

MICRO EXAM REVIEW

DAN ZIEGENFELDER

TERMS:

Scarcity: the limited nature of society's resources.

Economics: the study of how society manages its scarce resources.

Efficiency: the property of society getting the most it can from its scarce resources.

Equity: the property of distributing economic prosperity fairly among the members of society.

Opportunity Cost: whatever must be given up to obtain some item.

Marginal Changes: small incremental adjustments to a plan of action.

Market Economy: an economy that allocates resources through the decentralized decisions of many firms and households as they interact in markets for goods and services.

Market Failure: a situation in which a market left on its own fails to allocate resources efficiently.

Externality: the impact of one person's actions on the well-being of a bystander.

Market Power: the ability of a single economic actor (or small group of actors) to have a substantial influence on market prices.

Productivity: the quantity of goods and services produced from each hour of a worker's time.

Inflation: an increase in the overall level of prices in the economy.

Phillips Curve: a curve that shows the short-run tradeoff between inflation and unemployment.

Business Cycle: fluctuations in economic activity such as employment and production.

Circular-Flow Diagram: a visual model of the economy that shows how dollars flow through markets among households and firms.

Production Possibilities Frontier: a graph that shows the combinations of output that the economy can possibly produce given the available factors of production and the available production technology.

Microeconomics: the study of how households and firms make decisions and how they interact in markets.

Macroeconomics: the study of economy-wide phenomena, including inflation, unemployment, and economic growth.

Positive Statements: claims that attempt to describe the world as it is.

Normative Statements: claims that attempt to prescribe how the world should be.

Absolute Advantage: the comparison among producers of a good according to their productivity.

Opportunity Cost: whatever must be given up to obtain an item.

Comparative Advantage: the comparison among producers of a good according to their opportunity cost.

Imports: goods produced abroad and sold domestically.

Exports: goods produced domestically and sold abroad.

Market: a group of buyers and sellers of a particular good or service.

Competitive Market: a market in which there are many buyers and many sellers so that each has a negligible impact on the market price.

Price Takers: said to be the buyers and sellers in perfectly competitive markets must accept prices the market determines.

Price Makers: sellers that make their own price. **Ex: Monopoly, Oligopoly**

Monopoly: markets that have only one seller and this seller sets the price.

Oligopoly: a market that falls between extremes of perfect competition and monopoly. Has a few sellers that do not compete aggressively. Has many buyers and few sellers. **Ex: air travel**

Quantity Demanded: the amount of a good that buyers are willing and able to purchase.

Law of Demand: the claim that, other things equal, the quantity demanded of a good falls when the price of the good rises.

Demand Schedule: a table that shows the relationship between the price of a good and the quantity demanded.

Demand Curve: a graph of the relationship between the price of a good and the quantity demanded.

Normal Good: a good for which, other things equal, an increase in income leads to an increase in demand. Income elasticity of this good is above zero.

Inferior Good: a good for which, other things equal, an increase in income leads to a decrease in demand. Income elasticity of this good is less than zero.

Substitutes: two goods for which an increase in the price of one leads to an increase in the demand for the other. The Cross price elasticity of substitutes is positive. **Ex: Coca Cola and Pepsi**

Complements: two goods for which an increase in the price of one leads to a decrease in the demand for the other. The cross price elasticity of complements is negative. **Ex: Milk and Cookies**

Quantity Supplied: the amount of a good that sellers are willing and able to sell.

Law of Supply: the claim that, other things equal, the quantity supplied of a good rises when the price of the good rises.

Supply Schedule: a table that shows the relationship between the price of a good and the quantity supplied.

Supply Curve: a graph of the relationship between the price of a good and the quantity supplied.

Equilibrium: a situation in which the price has reached the level where quantity supplied equals quantity demanded.

Equilibrium Price: the price that balances quantity supplied and quantity demanded.

Equilibrium Quantity: the quantity supplied and the quantity demanded at the equilibrium price.

Surplus: a situation in which quantity supplied is greater than quantity demanded.

Shortage: a situation in which quantity demanded is greater than quantity supplied.

Law of Supply and Demand: the claim that the price of any good adjusts to bring the quantity supplied and the quantity demanded for that good into balance.

Elasticity: a measure of the responsiveness of quantity demanded or quantity supplied to one of its determinants.

Price Elasticity of Demand: a measure of how much the quantity demanded of a good responds to a change in the price of that good, computed as the percentage change in quantity demanded divided by the percentage change in price.

Total Revenue: the amount paid by buyers and received by sellers of a good, computed as the price of the good times the quantity sold.

Income Elasticity of Demand: a measure of how much the quantity demanded of a good responds to a change in consumers' income, computed as the percentage change in quantity demanded divided by the percentage change in income.

Cross-Price Elasticity of Demand: a measure of how much the quantity demanded of one good responds to a change in the price of another good, computed as the percentage change in quantity demanded of the first good divided by the percentage change in the price of the second good.

Price Elasticity of Supply: a measure of how much the quantity supplied of a good responds to a change in the price of that good, computed as the percentage change in quantity supplied divided by the percentage change in price.

Elastic: if the quantity demanded responds substantially to changes in the price.

Inelastic: if the quantity demanded responds only slightly to a change in price.

Unit Elastic: demand moves proportionally the same amount as price.

Perfectly Elastic: as the price elasticity of demand approaches infinity and the demand curve becomes horizontal (looks like an E), reflects the fact that very small changes in price have huge changes in the quantity demanded. Has many identical substitutes.

Perfectly Inelastic: in the extreme case of a zero elasticity when price is perfectly inelastic, the demand curve is vertical and looks like an I. In this case, regardless of the price, the quantity demanded stays the same. They buy or sell at any price.

Price Ceiling: a legal maximum on the price at which a good can be sold.

Price Floor: a legal minimum on the price at which a good can be sold.

Tax Incidence: the manner in which the burden of a tax is shared among participants in a market.

Tax Wedges: the difference between what the buyer pays and the seller receives after a tax has been imposed.

Welfare Economics: the study of how the allocation of resources affects economic well-being.

Willingness to Pay (WTP): each buyer's maximum that measures how much that buyer values a good. Each buyer would be willing to buy an album below their WTP, would refuse to buy the album at a price more than his WTP, and would be indifferent about buying the album at a price exactly equal to his WTP.

Consumer Surplus: the amount a buyer is willing to pay minus the amount the buyer actually pays for it. Consumer Surplus measures the benefit to buyers of participating in a market. The area below the demand curve and above the price measures the consumer surplus in a market.

Cost: the value of everything a seller must give up to produce a good.

Producer Surplus: the amount a seller is paid minus the actual cost of production. Producer Surplus measures the benefit to sellers participating in a market.

Efficiency: the property of a resources allocation of maximizing the total surplus received by all members of society.

Equity: the fairness of the distribution of well-being among the members of society.

Total Surplus: measures the total gains from trade in a market. To find the total surplus you add together the consumer & producer surplus.

Marginal Buyer: the buyer who would leave the market if price were any higher.

Marginal Seller: the seller who would leave the market if the price were any lower.

Market Failure: the inability of some unregulated markets to allocate resources efficiently.

Deadweight Loss: the fall in total surplus that results from a market distortion, in this case a tax.

World Price: the price of a good that prevails in the world market for that good.

Tariff: a tax on goods produced abroad and sold domestically.

Import Quota: a limit on the quantity of a good that can be produced abroad and sold domestically.

Import: bringing a good into a country.

Export: shipping a good out of a country

Externality: the uncompensated impact of one person's actions on the well-being of a bystander.

Internalizing an Externality: altering incentives so that people take account of the external effects of their actions.

Coase Theorem: the proposition that if private parties can bargain without cost over the allocation of resources, they can solve the problem of externalities on their own.

Transaction Costs: the costs that parties incur in the process of agreeing and following through on a bargain.

Pigovian Tax: a tax enacted to correct the effects of a negative externality.

Excludability: the property of a good whereby a person can be prevented from using it.

Rivalry: the property of a good whereby one person's use diminishes other people's uses.

Private Goods: goods that are both excludable and rival.

Public Goods: goods that are neither excludable nor rival.

Common Resources: goods that are rival but not excludable.

Free Rider: a person who receives the benefit of a good but avoids paying for it.

Cost-Benefit Analysis: a study that compares the costs and benefits to society of providing a public good.

Tragedy of the Commons: a parable that illustrates why common resources get used more than is desirable from the standpoint of society as a whole.

Budget Surplus: an excess of government receipts over government spending.

Budget Deficit: an excess of government spending over government receipts.

Average Tax Rate: total taxes paid divided by total income.

Marginal Tax Rate: the extra taxes paid on an additional dollar of income.

Lump-Sum Tax: a tax that is the same amount for every person.

Benefits Principle: the idea that people should pay taxes based on the benefits they receive from government services.

Ability-To-Pay Principle: the idea that taxes should be leveled on a person according to how well that person can shoulder the burden.

Vertical Equity: the idea that taxpayers with a greater ability to pay taxes should pay larger amounts.

Horizontal Equity: the idea that taxpayers with similar abilities to pay taxes should pay the same amount.

Proportional Tax: a tax for which high-income and low income taxpayers pay the same fraction of income.

Regressive Tax: a tax for which high-income and low-income taxpayers pay the same fraction of income.

Progressive Tax: a tax for which high-income taxpayers pay a larger fraction of their income than do low income taxpayers.

Total Revenue (TR): the amount a firm receives for the sale of its output. How much you sell and how much you sell it.

Total Cost (TC): the market value of the inputs a firm uses in production.

Profit: total revenue minus total cost.

Explicit Costs: input costs that require an outlay of money by the firm. Explicit costs are monetary payments a firm must make to an outsider to obtain a resource. (EX: paying wages to workers)

Implicit Costs: input costs that do not require an outlay of money by the firm. Implicit costs are income a firm sacrifices when it employs a resource it owns to produce a product instead of selling the resource to someone else. (EX: opportunity cost, what you could have had but didn't)

Economic Profit: total revenue minus total cost, including both explicit and implicit cost.

Accounting Profit: total revenue minus total explicit cost.

Production Frontier: the relationship between the quantity of inputs used to make a good and the quantity of output of that good.

Marginal Product: the increase in output that arises from an additional unit of input.

Diminishing Marginal Product: the property whereby the marginal product of an input declines as the quantity of the input increases.

Fixed Costs (FC): costs that do not vary with the quantity of output produced.

Variable Costs (VC): costs that do vary with the quantity of output produced.

Average Total Cost (ATC): total cost divided by the quantity of output. ATC is usually U shaped.

Average Fixed Cost (AFC): fixed costs divided by the quantity of output.

Average Variable Cost (AVC): variable costs divided by the quantity of output.

Marginal Cost (MC): the increase in total cost that arises from an extra unit of production.

Efficient Scale: the quantity of output that minimizes average total cost. The best point on ATC where it is the lowest point where MC crosses over ATC.

Economies of Scale: the property whereby long-run average total cost falls as the quantity of output increases.

Diseconomies of Scale: the property whereby long-run average total cost rises as the quantity of output increases.

Constant Returns to Scale: the property whereby long-run average total cost stays the same as the quantity of output changes.

Competitive Market: a market with many buyers and sellers trading identical products so that each buyer and seller is a price taker.

Average Revenue (AR): total revenue divided by the quantity sold.

Marginal Revenue (MR): the change in total revenue from an additional unit sold.

Sunk Cost: a cost that has already been committed and cannot be recovered.

Price Takers: buyers and sellers in a competitive market that must accept the price that the market determines.

Shut Down: a short-run decision to temporarily cease production during a specific period of time due to current market conditions. A firm that shuts down must still pay its fixed costs and workers sitting at home.

Exit: a long-run decision to permanently cease production and leave the market. A firm that does not have to pay any costs at all, fixed or variable.

Long-run Equilibrium: the process of entry or exit is complete, remaining firms earn zero *economic profit*. In the long-run $P = \text{Minimum ATC}$.

Monopoly: a firm that is the sole seller of a product without close substitutes.

Natural Monopoly: a monopoly that arises because a single firm can supply a good or service to an entire market at a smaller cost than could two or more firms.

Price Discrimination: the business practice of selling the same good at different prices to different customers.

Market Power: the ability to influence the market price of the product it sells. A competitive firm has no market power.

Barriers to Entry: other firms cannot enter the market.

Output Effect: more output sold, which raises revenue.

Price Effect: the price falls, which lowers revenue.

Perfect Price Discrimination: the business practice of selling the same good at different prices to different customers. This cannot happen if there is arbitrage.

Arbitrage: a situation in which the monopolist is able to charge each customer precisely his or her willingness to pay.

Price Maker: the sellers determine the price at which a product is sold in a market.

Oligopoly: a market structure in which only a few sellers offer similar or identical products.

Monopolistic Competition: a market structure in which many firms sell products that are similar but not identical.

Collusion: an agreement among firms in a market about quantities to produce or prices to charge. Collusion is how a cartel acts.

Cartel: a group of firms acting in unison.

Nash Equilibrium: a situation in which economic participants interacting with one another each choose their best strategy given the strategies that all the others have chosen.

Game Theory: the study of how people behave in strategic situations. How people behave and act together.

Prisoners' Dilemma: a "game" between two captured criminals that illustrates why cooperation is difficult even when it is mutually beneficial.

Dominant Strategy: a strategy that is for a player in a game regardless of the strategies chosen by other players.

Concentration Ratio: the percentage of the total market's total output supplied by its four largest firms. The higher the concentration ratio, the less competition. Concentration ratio goes with an oligopoly for the first four firms.

Payoff Matrix: a payoff matrix is a decision analysis tool that summarizes pros and cons of a decision in a tabular form.

Factors of Production: the inputs used to produce goods and services.

Production Function: the relationship between the quantity of inputs used to make a good and the quantity of output of that good.

Marginal Product of Labor: the increase in the amount of output from an additional unit of labor.

Diminishing Marginal Product: the property whereby the marginal product of an input declines as the quantity of input increases.

Value of the Marginal Product: the marginal product of an input times the price of the output.

Capital: the equipment and structures used to produce goods and services.

Compensating Differentials: a difference in wages that arises to offset the nonmonetary characteristics of different jobs.

Human Capitals: the accumulation of investments in people, such as education and on-the-job training.

Union: a worker association that bargains with employers over wages and working conditions.

Strike: the organized withdrawal of labor from a firm by a union.

Efficiency Wages: above-equilibrium wages paid by firms in order to increase worker productivity.

Discrimination: the offering of different opportunities to similar individuals who differ only by race, ethnic group, sex, age, or other personal characteristics.

Poverty Rate: the percentage of the population whose family income falls below an absolute level called the poverty line.

Poverty Line: an absolute level of income set by the federal government for each family size below which a family is deemed to be in poverty.

In-Kind Transfers: transfers to the poor given in the form of goods and services rather than cash.

Life Cycle: the regular pattern of income variation over a person's life.

Permanent Income: a person's normal income.

Utilitarianism: the political philosophy according to which the government should choose policies to maximize the total utility of everyone in society.

Utility: a measure of happiness or satisfaction.

Liberalism: the political philosophy according to which the government should choose policies deemed to be just, as evaluated by an impartial observer behind a "veil of ignorance."

Maximin Criterion: the claim that the government should aim to maximize the well-being of the worst-off person in society.

Libertarianism: the political philosophy according to which the government should punish crimes and enforce voluntary agreements but not redistribute income.

Welfare: government programs that supplement the incomes of the needy.

Negative Income Tax: a tax system that collects revenue from high-income households and gives transfers to low-income households.

KEY CONCEPTS:

- **WHAT IS THE OPPORTUNITY COST FOR A COLLEGE STUDENT?**
College age athletes who can earn millions if they drop out of school and play professional sports are well aware that their opportunity cost of college is very high. They often decide the benefit is worth the cost.
- **WHAT IS ADAM SMITH'S "INVISIBLE HAND?"**
Households and firms interacting in markets act as if they are guided by an Invisible Hand that leads them to desirable market outcomes. Because households and firms look at prices when deciding what to buy and sell, they unknowingly take into account the social benefits and costs of their actions. As a result, prices guide these individual decisionmakers to reach outcomes that, in many cases, maximize the welfare of society as a whole.
- **HOW COULD A COUNTRY MOVE TO DIFFERENT POINTS ON A PRODUCTION POSSIBILITIES CURVE?**
The curve will move with an increase or decrease in technology or raw materials.
- **HOW IS COMPARATIVE ADVANTAGE FACTORED INTO TRADE?**
Comparative advantage is factored into trade because based on the opportunity cost it tells who has the comparative advantage for that good and that is what that firm should produce.
- **What is the difference between a Perfectly Competitive Market vs. an Imperfectly Competitive Market?**
Perfectly Competitive Market- no one has control over the market
Imperfectly Competitive Market- someone has some control on the market
- **What does a demand curve/supply curve show?**
A demand curve shows the market of demand.
A supply curve shows the market of supply.
- **How does the market respond to shortages and surpluses?**
Shortages- pressure is put on sellers to raise prices.
Surplus- pressure is put on sellers to lower prices.

- **What causes a change in supply?**

VARIABLE	CHANGE
Price	Quantity Supplied
Input Prices	Supply
Technology	Supply
Number of Sellers	Supply
Expectations	Supply

- **What causes a change in demand?**

VARIABLE	CHANGE
Price	Quantity Demanded
Number of Buyers	Demand
Income	Demand
Price of Related Goods	Demand
Tastes	Demand
Expectations	Demand

- **What happens to price or quantity when supply or demand shift?**

	NO CHANGE IN SUPPLY	INCREASE IN SUPPLY	DECREASE IN SUPPLY
NO CHANGE IN DEMAND	P & Q are the Same	P Decreases Q Increases	P Increases Q Decreases
INCREASE IN DEMAND	P Increases Q Decreases	P Ambiguous Q Increases	P Increases Q Decreases
DECREASE IN DEMAND	P Decreases Q Increases	P Decreases Q Ambiguous	P Ambiguous Q Decreases

- **What is the rule of thumb for the variety of supply and demand curves?**

The flatter the curve, the bigger the elasticity. The steeper the curve, the smaller the elasticity.

- **WHAT DOES IT MEAN FOR CONSUMERS WHEN THE ELASTICITY OF DEMAND FOR A GOOD IS 3.0?**

When the elasticity of demand for a good is 3.0, demand will change three times as much as price.

- **HOW DO CHANGES IN PRICE AFFECT TOTAL REVENUE, BOTH WHEN DEMAND IS ELASTIC AND INELASTIC?**

Demand is elastic- lower prices to increase revenue.

Demand is inelastic- increase prices because people are less likely to change.

- **WHAT ARE DETERMINANTS FOR PRICE ELASTICITY OF DEMAND? SUPPLY? WHICH IS MORE ELASTIC?**

DETERMINANT	ELASTIC OR INELASTIC?
Availability of Close Substitutes	Close Subs- Elastic Few Close Subs-Inelastic
Definition of the market	Narrowly Defined- Elastic Broadly Defined- Inelastic
Time Horizon	Long Run- Elastic Short Run- Inelastic
Necessity vs. Luxury	Necessity- Inelastic Luxury- Elastic

- **WHAT IS THE PROBLEM WITH THE STANDARD METHOD (COMPARED TO MIDPOINT)?**

The problem with the standard method is it matters where you start, the midpoint, it does not matter where you start.

- **WHERE IS IT MORE ELASTIC ON A DEMAND CURVE? A SUPPLY CURVE?**

Demand Curve: top is more elastic, middle unit elastic, bottom is inelastic.

Supply Curve: bottom is elastic, middle is unit elastic, top is inelastic.

- **When is a price floor and Price Ceiling Binding? What is the effect of the Binding Price Floor/ Ceiling?**

PRICE FLOOR/CEILING	BINDING	EFFECT
Price Floor	Binding, equilibrium is below PF	Surplus
Price Floor	Not Binding, equilibrium is above PF	No Effect
Price Ceiling	Binding, equilibrium is above PC	Shortage
Price Ceiling	Not Binding, equilibrium is below PC	No Effect

- **Does it matter who a tax is placed on?**

It does not matter who a tax is placed on.

- **How does elasticity affect tax burden?**

More elastic- less burden

Less elastic- more burden

- **What kind of binding is Rent Control an example of? How does Rent control affect the market?**

Rent control is a type of price ceiling. Rent control creates shortages and waiting lists, landlords lose their incentive to respond to tenants' concerns. Why should a landlord spend his money to maintain and improve his property when people are willing to take it as it is? In the end, tenants get lower rents, but they also get lower-quality. In the short run, landlords have a fixed number of apartments to rent, and they cannot adjust this number quickly as market conditions change. Moreover, the number of people searching for housing in a city may not be highly responsive to rents in the short run because people take time to adjust their housing arrangement, making short run supply and demand for housing relatively inelastic. The long run is different because the buyers and sellers of rental housing respond more to market conditions as time passes. On the supply side, landlords respond to low rents by not building new apartments and by failing to maintain existing ones. On the demand side, low rents encourage people to find their own apartments (rather than sharing living space) and induce more people to move into a city. Therefore, both supply and demand are more elastic in the long run.

- **What are the two reasons that cause a decrease in consumer surplus? Producer Surplus?**

A fall in **consumer surplus** is due to buyers leaving the market and the remaining buyers paying higher prices.

A fall in **producer surplus** is due to sellers leaving the market and the remaining sellers getting a lower pay.

- **What does it mean for an allocation of resources to be efficient?**

If an allocation of resources is *efficient*, then all potential gains from trade among buyers and sellers are being realized.

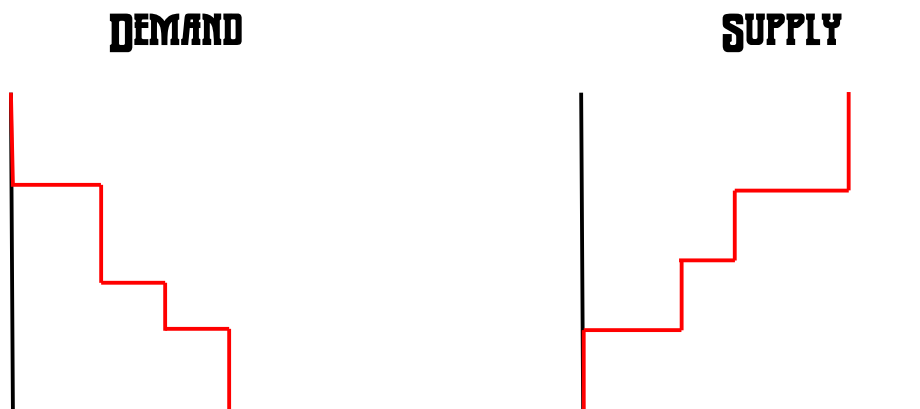
- **What is a benevolent social planner?**

The benevolent social planner is an all-knowing, all-powerful, well-intentioned dictator. The planner wants to maximize the economic well-being in society.

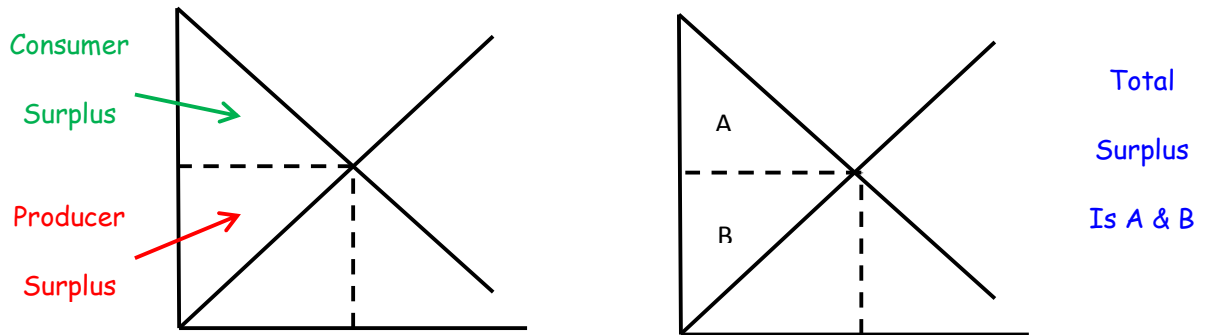
- **Is a competitive market efficient? Why?**

A competitive market is efficient because it maximizes the area below the demand curve and above the consumer surplus.

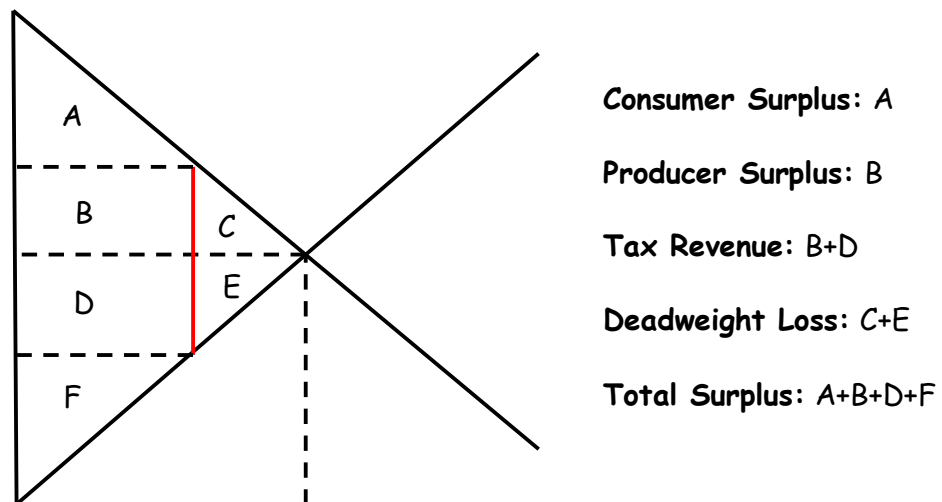
- **What do the demand curve and supply curve look like when there are only a few buyers? Show an example.**



- Identify on a graph the consumer surplus, producer surplus, and total surplus.



- Identify on a graph with a tax the consumer surplus, producer surplus, total surplus, tax revenue, and deadweight loss.



- What does efficiency mean?**
Efficiency means raising or lowering the quantity of a good would not increase total surplus. The goods are being produced by the producers with the lowest cost. Two goods are being consumed by the buyers who value them most highly.
- Which buyers consume the good? Which sellers produce the good?**
The **buyers** that consume the good are the ones who value the good most highly. The **sellers** that produce the good are the ones who can produce the good at the lowest cost.
- What does a market failure cause?**
A market failure cause a *market power*, a single buyer or seller can influence the market economy EX: Monopoly. A market failure also causes *externalities* which are side effects of transactions EX: pollution.

- With elasticity, when is the burden of a tax heavier? When is the deadweight loss larger?
Inelastic- the burden of the tax is larger and the DWL is smaller.
Elastic- the burden of the tax is smaller and the DWL is larger.
- What happens to DWL as a tax increases?
As a tax increases, DWL increases, at a greater and greater amount.
- What is a Laffer curve?
A Laffer curve shows the relationship between the size of the tax and revenue.
- If the government wanted to maximize efficiency (total surplus) what tax per unit should it impose?
To maximize efficiency there would need to be no tax imposed on the market.
- Why does a tax generally produce a DWL?
A tax generally produces a DWL because a market fails to produce benefits that exceed the cost.
- What will happen to consumer surplus with a price increase? Producer surplus?
Consumer Surplus- decrease
Producer Surplus- increase
- How is total surplus calculated?
To calculate total surplus you subtract the value to buyers by the cost to sellers.
- Total surplus in a market is usually maximized when:
Total surplus in a market is usually maximized when the market is in equilibrium.
- If the quantity traded in a market is less than equilibrium quantity:
If the quantity traded in a market is less than equilibrium quantity the value to consumers for additional units is greater than the cost to sellers of producing those units.
- If a market is not very competitive and/or if there are externalities, we can expect the market outcome:
We can expect for the market outcome not be efficient, and total surplus will not be maximized.
- According to the Laffer curve, if the government wants to increase its revenue from taxes:
According to the Laffer curve, if the government wants to increase its revenue from taxes sometimes the way to do so will be by lowering the size of the tax.
- What does DWL measure?
DWL measures the loss in a market to buyers and sellers that is not offset by an increase in gov't revenue.
- **WHAT IS THE DIFFERENCE BETWEEN A TARIFF AND AN IMPORT QUOTA?**
A tariff creates revenue for the gov't while a quota creates profits for foreign producers for the imported goods, who can sell them at high prices.
- **EXPLAIN THE FIVE DIFFERENT ARGUMENTS FOR RESTRICTING TRADE?**
The Job Argument: Trade destroys jobs in the industries that compete against imports.

The National Security Argument: An industry vital to National Security should be protected from foreign competition, to prevent dependence on imports that can be disrupted during war time.

The Infant-Industry Argument: A new industry argues for temporary protection until it is mature and can compete with foreign markets.

The Unfair-Competition Argument: Producers argue their competitors in another country have an unfair advantage. EX: gov't subsidies

The Protection-as-baring-chip Argument: EX: The U.S. can threaten to limit imports of French wine unless France lifts their quota on American beef.

- **WHAT ARE THE THREE DIFFERENT TRADE AGREEMENTS?**

North American Free Trade Agreement (NAFTA): lowers trade barriers.

General Agreement on Tariffs and Trade (GATT): a continuing series of negotiations among many of the world's countries with the goal of promoting free trade.

World Trade Organization (WTO): rules established under GATT that are now enforced by an international institution called the WTO.

- **WHAT CAUSES A DWL FROM RESTRICTING TRADE?**

- 1.) Overproduction of goods
- 2.) Underproduction of goods

- **WHAT IS THE RULE FOR THE WORLD PRICE AND COMPARATIVE ADVANTAGE?**

If a country has a comparative advantage in that good then they export, if they don't then they import.

	Domestic Price is less than world price	Domestic Price is greater than world Price
Direction of Trade	Exports	Imports
Consumer Surplus	Falls	Rises
Producer Surplus	Rises	Falls
Total Surplus	Rises	Rises

- **WHAT ARE THE GOVERNMENT'S OPTIONS FOR EXTERNALITIES?**

Command and Control Policy- regulate behavior directly

EX) limits on Q of pollution emitted, requirements that firms adopt a particular technology to reduce emissions.

Market-Based Policies- provide incentives so that private decision-makers will choose to solve the problem on their own.

EX) Corrective Taxes and Subsidies

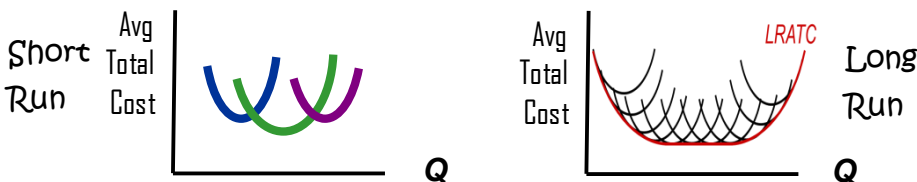
- **WHAT IS THE GOAL OF THE TAX SYSTEM?**

Equity or Efficiency.

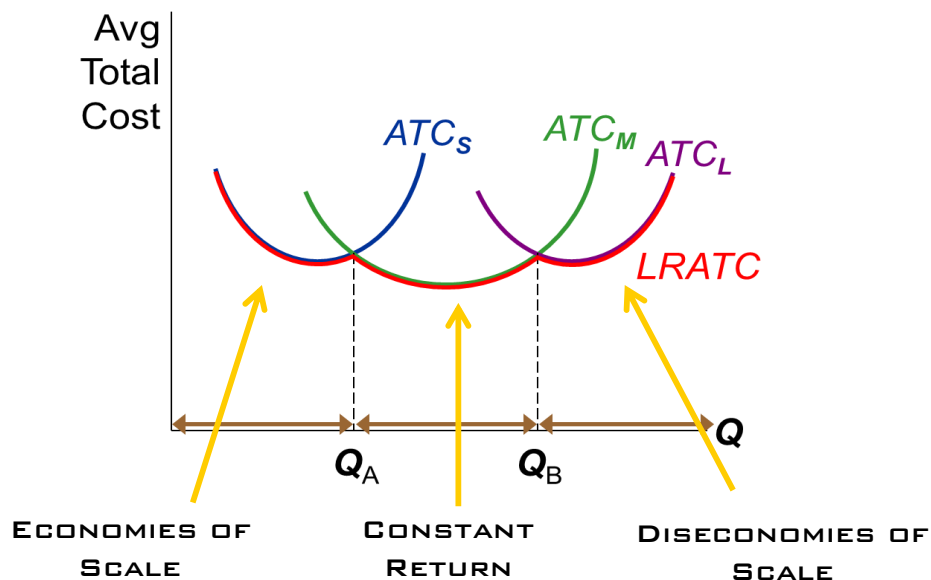
- **WHAT FACTORS ARE CONSIDERED WHEN TAXING A FAMILY?**
Children, handicaps, and how much is given to charity.
- **WHAT DOES THE MARGINAL TAX RATE TELL US ABOUT INCENTIVES?**
Measures the incentive effects of taxes on work effort, saving, etc.
- **WHEN IS A GOOD RIVAL? WHEN IS A GOOD EXCLUDABLE? MAKE A CHART.**

		RIVAL	
		Yes	No
E X C L U D A B L E	Yes	<i>PRIVATE GOOD</i>	<i>NATURAL MONOPOLY</i>
	No	<i>COMMON RESOURCES</i>	<i>PUBLIC GOOD</i>

- **What are the three sources for Barriers to Entry in a monopoly?**
 - 1) A single firm owns a key resource (EX. DeBeers Diamonds)
 - 2) The gov't gives a single firm the exclusive right to produce a good (EX. Patent, Copyright laws)
 - 3) Natural Monopoly
- **How are short run and long run ATC curves different?**
In the short run, they are stuck with the cost, but in the long run they can adjust.



- **On the ATC curve, when are there economies of scale, diseconomies of scale, and constant returns?**



- **Why does marginal cost rise as output increases?**
Although MC is less than output on a normal scale, diminishing product of labor will in the long run price out to be more than that of an output.
- **Under what conditions will a firm shut down? Exit? What happens as a result?**
Firms will shut down in the short run and exit in the long run. A firm will shut down temporarily if Price is less than AVC. A firm will exit if P is less than ATC. A firm will enter if P is greater than ATC.
- **What is meant by zero economic profit?**
When a firm is earning zero economic profit, they are earning enough revenue to cover their cost.
- **What are the short run effects of an increase in demand? The long run effects?**
Firms can enter and exit the market in the long run, but not the short run.
Short Run: Price exceeds average total cost and firms are making a positive profit.
Long Run: Price lowers and quantity increases with new firms entering the market. The firm produces at the efficient scale, but quantity produced and sold is higher.
- **Is it beneficial to break a natural monopoly into smaller firms?**
No because the firm entering will not receive the same low cost and after entry each firm will have a smaller piece of the market. The firms would have to pay fixed cost to start up, and these cost are high.

- **How does price discrimination and perfect price discrimination affect surplus?**

Price discrimination there is consumer surplus, monopoly profit, and a DWL. In perfect price discrimination there is no DWL or consumer surplus, instead the monopoly takes it all as profit.

- **How do numbers of firms and agreements affect P & Q in an oligopoly?**

One Firm- price high, quantity low
Many Firms- quantity high, price low

- **Why do firms renege on their agreements? What happens as a result?**

Firms renege on their agreement so they can make a larger profit. When one firm does this, it is very likely that so will the other causing them to both cheat and make less than when they honored their agreement.

- **What types of firms are efficient for consumers?**

Perfectly competitive markets are efficient for consumers.

- **Why does a monopolistically competitive firm face a flatter demand curve than a monopoly?**

There are closer substitutes which makes it more elastic causing there to be a flatter demand curve.

- **What happens to a patent after it expires?**

When the patent expires, the market becomes competitive.

- **What is the public policy toward monopolies?**

- 1.) Increasing competition with antitrust laws
- 2.) Regulation
- 3.) Public Ownership (Public ownership is usually less efficient because no profit motive to minimize cost)
- 4.) Do nothing

- **What are the benefits of antitrust laws?**

Resale Price Maintenance: Occurs when a manufacturer imposes lower limits on the price retailers can charge. Is often opposed because it appears to reduce competition at the retail level. The practice has a legitimate objective, to prevent discount retailers from free-riding on the services provided by full service retailers.

Predatory Pricing: occurs when a firm cuts price to prevent entry or drive a competitor out of the market, so that it can charge monopoly price later. Illegal under antitrust laws, many economist doubt predatory pricing is a rational strategy. It involves selling a loss, which is extremely costly to the firm and it can back fire.

Tying: Occurs when a manufacture bundles two products together and sells them for one price. Critics argue that tying gives firms more market power by connecting weak products to strong ones. Others counter that tying cannot change the market power. Firms may use tying for price discrimination which is not illegal, and sometimes increases economic efficiency.

- **What is the purpose of a patent and copyright?**

A patent gives a company the exclusive right to produce the good. Patents encourage people to do more research. The copyright is a government guarantee that no one can print and sell the work without the author's permission. Copyrights encourage authors to write more and better books. The benefits of the patent and copyright laws are increased incentive for creative activity.

- **What causes entry/exits in a perfectly competitive market?**

The firm exits the market if the revenue it would get from producing is less than its total cost. So exit if price is less than average total cost. The firm will enter the market if such an action would be profitable, which occurs if the price of the good exceeds the average total cost of production. Firms will enter if price is greater than average total cost.

- **What is a duopoly?**

A duopoly is an oligopoly of two firms.

Two firms enter an agreement. If they both honor the agreement and produce the given quantity, they will earn \$5,000 profit. If one firm increases Q while the other does not, that firm will earn \$7,000 and the other will earn \$3,000. If they both break the agreement, they will each earn \$4,000. Draw the payoff matrix, identify any dominant strategies and the Nash equilibrium.

Nash Equilibrium is where

X and O are.

Firm 1

Q1

Q2

		<u>Firm 2</u>	
		Q1	Q2
<u>Firm 1</u>	Q1	5000 5000	3000 7000 X
	Q2	7000 3000 O	4000 X 4000 O

Firm 1's dominant strategy: O

Firm 2's Dominant strategy: X

- **How does a company provide an incentive for dangerous jobs?**

A company provides an incentive for dangerous jobs by offering higher wages.

DIFFERENCES IN MARKETS

PERFECTLY COMPETITIVE MARKET

- Marginal Revenue=Price=Average Revenue
- Characteristics:
 - 1) Many buyers and sellers
 - 2) The goods offered for sale are largely the same
 - 3) Firms can freely enter or exit the market

- If MR is greater than MC , then increase quantity to raise profit
- If MR is less than MC , then reduce quantity to raise profit
- Price Takers
- $MR=MC$ is profit maximization
- MC curve is the firms supply curve
- Profit per unit is $P-ATC$
- The number of firms in the short run is fixed due to fixed cost
- The number of firms in the long run is variable due to free entry and exit
- A firm will have a profit if MR is above ATC
- A firm will have a loss if MR is below ATC
- Market Demand Curve slopes downward, but a single firms demand curve is horizontal at the market price
- Firm can increase quantity without lowering price
- Quantity high, price low
- Identical products

MONOPOLY

- Price high, quantity low
- Monopoly does not have a supply curve
- MR does not equal Price
- Price=Average Revenue
- Profit Maximization is at $MR=MC$
- The quantity for profit maximization is where $MR=MC$ and you would go to the demand curve at this quantity to find the price
- If ATC is above demand there is a loss
- If ATC is below demand there is a profit
- Profit is $(P-ATC)XQ$
- Price per unit is $P-ATC$
- Price Maker
- Has a dead weight loss
- Has price discrimination
- Price is greater than $MR=MC$
- One firm
- High importance of strategic operation between firms
- Barriers to entry

OLIGOPOLY

- Profit Maximization $MR=MC$
- Profit= $(P-MC)XQ$
- Profit per unit= $P-MC$
- Socially efficient quantity when maximizes surplus
- Socially efficient outcome is equilibrium in perfectly competitive market
- Policymakers promote competition, prevent cooperation to move the oligopoly outcome closer to the efficient outcome
- Few sellers; similar or identical products

MONOPOLISTIC COMPETITION

- Many firms sell products that are similar, but not identical
- Location is differentiation
- Very likely to have fierce competition
- Has zero long run economic profit
- Free entry/exit
- Firm has market power
- Price and quantity is same as monopoly, along with profit and loss
- More elastic (sensitive to a change in price)
- Has a flatter demand curve

	FIRST	SECOND	THIRD	FOURTH
Most differentiated product	Monopoly	Oligopoly	Monopolistic Competition	Perfect Competition
Best for Consumers	Perfect Competition	Monopolistic Competition	Oligopoly	Monopoly
Most likely to earn economic profit in the long run	Monopoly	Oligopoly	Monopolistic Competition	Perfect Competition
Highest Quantity	Perfect Competition	Monopolistic Competition	Oligopoly	Monopoly
Highest Price	Monopoly	Oligopoly	Monopolistic Competition	Perfect Competition

	Number of Firms	Differentiated or Homogeneous Product	Ease To Entry
PERFECT COMPETITION	Many	Identical	Easy
MONOPOLISTIC COMPETITION	Many	Similar	Easy
OLIGOPOLY	Few (2-6)	Same to similar	Getting Harder
MONOPOLY	One	One product with no close substitutes	Hard, almost impossible

	Price-Setting Power	Nonprice Competition (Advertisements)	Allocative and Productive Efficiency	Long-Run Profit	Examples
PERFECT COMPETITION	None	No	Yes	Zero	Noodles
MONOPOLISTIC COMPETITION	Some, a little	Yes	No (not really)	Zero	Apartments, fast food, shoes, gas
OLIGOPOLY	Some	Yes if competing	No	Agreement positive, if not, zero	Tennis balls, airlines, cell phones, oil
MONOPOLY	Absolutely	No	No, least efficient	Positive	Electricity

FORMULAS:

$$\text{Price Elasticity of Demand: } \frac{\% \Delta \text{ in QD}}{\% \Delta \text{ in D}}$$

$$\text{Midpoint: } \frac{\text{End Value} - \text{Start Value}}{\text{Midpoint}}$$

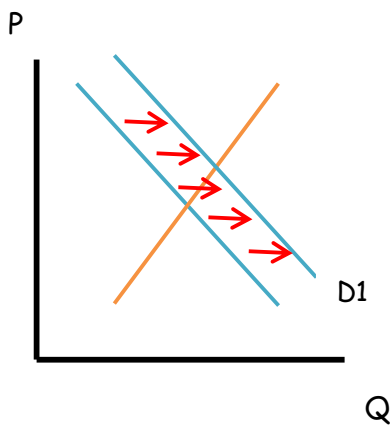
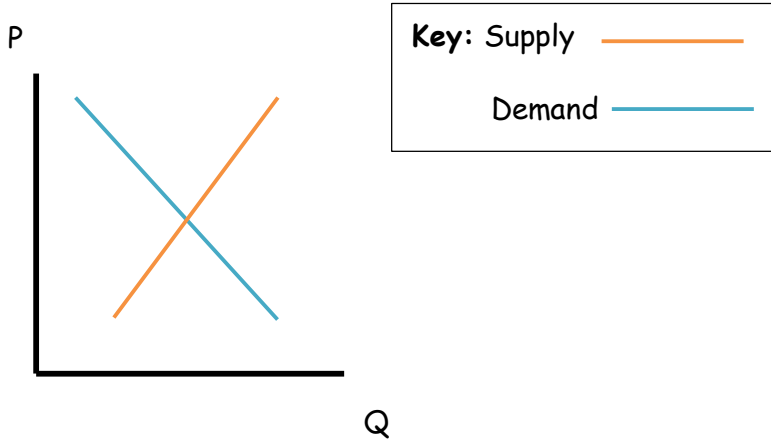
$$\text{Price Elasticity of Demand: } \frac{(Q_2 - Q_1) / \left(\frac{Q_2 + Q_1}{2}\right)}{(P_2 - P_1) / \left(\frac{P_2 + P_1}{2}\right)}$$

$$\text{Total Revenue: } P \times Q$$

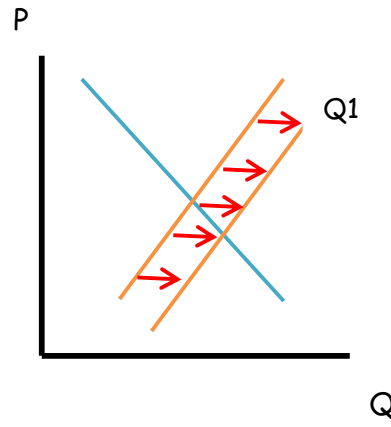
$$\text{Income Elasticity of Demand: } \frac{\% \Delta \text{ in QD}}{\% \Delta \text{ in income}}$$

$$\text{Cross Price Elasticity of Demand: } \frac{\% \Delta \text{ in QD for Good 1}}{\% \Delta \text{ in P for Good 2}}$$

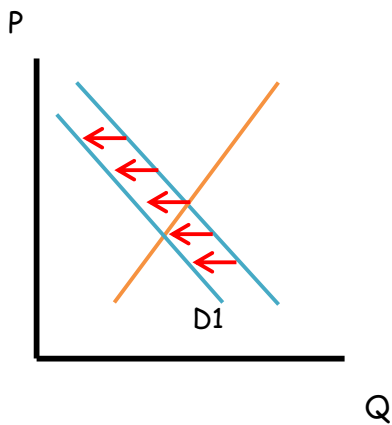
DIAGRAMS



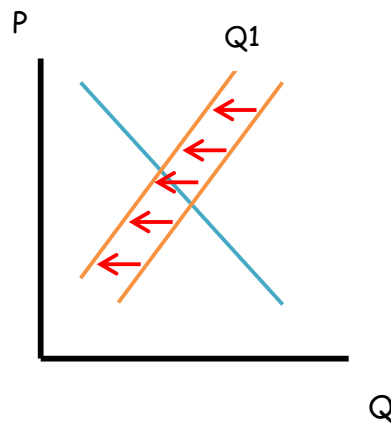
An increase in Quantity Demanded



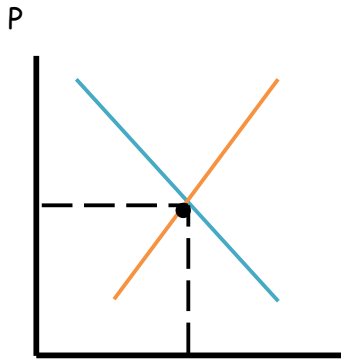
An increase in Quantity Supplied



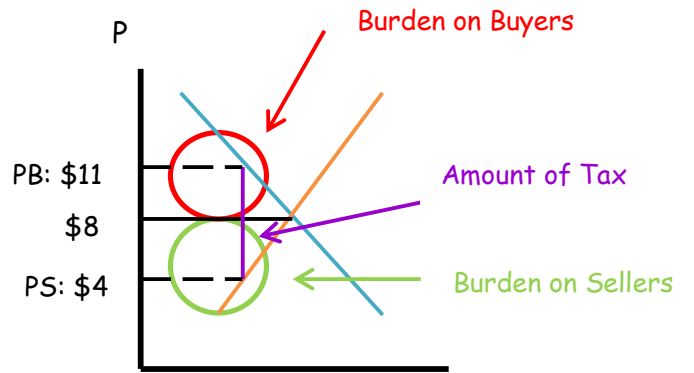
A decrease in Quantity Demanded



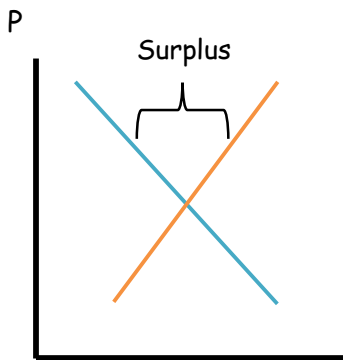
A decrease in Quantity Supplied



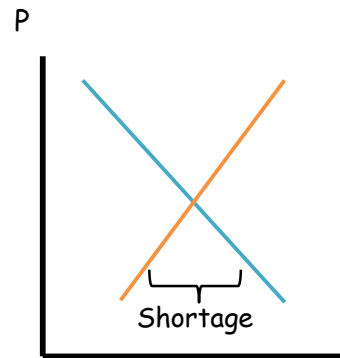
Equilibrium



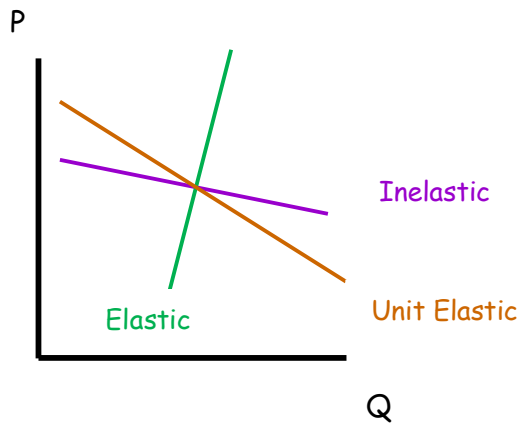
Tax

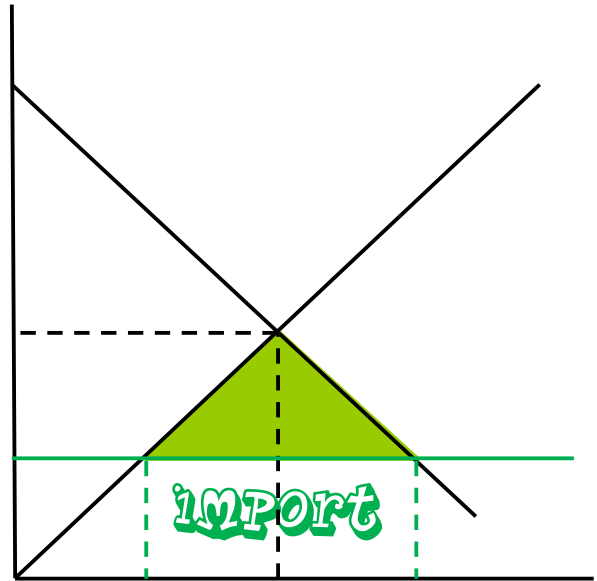
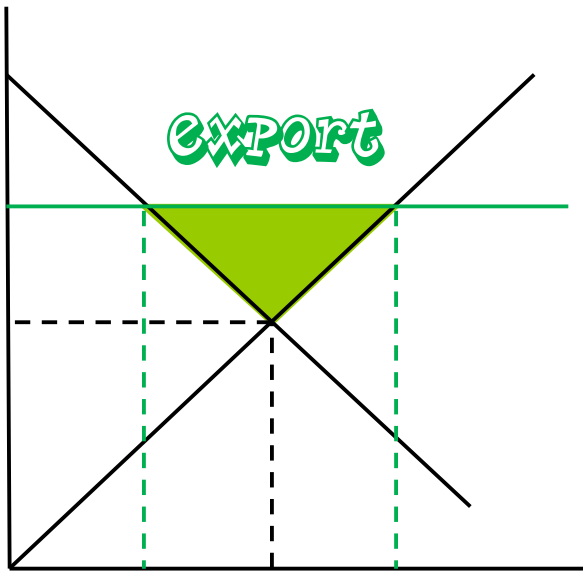


Surplus



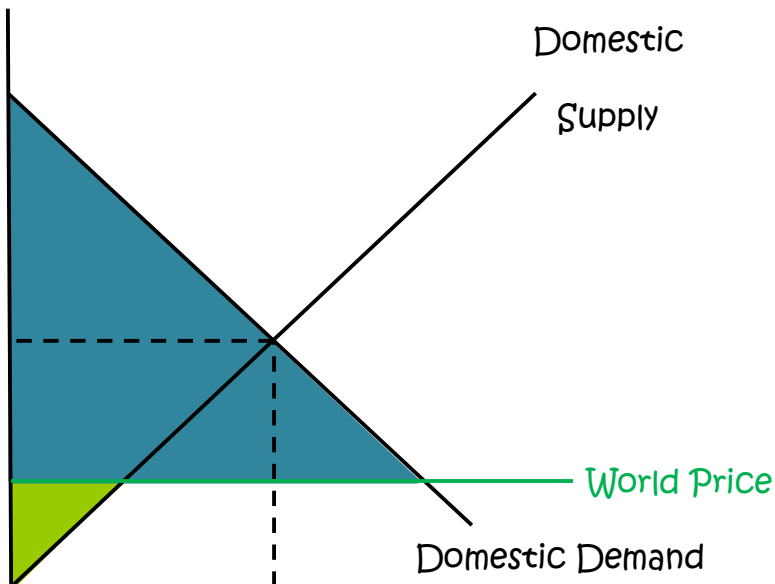
Shortage





GAINS FROM TRADE

WITHOUT TRADE

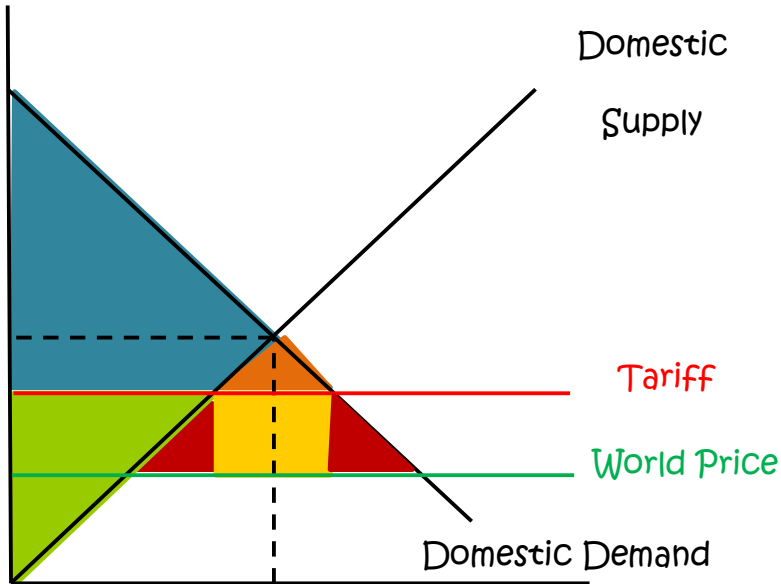


Consumer Surplus:
Turquoise

Producer Surplus: Lime

Total Surplus: Turquoise
+ Lime

WITH TRADE



Consumer Surplus: **Turquoise** + **Orange**

Producer Surplus: **Lime**

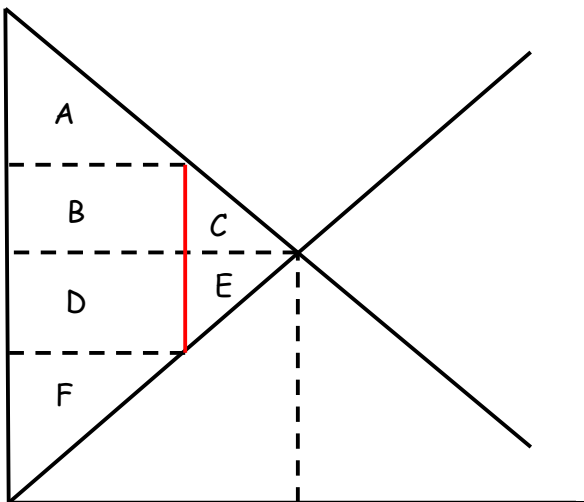
Tax Revenue: **Gold**

Deadweight Loss: **Ruby**

Total Surplus: **Turquoise** + **Orange** + **Gold** + **Lime**

Gains from Trade: **Orange** + **Gold**

PERFECTLY COMPETITIVE MARKET



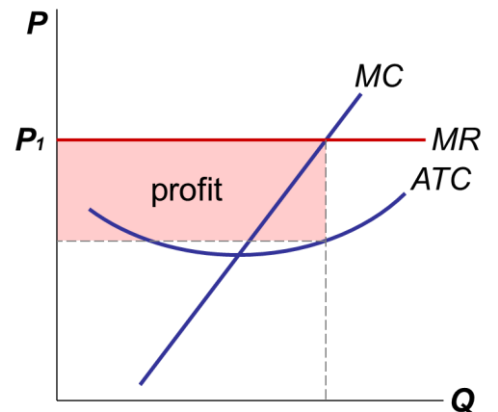
Consumer Surplus: **A**

Producer Surplus: **B**

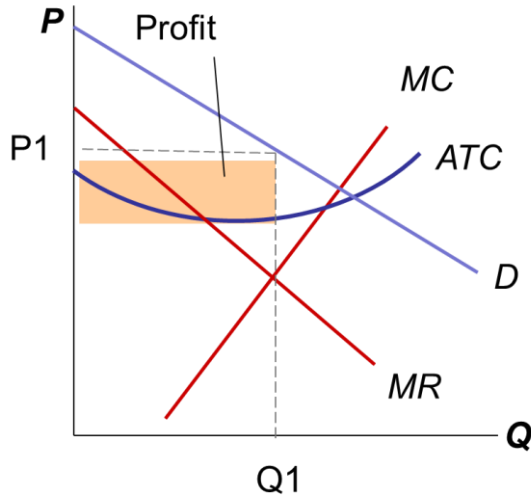
Tax Revenue: **B+D**

Deadweight Loss: **C+E**

Total Surplus: **A+B+D+F**

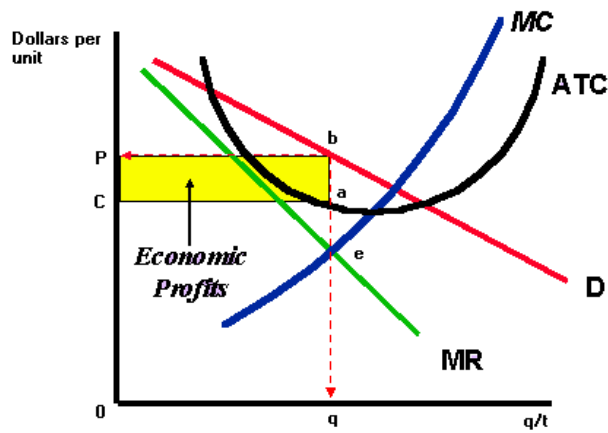


MONOPOLY

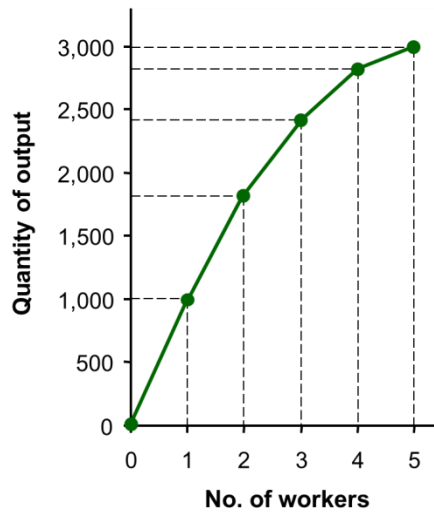


MONOPOLISTIC COMPETITION

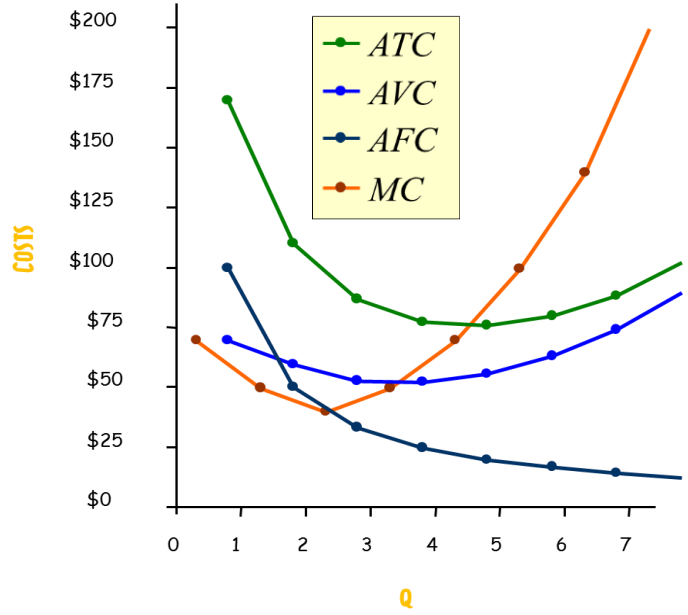
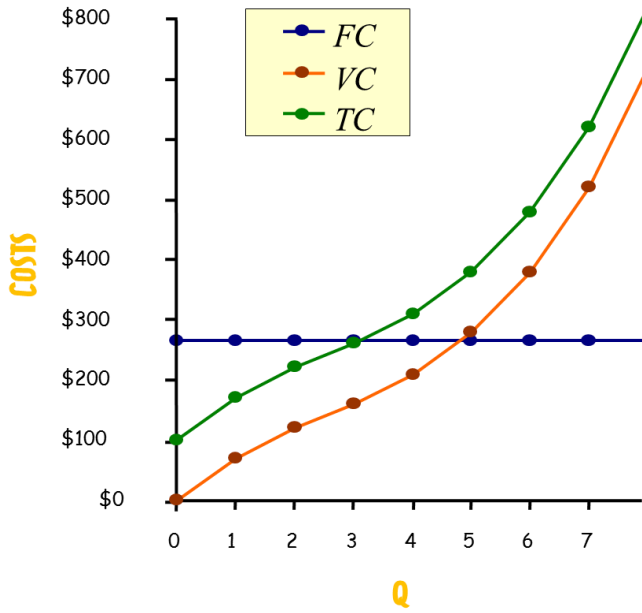
(a.) Maximizing Profits



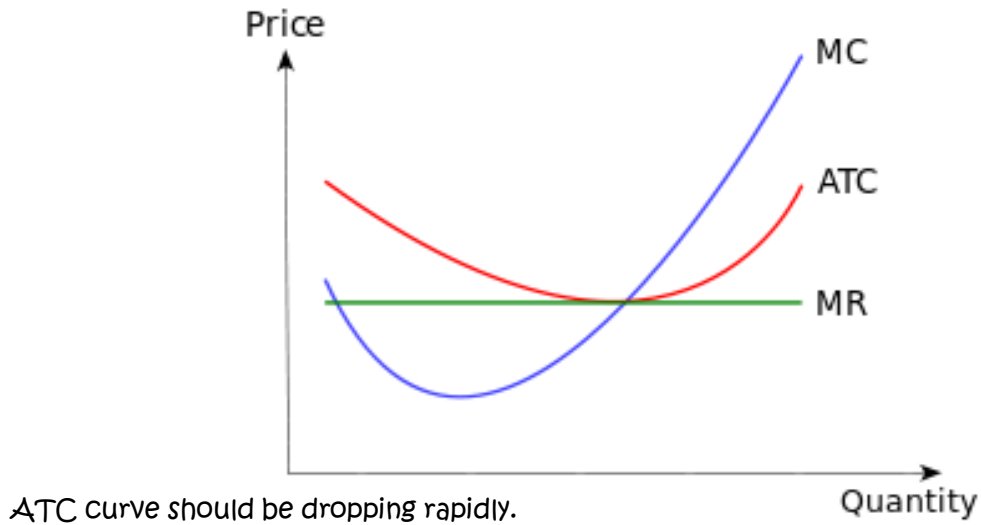
DIMINISHING MARGINAL PRODUCT



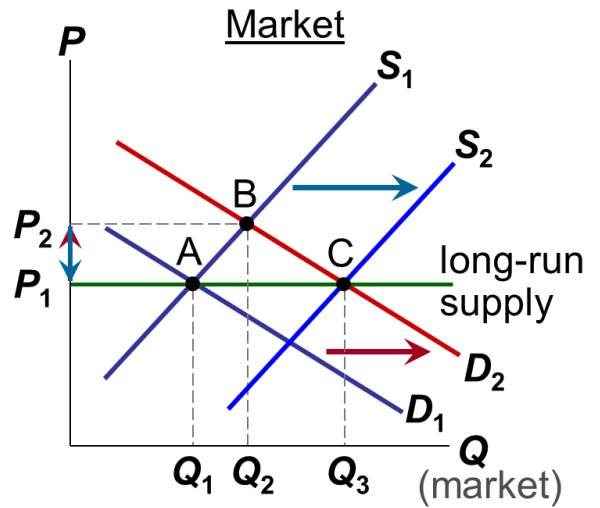
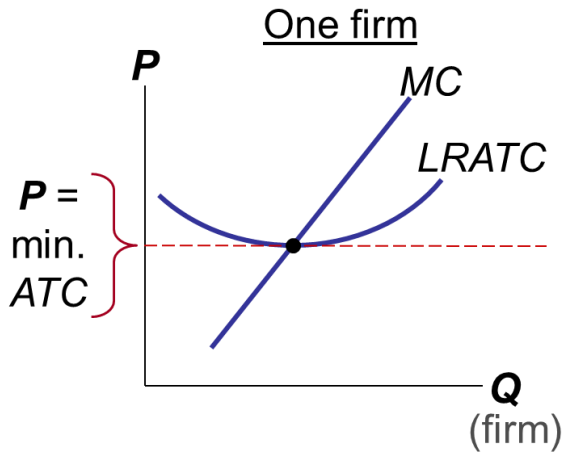
COST CURVES



AVERAGE TOTAL COST FOR A NATURAL MONOPOLY

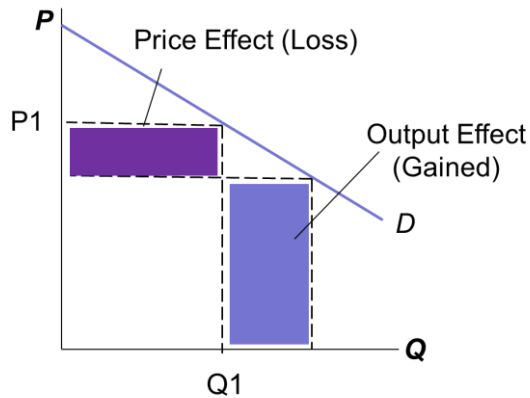


LONG RUN SUPPLY CURVES

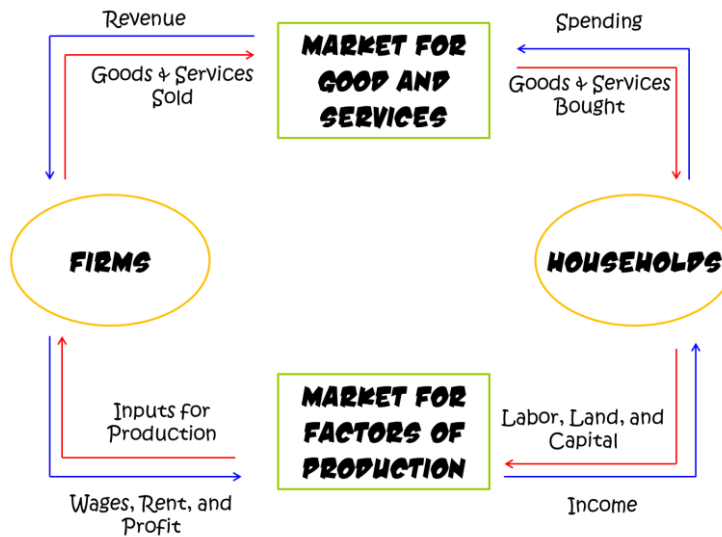


A market supply curve looks like this because it will be equal to the price and will supply whatever amount at that price.

THE OUTPUT & PRICE EFFECT



CIRCULAR FLOW DIAGRAM



KEY IDEAS

- Fixed costs do not change with a change in output. There are fixed costs only in the short run. The long run is defined as a period in which there are no fixed costs and firms are free to allocate their resources as they please.
- Variable costs change with a change in output. Total costs equal fixed costs plus variable costs. Marginal cost is the additional cost of producing an additional unit of output. Marginal cost is very important in determining at what price and output will operate.
- Marginal cost eventually rises because of the law of diminishing marginal returns. The law of diminishing marginal returns is based on evidence that marginal product eventually declines when equal amounts of a variable factor of production are added to fixed factors of production.
- Average total cost and average variable cost are total cost and variable cost divided by output.
- ATC and AVC fall when MC is below them and rise when MC is above them.
- The MC curve crosses the AVC curve and the ATC curve at their lowest points.
- If a firm has revenue that just covers all its costs, it breaks even.
- If a firm has more revenue than costs, it makes an economic profit.
- If a firm has more costs than revenue, it operates at an economic loss.
- In the long run, a firm must cover all its implicit and explicit costs, including a normal rate of profit.
- Firm's goal is to maximize profit.
- In the long run, TC at any Q is cost per unit using the most efficient mix of inputs for that Q (EX: the factory size with the lowest ATC).
- If marginal costs equal average total costs, average total costs are minimized.
- ALL COST ARE VARIABLE IN THE LONG RUN.
- The efficient scale of production is the quantity of output that minimizes average total cost.
- Marginal Revenue equals price ONLY IN COMPETITIVE MARKETS.
- The place where you want to be is when $MR=Q$.
- **$MR=MC$ at the PROFIT-MAXIMIZING Quantity.**
- A normal profit represents the opportunity cost of capital and is equal to the average return on investment.
- In the short run, a firm can operate at a loss as long as its revenue covers its variable costs.
- Economic profits are profits over and above the normal rate of profit at which a firm just covers its costs. A firm makes an accounting profit when its revenue exceeds its explicit costs.
- A firm makes an economic profit if it more than covers both its explicit and implicit costs.
- The objective of a firm is to maximize profits and/ or minimize job losses.
- Firms maximize profits when they produce where marginal revenue equals marginal cost.

- Perfect competition exists when there are many producers and many consumers of a homogeneous product.
- For a perfectly competitive firm, marginal revenue is equal to price. A perfectly competitive firm produces where price equals marginal cost. A perfectly competitive firm breaks even in the long run.
- Other things being constant, the most efficient allocation of resources occurs when a firm produces at the level of output where price (measuring marginal benefits to buyers) is equal to marginal cost.
- In the long run, a perfectly competitive firm produces at an output where price equals marginal cost and also produces where average total cost reaches its lowest point. A perfectly competitive firm is allocatively and productively efficient in the long run.
- A monopoly occurs when one firm controls the market.
- Allocatively efficient means the perfectly competitive firm operates at the point where $P=MC$. Productive efficiency means the perfectly competitive firm operates at the point where $P=MC=$ minimum ATC in the long run.
- For a monopoly firm or any firm under imperfect competition, marginal revenue is less than price.
- A monopoly firm maximizes profits by producing at the quantity where marginal revenue equals marginal cost and by setting price according to the demand at that quantity.
- A monopoly firm can make economic profits in the long run. However, a long-run economic profit is not guaranteed.
- In the long run, a monopoly firm charges a higher price and produces a lower output rather than a perfectly competitive firm with the same cost curves.
- A monopoly firm will operate where price is greater than marginal cost, causing a misallocation of resources.
- Oligopoly occurs when a few firms control the market.
- Monopolistic competition is close to pure or perfect competition except that there is product differentiation.
- Monopoly and Perfect Competition are two extremes; in between these extremes are Oligopolies and Monopolistic Competition.

PROBLEM SOLVING

1. Determine opportunity cost. An individual can produce 10 tvs or 2 computers. What is the opportunity cost of a computer? Of a tv?
The opportunity cost of a computer is 5 TVs and the opportunity cost of a computer is 1/5 a computer.
2. Given the same resources, person A can make 10 tvs or 2 computers, person B can make 8 tvs.
Absolute Advantage: TV= Person A Computer= Person B
Comparative Advantage: TV= Person A Computers= Person B

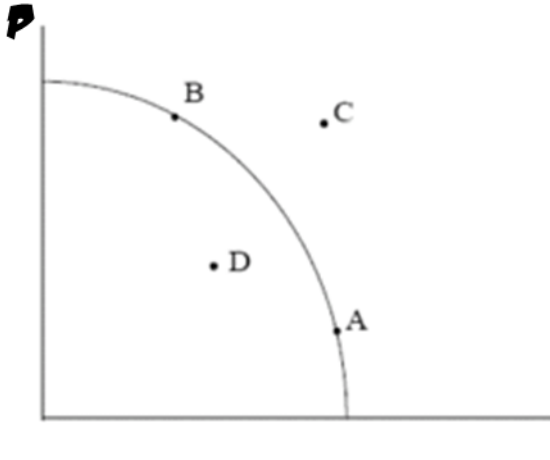
3. A new iPod is available, which person A willing to pay \$500, B willing to pay \$425 and C willing to pay \$375.
 - What is the quantity demanded and surplus when the price is \$400?
Quantity demanded is 2 and the surplus is \$100.
 - The price is \$350?
Quantity demanded is 3 and the surplus is \$225.
4. An individual earns \$50,000 a year, and pays 39% on each additional dollar. Determine the average and marginal tax rates.
Average Tax Rate: 39%
Marginal Tax Rate: 39%
5. Bob is a carpenter with his own business. The cost of owning his shop is \$5000 a year; he spends \$10,000 a year on materials. When he started the company, he took out a loan of \$100,000 at an interest rate of 5% and invested \$100,000 of his own money, which was earning 3%. He turned down a job at a chain store that paid \$60,000/year. Bob sells 20 desks a year at a price of \$1,000 each. What are the:
 - Implicit costs \$68,000
 - Explicit costs \$15,000
 - Total revenue \$20,000
 - Accounting profit \$5,000
 - Economic profit -\$63,000
6. Solve a payoff matrix (pg. 369 #5)

Nash Equilibrium is where
X and O are.

		<u>U.S.</u>		
		Low Tariffs	High Tariffs	
<u>Mexico</u>	Low Tariffs	\$25 bil \$25 bil	\$30 bil \$10 bil X	Mexico's dominant strategy: O
	High Tariffs	\$30 bil O	X \$20 bil \$20 bil O	

- a.) Dominant Strategy for
United States: Break the agreement
Mexico: Break the agreement
- b.) Look above in terms
- c.) Yes
- d.) Yes
7. What must happen for a government's revenue to shrink?
For the gov't revenue to shrink the tax needs to be too large that people are less WTP for the good.
8. What might be done to eliminate some of a monopoly's inefficiency?
By increasing competition with antitrust laws, regulation, public ownership, and doing nothing.
9. How has income equality/distribution changed over the past 60 years?
The rich get richer and the poor get poorer.
10. In a perfectly competitive market, the horizontal sum of all firms supply curve is the?
Market Supply Curve

11. When does a cartel maximize profit?
A cartel maximizes profit when it acts as a monopoly.
12. Most product variety is what type of market most associated with?
Most product variety is monopolistic competition.
13. What does a production possibilities curve look like?



AB- Efficient
D- Inefficient
C- Not Possible

14. What does the social cost curve look like?

