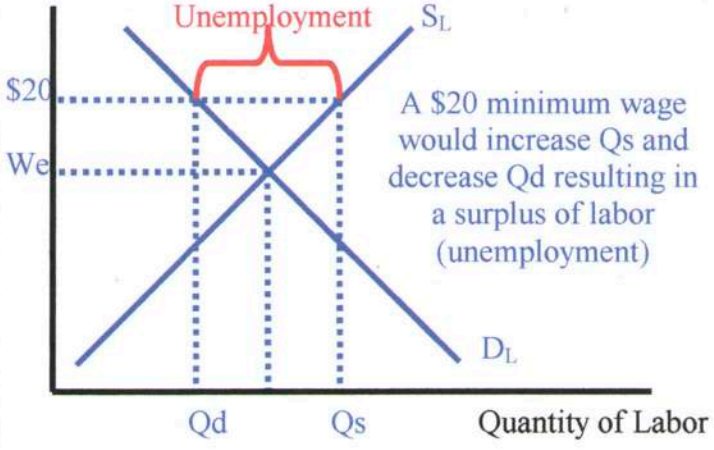
1. Assume perfectly competitive product and labor markets. If the price of the product is $5 and the wage is $20, how many workers should be hired? 3
2. How much is the profit or loss? $90 - $60 = $30
3. Assume that this firm develops a process that makes only their workers more productive. The wage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

Plot the MRP and MRC for the firm



Minimum Wage*

Draw the results of a minimum wage. Label Qs & Qd



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. 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.

*See videos on YouTube channel ACDCLeadership

Unit 6: Four Market Failures

Public Goods

Why are public goods a market failure?
It is impractical for the free-market to provide these goods because there is little opportunity to earn profit.

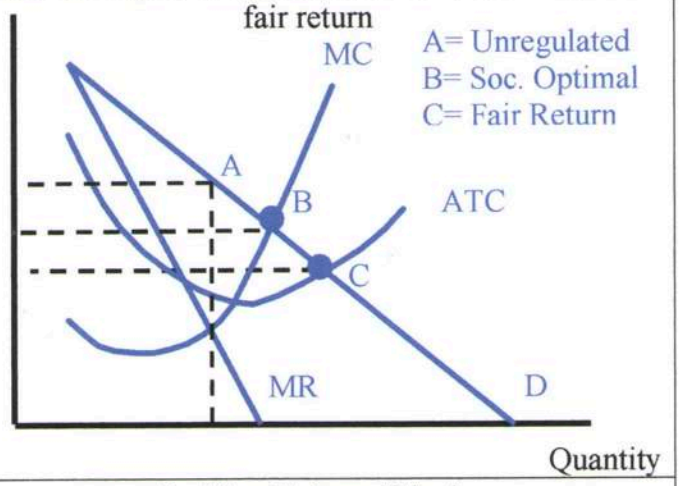
Two Characteristic of Public Goods:

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

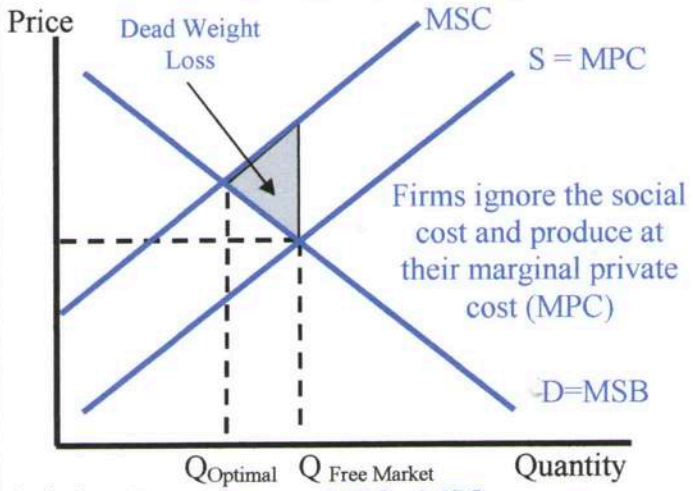
Monopolies*

Label monopoly unregulated, socially optimal, and fair return



Negative Externalities*

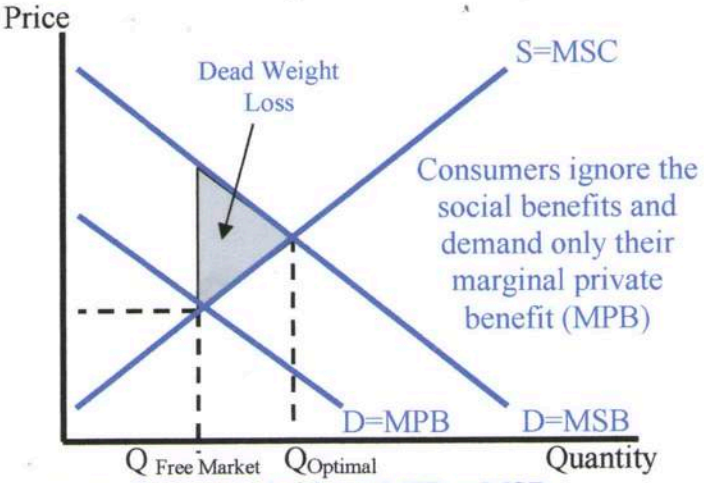
Draw a negative externality



Solution: Per unit tax so MPC =MSC

Positive Externalities*

Draw a positive externality



Solution: Per unit subsidy so MPB = MSB

Distribution of Income and Taxes

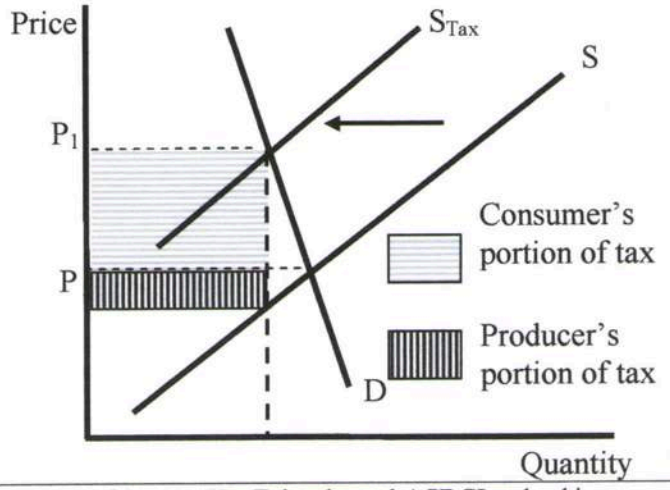
1. Progressive Tax- takes a larger percent of income from high income groups (takes more from rich people).
2. Proportional Tax- takes the same percent of income from all income groups.
3. Regressive Tax- takes a larger percentage from low income groups (takes more from poor people).

Who pays more of the tax:

4. If demand is elastic and supply is inelastic?
   Producers
5. If demand is inelastic and supply is elastic?
   Consumers
6. If demand is perfectly inelastic?
   Consumers pay all of the tax

Tax Incidence*

Label the amount consumers and producers pay of tax



*See videos on YouTube channel ACDCLeadership

Name: _____
Team: _____

Unit 1: Basic Economics Concepts

Key Terms (Define the following)

1. Scarcity

2. Positive vs. Normative Economics

3.Trade-offs

4. Opportunity Cost

3 Economic Systems

1. Centrally Planned Economies (Communism)

2. Free-Market Economies (Capitalism)

3. Mixed Economies

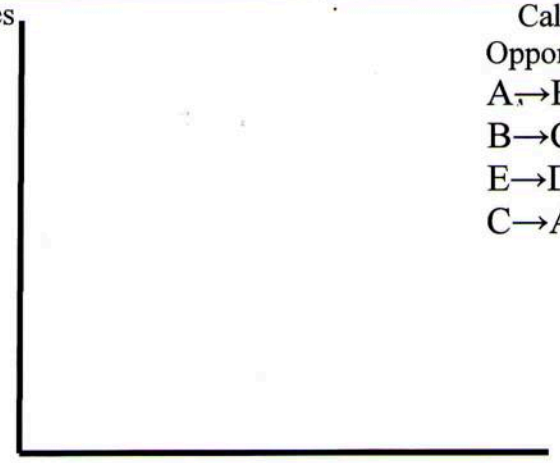
Production Possibilities Curve (Frontier)*

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



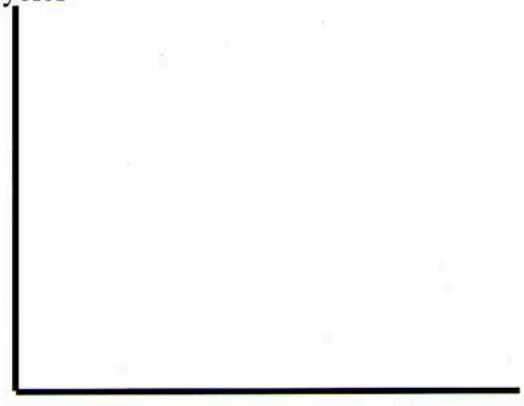
Calculate the Opportunity Cost:

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

Constant Opportunity Cost*

Why does this occur?

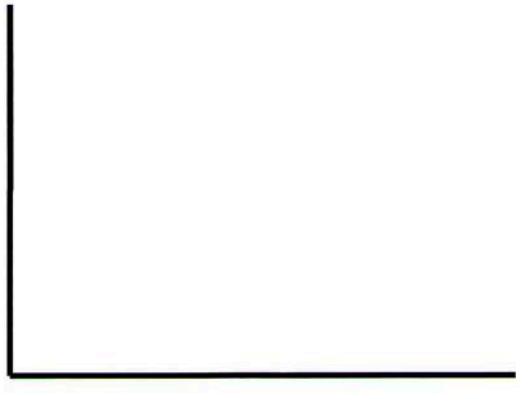
Draw the graph below



Increasing Opportunity Cost*

Why does this occur?

Draw the graph below



Name: _____
Team: _____

Efficiency	Shifting the PPC
Difference between allocative and productive efficiency:	Identify the three shifters of the PPC 1. 2. 3.

Shifting and Changes Practice (draw 3 PPCs with pizza and cars)

Scenario: Better resources for both products	Scenario: Increase in consumer demand for pizza	Scenario: Improvements in technology for only cars

Trade: Absolute and Comparative Advantage*

	Sugar (tons)	Cars
Cuba	40	10
Mexico	50	100

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

Circular Flow Model*

Resource Market

Businesses Government Individuals

Product Market

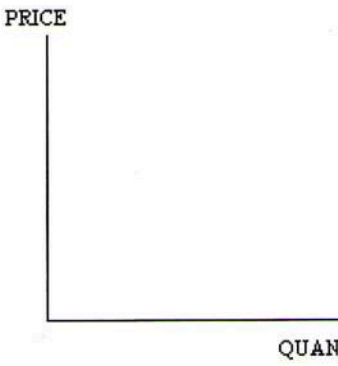
*See videos on YouTube channel ACDCLeadership

Name: _____
Team: _____

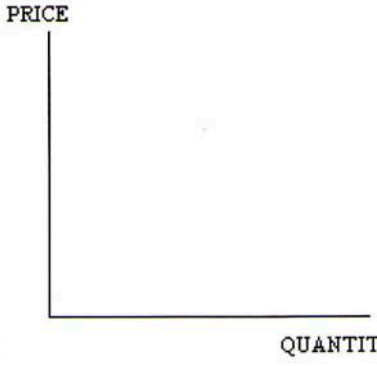
Demand*	**Supply***
The Law of Demand: P _____ Qd _____ P _____ Qd _____	The Law of Supply: P _____ Qs _____ P _____ Qs _____
Why is demand downward sloping? 1. 2. 3.	Why is supply upward sloping?
Changes in Quantity (Moving Along the Curve)	
What changes quantity demanded?	What changes quantity supplied?
Changes in Demand and Supply (Shifting the Curve)	
What changes demand? (5 Shifters of Demand)	What changes supply? (6 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*

Shortage



Surplus



Equilibrium- Qd____Qs

Shortage- Qd____Qs

Surplus- Qd____Qs

Government Controls*

Price FLOORS go _____ equilibrium and result in a _____.

Price CEILINGS go _____ equilibrium and result in a _____.

Name: _____
Team: _____

Unit 2: Macro Measures

Measuring Growth

Definition of Gross Domestic Product (GDP)-

GDP = _____+_____+_____+_____

Three things not included in GDP:
1.

2.

3.

Nominal GDP-

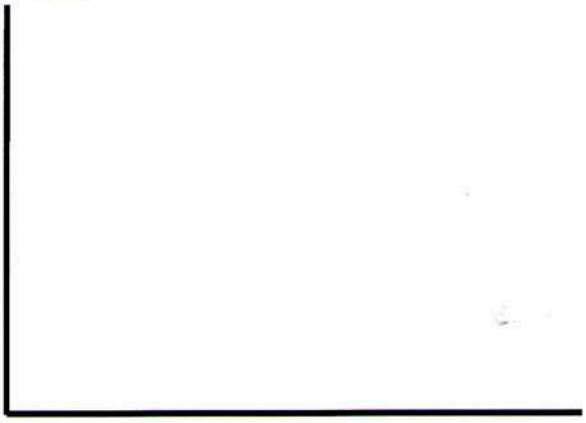
Real GDP-

GDP Deflator-

Business Cycle

Label peak, recession/contraction, trough, expansion

Real GDP



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.

Measuring Unemployment*

1. Frictional Unemployment

2. Structural Unemployment

3. Cyclical Unemployment

Full Employment

Natural Rate of Unemployment (NRU)

Problems With Unemployment Rate

Discouraged Job Seekers-

Underemployed (part-time) Workers-

Name: _____
Team: _____

Measuring Inflation

Market Basket-

Consumer Price Index (CPI) Equation

CPI = _____ x 100

CPI Practice*

Using the values of the market baskets below, calculate the CPI for each year. Start with 2009 as the base year then recalculate with 2010 as the base year. Lastly, recalculate with 2011 as the base year.

Year	Market Basket	Base Year 2009	Base Year 2010	Base year 2011
2009	$20	100		
2010	$40		100	
2011	$50			100

Helped or Hurt by Unexpected Inflation

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

Helped	Hurt

Interest Rates and Inflation

Real interest rate=

Nominal interest rate=

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?

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?

*See videos on YouTube channel ACDCLeadership

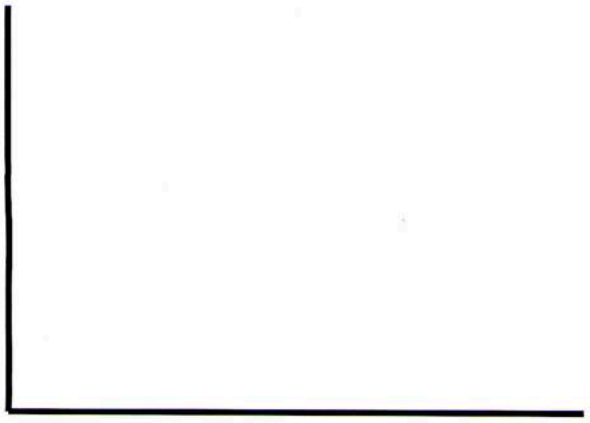
Name: _____
Team: _____

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

AD , AS, and LRAS*

Draw the economy at full employment

Price Level



Real GDP

Short Run vs. Long Run Aggregate Supply*

1. In the short run,

2. In the long run,

Shifters of AD and AS

Shifters of Aggregate Demand

1. _____ 3. _____

2. _____ 4. _____

Shifters of Aggregate Supply

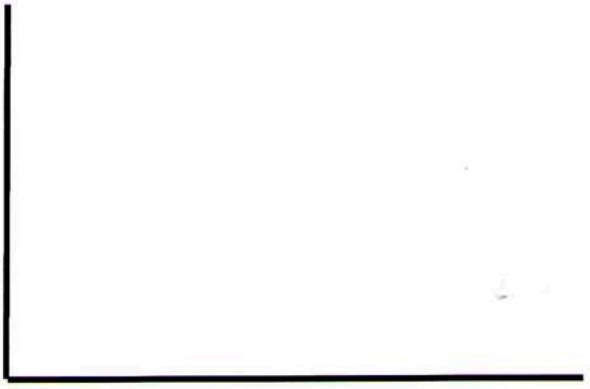
1. _____ 3. _____

2. _____ 4. _____

Recessionary Gap*

Draw the economy in a recession

Price Level

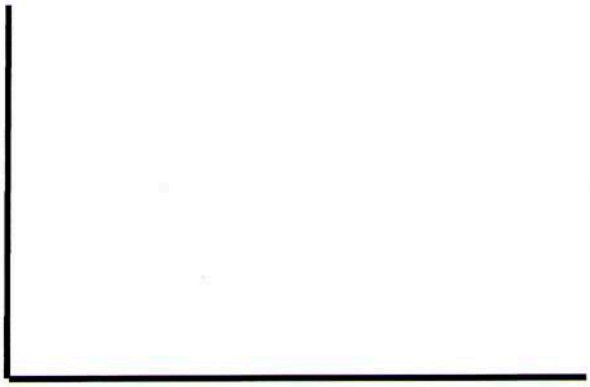


Real GDP

Inflationary Gap*

Draw the economy beyond full employment

Price Level

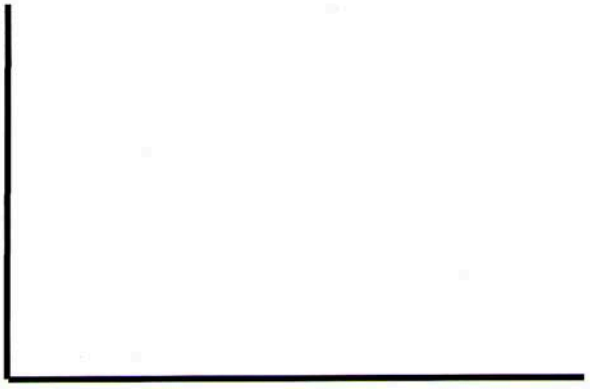


Real GDP

Classical vs. Keynesian*

Draw and label the three ranges of the AS curve

Price Level



Real GDP

Fiscal Policy

Discretionary Fiscal Policy-

Non-Discretionary Fiscal Policy-

Government Spending and Taxation

Expansionary Fiscal Policy-

1.

2.

Contractionary Fiscal Policy-

1.

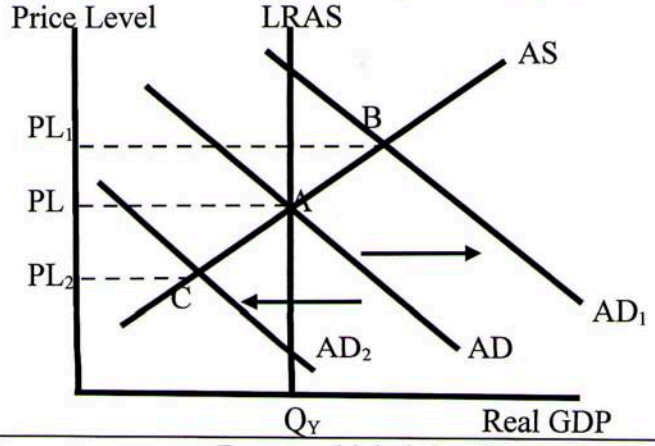
2.

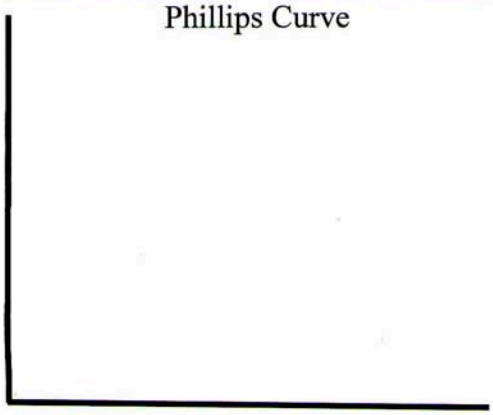
Name: _____

Team: _____

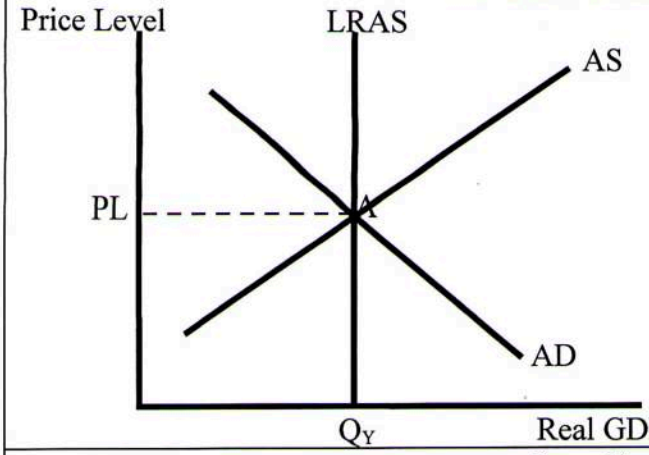
Short Run and Long Run Phillips Curve*

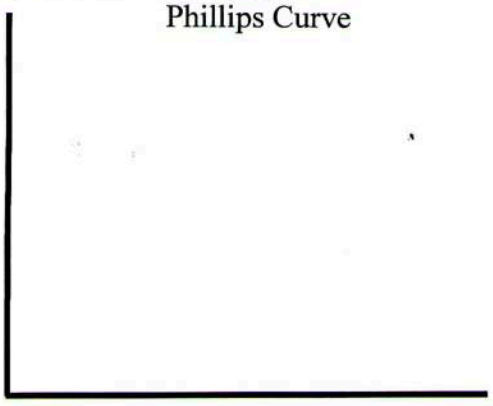
Draw and label the short and long run Phillips curve. Label points A, B, and C based on the changes in AD



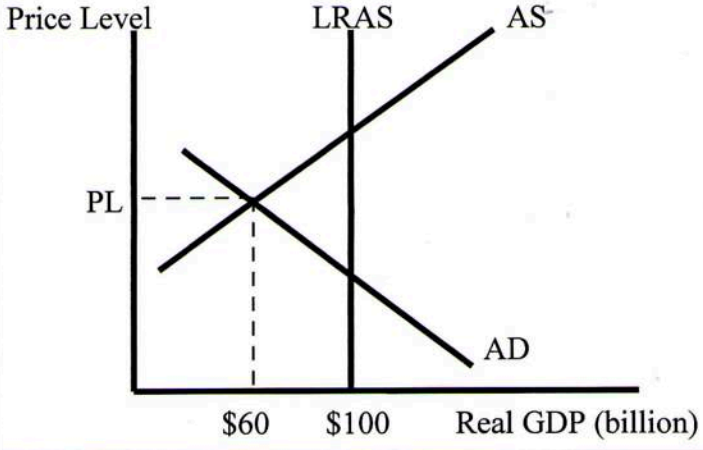


Draw and label the short and long run Phillips curve and label point A.
Show the result of a negative supply shock on both graphs





Spending Multiplier Practice*



1. What type of gap?
2. To close the gap the government could _____ spending or _____ taxes on consumers

Assume the MPC is .5:

3. How much should the government increasing spending to close the gap?
4. How much should the government cut taxes to close the gap?

Now assume that the MPC is .8:

5. How much should the government increasing spending to close the gap?
6. How much should the government cut taxes to close the gap?

Problem with Fiscal Policy

1. Deficit Spending-
2. Time Lags-
3. Crowding out-

*See videos on YouTube channel ACDCLeadership

Name: _____
Team: _____

Unit 4: Money and Monetary Policy

Money Market

Draw S&D of Money and Equilibrium Interest Rate

Three Functions of Money

1.

2.

3

Types of Money

1. Commodity Money

2. Fiat Money

Shifters of Money Demand

1.

2.

3.

Shifters of Money Supply (The FED)

1.

2.

3.

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.
4. 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

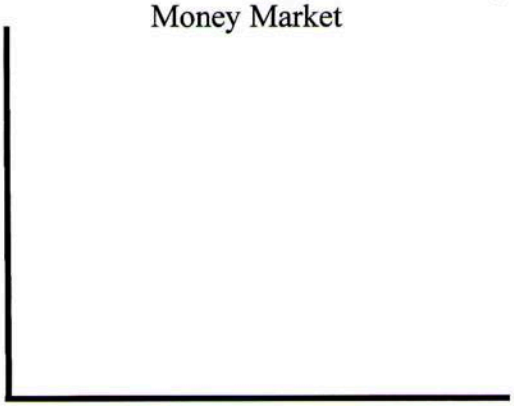
Federal Funds Rate

Name: _____
Team: _____

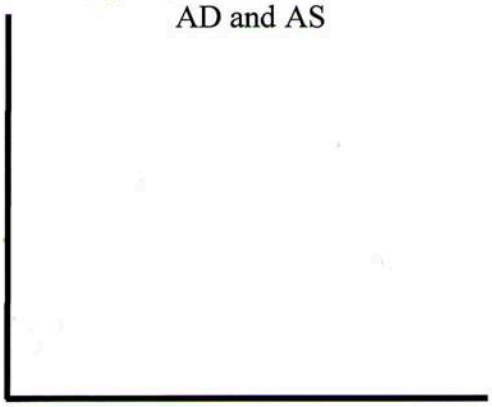
Monetary Policy and AD/AS

Assume the country is in a recession. Use the money market graph to show how the FED closes the recessionary gap using monetary policy

Money Market



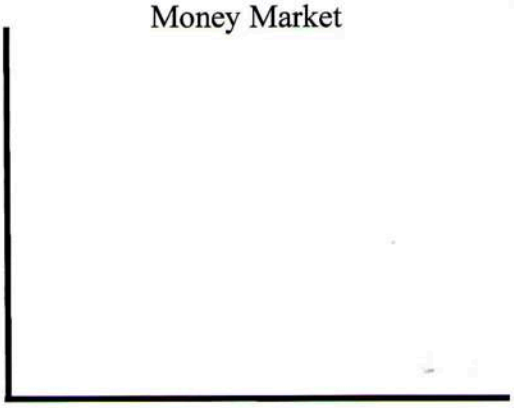
AD and AS



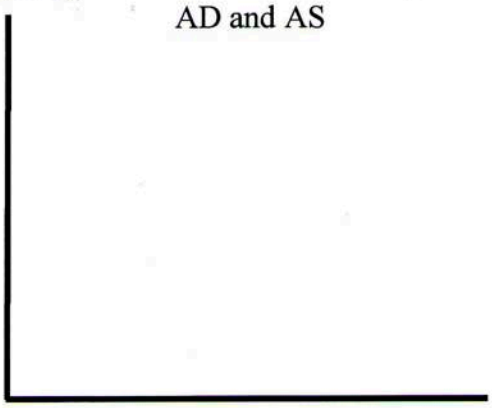
Use arrows to explain the process:

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

Money Market

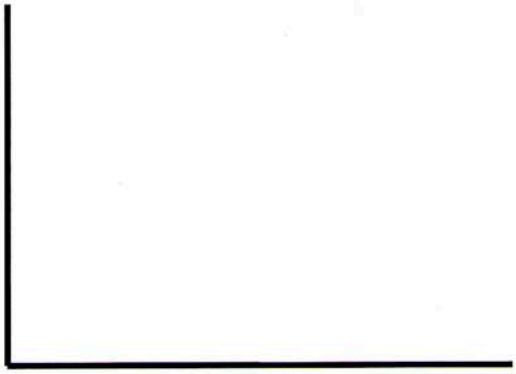


AD and AS



Use arrows to explain the process:

Loanable Funds



Shifters of Demand for Loanable Funds

Shifters of Supply for Loanable Funds

1. What happens to the real interest rate if the government begins to deficit spend?
2. If lenders decide to lend less, real interest rates ___, investment ____, and economic growth ____

Name: _____
Team: _____

Unit 5: International Trade

Key Terms

Export-

Import-

Net Exports (X_N)-

Trade Deficit-

Trade Surplus-

Balance of Payments

Balance of Payments-

Current Account-

Example:

Capital Account-

Example:

Foreign Exchange (FOREX)

Appreciation- 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 _____.

Depreciation- 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 _____.

FOREX Shifters

1.

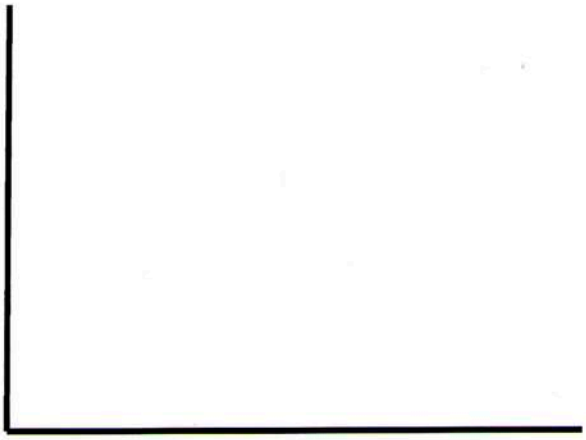
2.

3.

4.

Foreign Exchange Market

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 are higher



Appreciation and Depreciation

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 _____

Unit 1: Basic Economics Concepts

Key Terms (Define the following)

1. Scarcity
Individuals, businesses, and Governments have unlimited wants but limited resources.
2. Positive vs. Normative Economics
Positive refers to facts. No opinions
Normative includes opinion. "What out to be done".
3.Trade-offs
ALL the 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

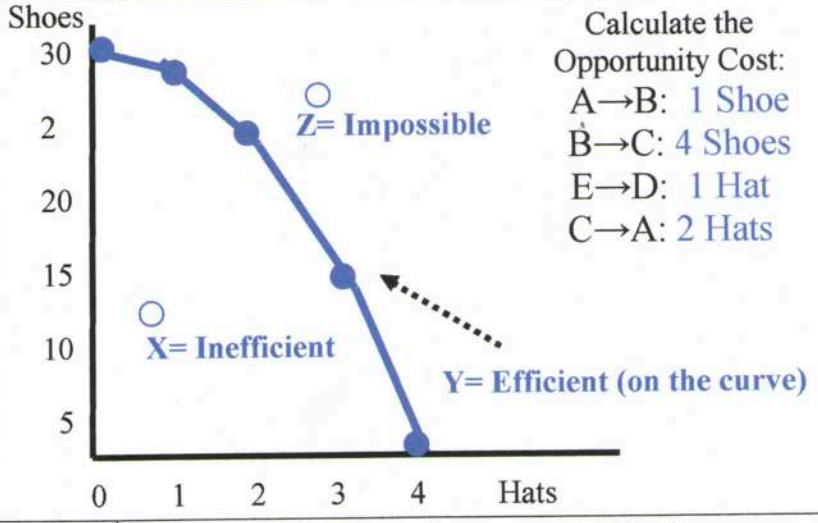
1. Centrally Planned Economies (Communism)
Economic system where the government owns the resources and decides what to make, how to make it , and who gets it. Total government control of the economy
2. Free-Market Economies (Capitalism)
Economic system where individual citizens own the resources and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

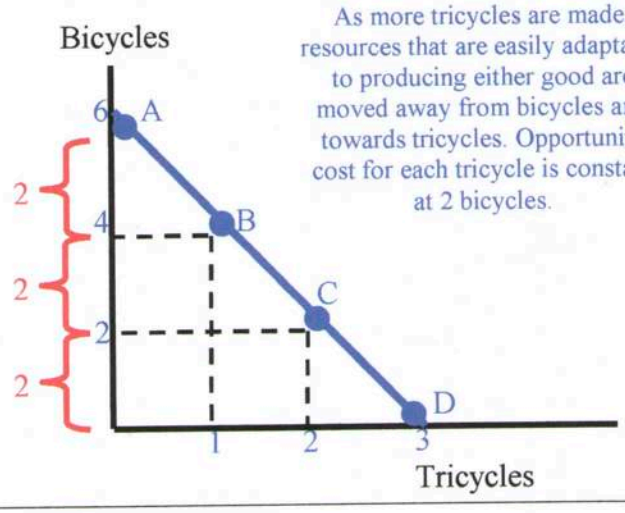


Calculate the Opportunity Cost:
A→B: 1 Shoe
B→C: 4 Shoes
E→D: 1 Hat
C→A: 2 Hats

Constant Opportunity Cost*

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

Draw the graph below

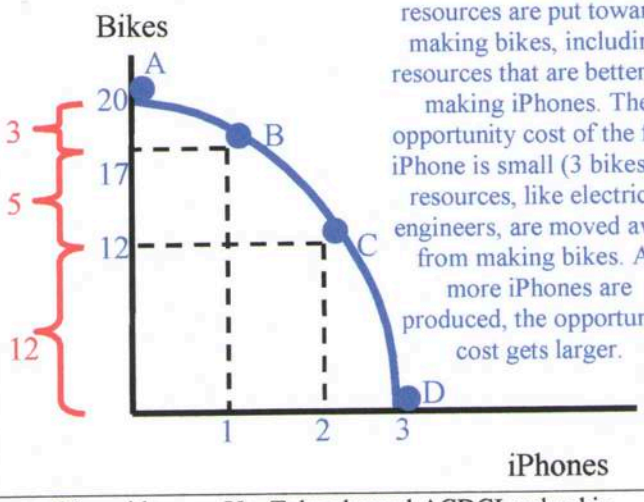


As more tricycles are made, resources that are easily adaptable to producing either good are moved away from bicycles and towards tricycles. Opportunity cost for each tricycle is constant at 2 bicycles.

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.

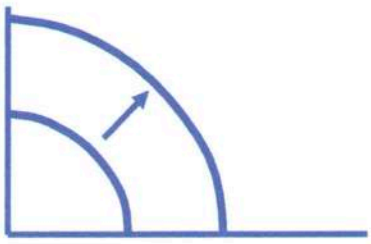
*See videos on YouTube channel ACDCLeadership

Efficiency	Shifting the PPC
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.)	Identify the three shifters of the PPC 1. Change in resource quantity or quality 2. Change in Technology 3. Change in Trade

Shifting and Changes Practice (draw 3 PPCs with pizza and cars)

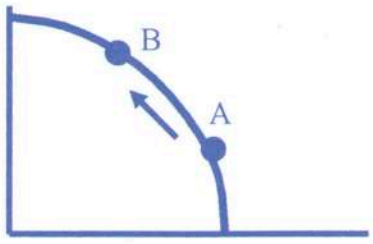
Scenario: Better resources for both products

Pizza



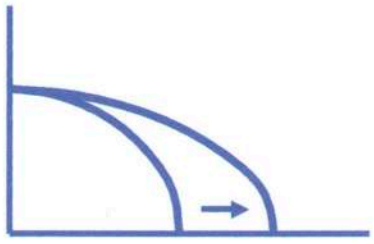
Scenario: Increase in consumer demand for pizza

Pizza



Scenario: Improvements in technology for only cars

Pizza

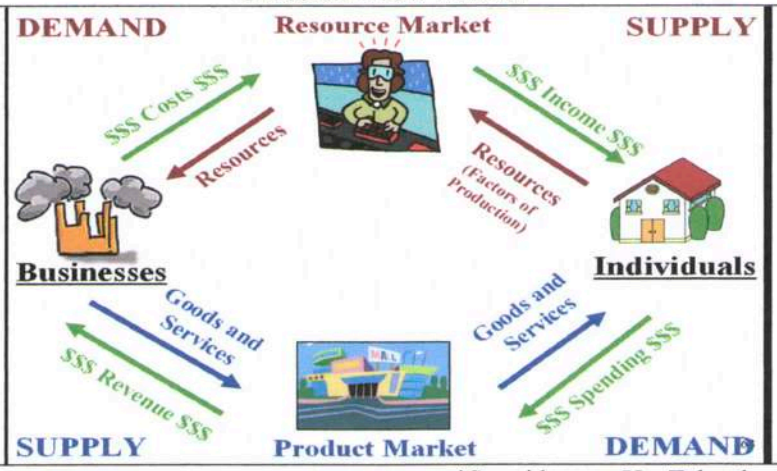


Trade: Absolute and Comparative Advantage*

	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? Mexico
2. Which country has an absolute advantage in cars? Mexico
3. What is Cuba's opportunity cost for producing one car? 4 Sugar
4. Which country has a comparative advantage in cars? Mexico
5. Which country has a comparative advantage in sugar? Cuba
6. 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)

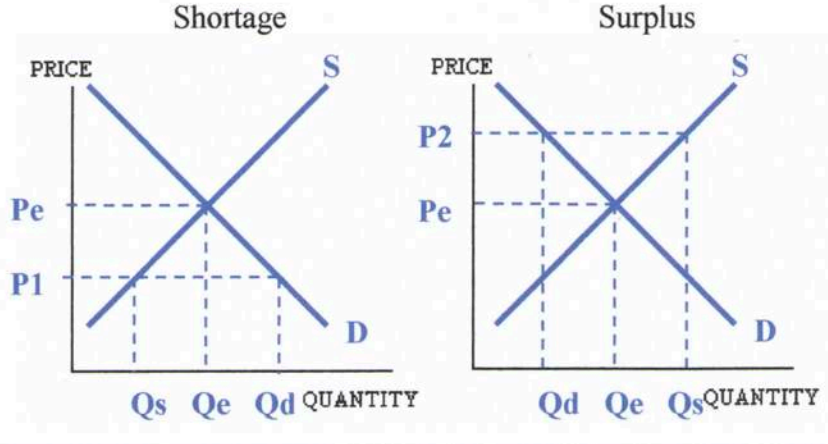
Circular Flow Model*



*See videos on YouTube channel ACDCLeadership

Demand*	Supply*
The Law of Demand: P ↑ Qd ↓ P ↓ Qd ↑	The Law of Supply: P ↑ Qs ↑ P ↓ Qs ↓
Why is demand downward sloping? 1. Substitution Effect- When price goes up, consumers buy more of a substitute product 2. Income Effect- If the price goes down for a product, the purchasing power increases for consumers -allowing them to purchase more 3. Law of Diminishing Marginal Utility- Since you eventually get less satisfaction from each new unit, the price must fall to increase quantity demanded	Why is supply upward sloping? 1. Opportunity Cost-At higher prices, profit seeking firms have an incentive to produce more. 2. Law of Diminishing Marginal Returns- Since the additional cost of each new unit will eventually increase, the firm must increase the price to increase quantity supplied.
Changes in Quantity (Moving Along the Curve)	
What changes quantity demanded? Change in Price	What changes quantity supplied? Change in Price
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 • Normal and Inferior Goods 5. Future Expectations	What changes supply? (6 Shifters of Supply) 1. Prices/Availability of inputs (resources) 2. Number of Sellers 3. Technology 4. Government Action: Taxes & Subsidies 5. Opportunity Cost of Alternative Production 6. 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*



Equilibrium- Qd = Qs

Shortage- Qd > Qs

Surplus- Qd < Qs

Government Controls*

Price FLOORS go ABOVE equilibrium and result in a SURPLUS.

Price CEILINGS go BELOW equilibrium and result in a SHORTG.

*See videos on YouTube channel ACDCLeadership

Unit 2: Macro Measures

Measuring 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.

GDP = __C__+__ I___+__G__+__Xn___

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)

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

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

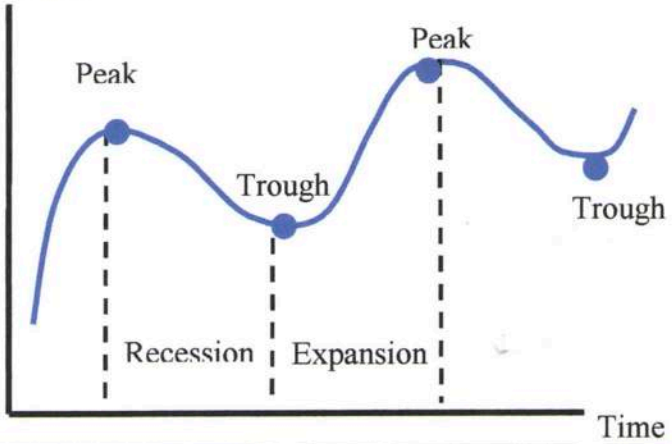
GDP Deflator- Measurement of inflation that is used to adjust (deflate) nominal GDP.

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

Business Cycle

Label peak, recession/contraction, trough, expansion

Real GDP



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)

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.

Full Employment

Natural Rate of Unemployment (NRU)
Frictional and structural unemployment are unavoidable. Together they make up the natural rate of unemployment (or FULL EMPLOYMENT) which means NO Cyclical unemployment

Problems With Unemployment Rate

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.

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.

Measuring Inflation

Market Basket-
A fix list of about 300 commonly purchased goods used to measure inflation over time.
Consumer Price Index (CPI) Equation

$$\textbf{CPI} = \frac{\text{Price of a market basket in a given year}}{\text{Price of the same basket in the base year}} \times 100$$

CPI Practice*

Using the values of the market baskets below, calculate the CPI for each year. Start with 2009 as the base year then recalculate with 2010 as the base year. Lastly, recalculate with 2011 as the base year.

Year	Market Basket	Base Year 2009	Base Year 2010	Base year 2011
2009	$20	100	50	40
2010	$40	200	100	80
2011	$50	250	125	100

Helped or Hurt by Unexpected Inflation

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

Helped	Hurt
-Borrowers -Employers that now pay lower real wages	-Lenders -Savers -People on fixed incomes

Interest Rates and Inflation

Real interest rate=
Real = nominal interest rate - expected inflation

Nominal interest rate=
Nominal = real interest rate + expected 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%

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: Bolivia, Peru, Brazil and Germany after WWI

2. Demand-Pull Inflation- An overheated economy with excessive spending but same amount of goods. ("too much money chasing to few goods") Example: If consumer demand increases, firms in the short-run, a large increase in demand will not lead to a large increase in

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:

$$M \times V = P \times Q$$

M = Money Supply P = Price Level

V = Velocity of Money Q = Quantity/Output

The velocity of money is the average times a dollar is spent and re-spent in a year

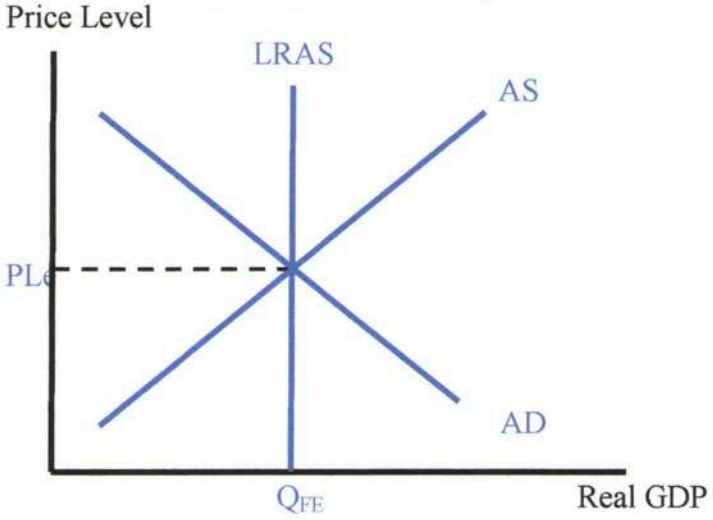
Assume the amount of money is $5 and it is being used to buy 10 products with a price of $2 each.
1. How much is the velocity of money? 4
2. If the velocity and output stay the same, what will happen if the amount of money increases to $10?
Price level will also double.

*See videos on YouTube channel ACDCLeadership

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

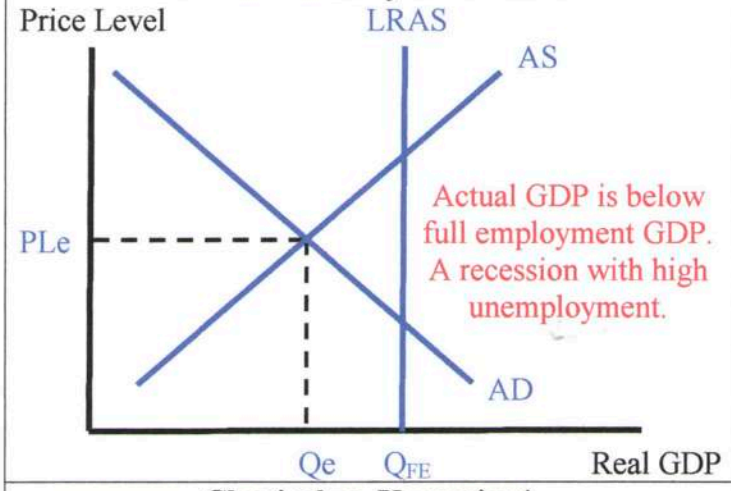
1. Consumer Spending
2. Investment Spending
3. Government Spending
4. Net Exports

Shifters of Aggregate Supply

1. Inflationary Expectations
2. Resource Prices
3. Government Actions (taxes, subsidies, regulations)
4. Productivity

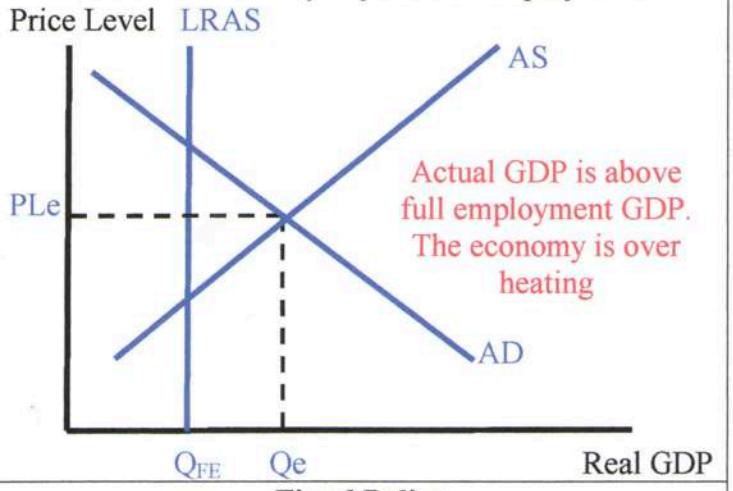
Recessionary Gap*

Draw the economy in a recession



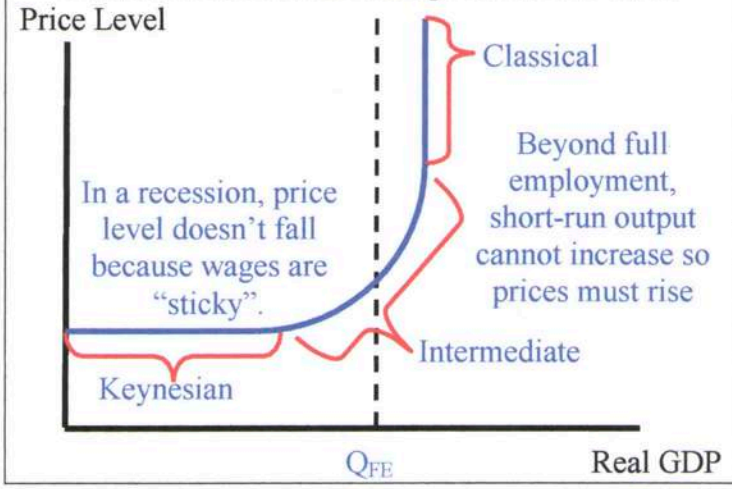
Inflationary Gap*

Draw the economy beyond full employment



Classical vs. Keynesian*

Draw and label the three ranges of the AS curve



Fiscal Policy

Discretionary Fiscal Policy-
Congress creates a new bill that is designed to change AD through government spending or taxation.

Non-Discretionary Fiscal Policy-
Permanent spending or taxation laws enacted to work counter cyclically to stabilize the economy

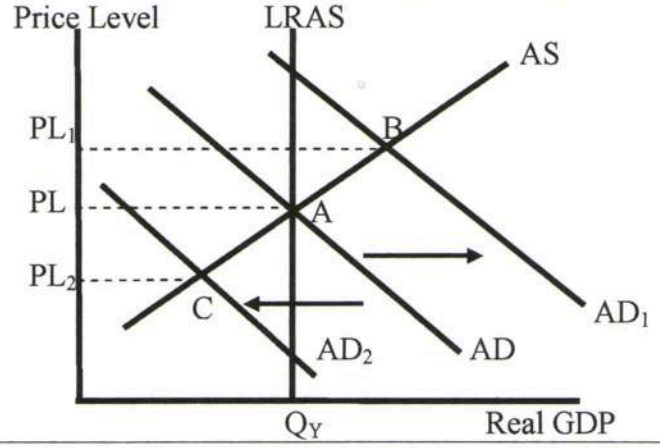
Government Spending and Taxation

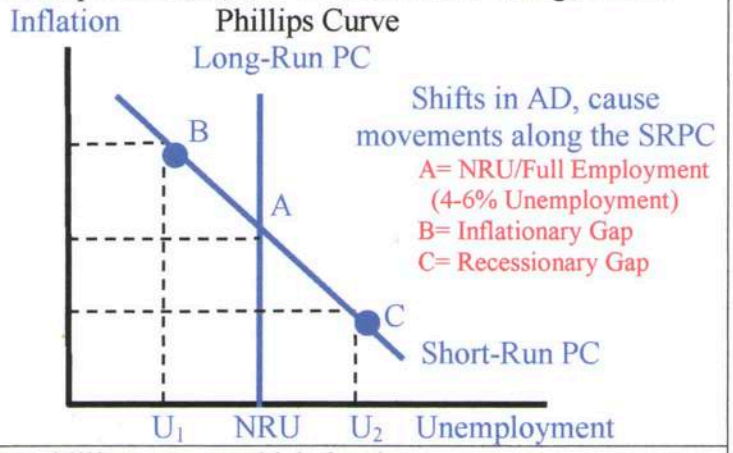
Expansionary Fiscal Policy- Laws to increase output
1. Increase Government Spending
2. Decrease Taxes (Increases disposable income)

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

Short Run and Long Run Phillips Curve*

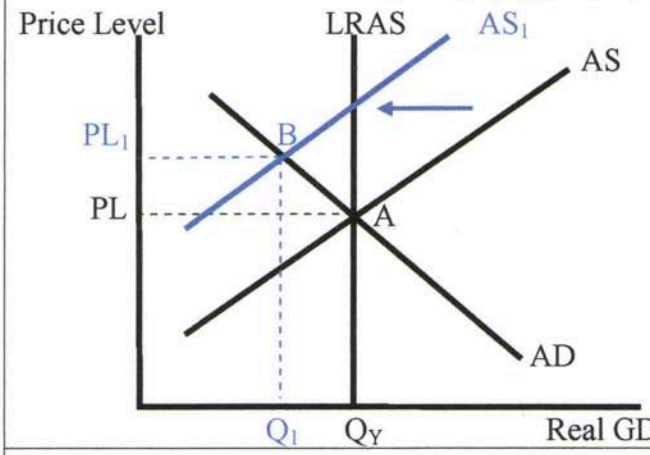
Draw and label the short and long run Phillips curve. Label points A, B, and C based on the changes in AD

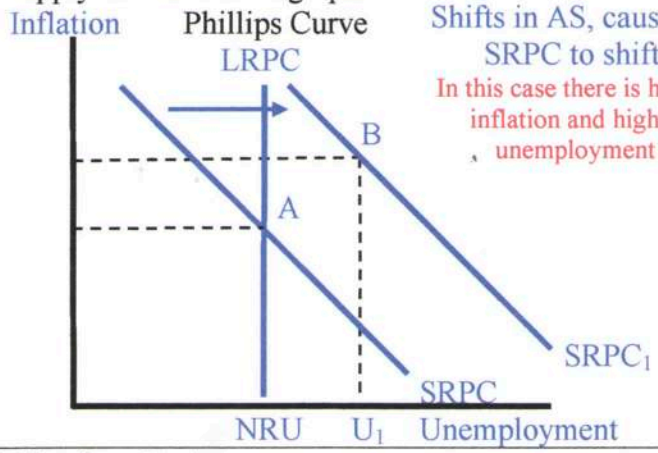




Shifts in AD, cause movements along the SRPC
A= NRU/Full Employment (4-6% Unemployment)
B= Inflationary Gap
C= Recessionary Gap

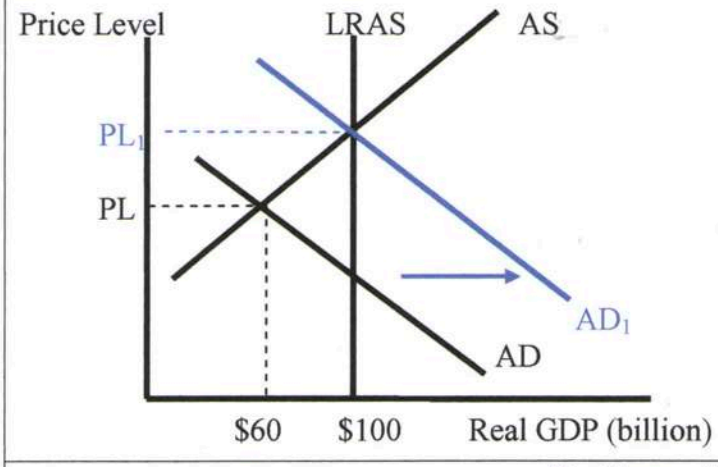
Draw and label the short and long run Phillips curve and label point A.
Show the result of a negative supply shock on both graphs





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

Spending Multiplier Practice*



1. What type of gap? Recessionary
2. To close the gap the government could increase spending or decrease taxes on consumers

Assume the MPC is .5: (multiplier is 2)

3. How much should the government increasing spending to close the gap? $20 billion
4. How much should the government cut taxes to close the gap? $40 billion (consumers only spend half)

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

5. How much should the government increasing spending to close the gap? $8 billion
6. How much should the government cut taxes to close the gap? $10 billion (people save $2B and spend $8B)

Problem with Fiscal Policy

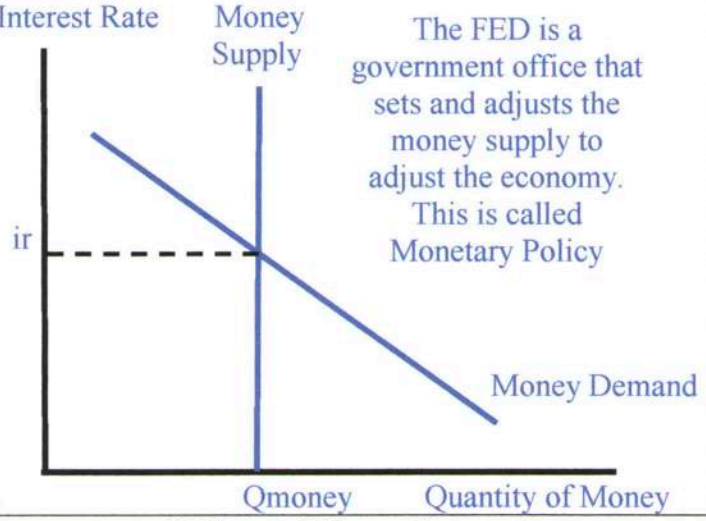
1. Deficit Spending-if the government increases spending without increasing taxes they will increase the annual deficit and the national debt
2. Time Lags-Congress takes time to write, debate, pass, and implement legislation
3. Crowding out- Government spending might cause unintended effects that weaken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

*See videos on YouTube channel ACDCLeadership

Unit 4: Money and Monetary Policy

Money Market*

Draw S&D of Money and Equilibrium Interest Rate



The FED is a government office that sets and adjusts the money supply to adjust the economy. This is called Monetary Policy

Three Functions of Money

1. A Medium of Exchange- Money can easily be used to buy goods and services with no complications of barter system.
2. A Unit of Account- Money measures the value of all goods and services. Money acts as a measurement of 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 alternative uses (ex: cigarettes in prison)
2. Fiat Money
Something that serves as money but has no other important uses. (ex: $20 dollar bill)

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 more employment and 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

Shifters of Money Supply (The FED)*

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 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.
4. 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

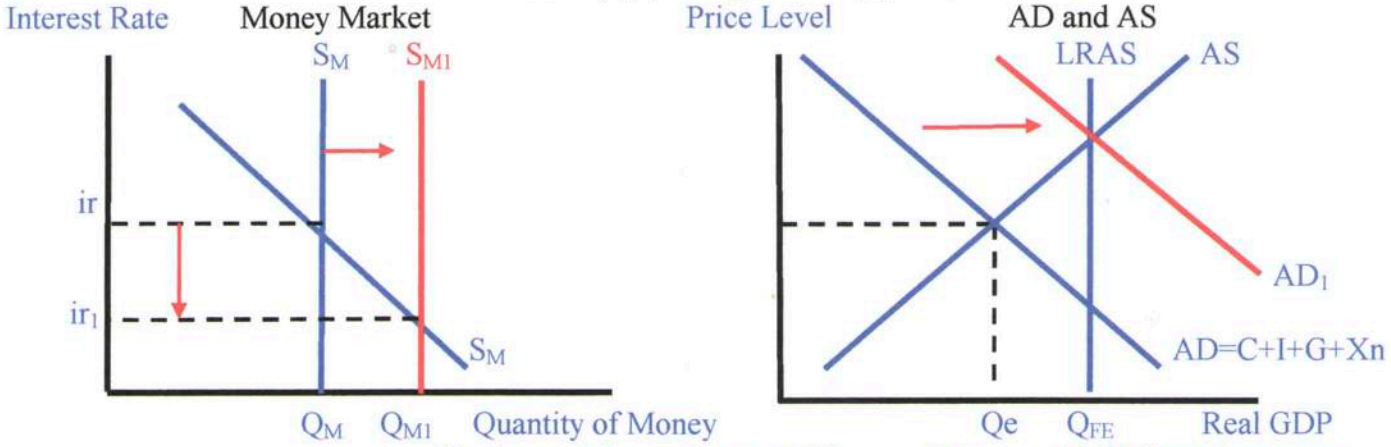
1. If the FED increases the reserve requirement the money supply will ↓ and interest rates ↑.
2. If the FED sells bonds the money supply will ↓ interest rates ↑, and investment ↓.
3. If the FED decreases the reserve requirement the money supply will ↑ and interest rates ↓.
4. If the FED decreases the 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 one another for one-day loans of reserves. The FED sets a target rate and using open market operation to hit the target.

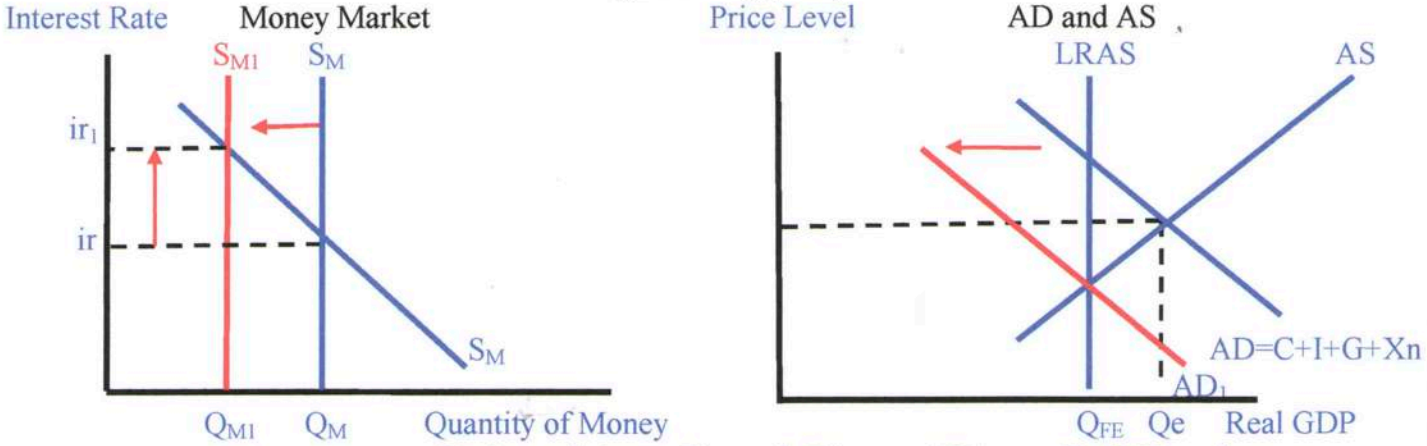
Monetary Policy and AD/AS*

Assume the country is in a recession. Use the money market graph to show how the FED closes the recessionary gap using monetary policy



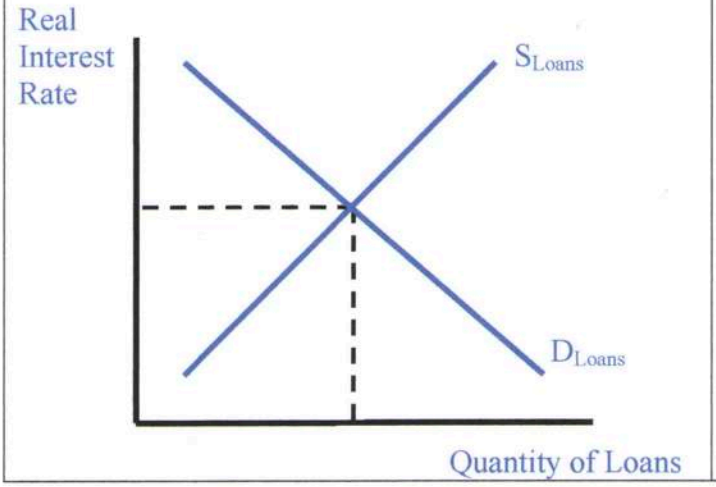
Use arrows to explain the process: $S_M\uparrow \rightarrow ir\downarrow \rightarrow I\uparrow$ and $C\uparrow \rightarrow AD\uparrow \rightarrow$ Full Employment

Assume 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

Loanable Funds



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

1. What happens to the real interest rate if the government begins to deficit spend? Demand for loans increases so interest rate increase
2. If lenders decide to lend less, real interest rates _↑_, investment __↓__, and economic growth __↓__

*See videos on YouTube channel ACDCLeadership

Unit 5: International Trade

Key Terms

Export- the sale of goods and service created by domestic producers to foreign consumers.

Import- the purchase of goods and service created by foreign producers to domestic consumers.

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) The US has a huge trade deficit with China.

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

Balance of Payments

Balance of Payments- summary of all international transactions within a given year prepared in the domestic country's currency

Current Account-
The sum of trades in goods and services, investment income, and net transfer payments

Examples:
- -Toys imported from China
- -Dividends paid to foreign investors
- -Foreign aid

Capital Account-
The net change in national ownership of assets

Examples:
- -US company buys a hotel in Russia
- -German investor buys $5000 US Treasury Bonds

Foreign Exchange (FOREX)

Appreciation- 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.

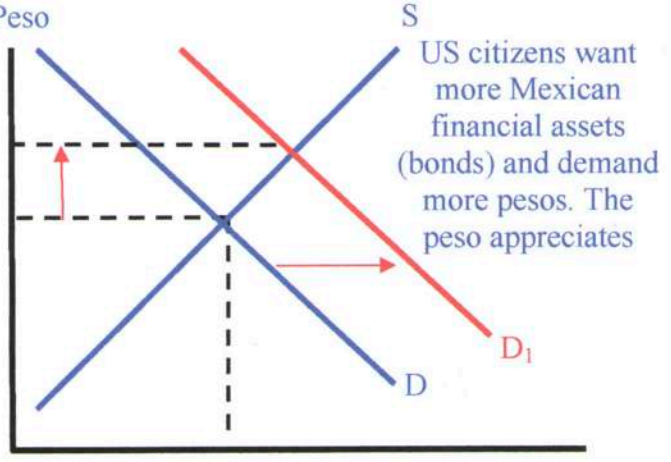
Depreciation- The US dollar will depreciate relative to another currency if demand for the dollar decreases or if supply increases. This will cause US exports to increase and imports to decrease.

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: US has a higher interest rate than Britain.

Foreign Exchange Market*

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 are higher



Appreciation and Depreciation*

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

*See videos on YouTube channel ACDCLeadership