

Unit 2: Supply, Demand, and Consumer Choice

Connection to Circular Flow Model

1. Do individuals supply or demand?
2. Do business supply or demand?
3. Who demands in the product market?
4. Who supplies in the product market?



DEMAND DEFINED

What is Demand?

Demand is the different quantities of goods that consumers are **willing** and **able** to buy at different prices.

(Ex: Bill Gates is **able** to purchase a Ferrari, but if he isn't **willing** he has NO demand for one)

What is the Law of Demand?

The law of demand states There is an **INVERSE** relationship between price and quantity demanded

LAW OF DEMAND

As Price Falls...

...Quantity Demanded Rises

As Price Rises...

...Quantity Demanded Falls



Example of Demand

I am willing to sell several A's in AP Economics. How much will you pay?

Demand Schedule



Price	Quantity Demanded

Why does the Law of Demand occur?

The law of demand is the result of three separate behavior patterns that overlap:

1. The Substitution effect
2. The Income effect
3. The Law of Diminishing Marginal Utility

We will define and explain each...

Why does the Law of Demand occur?



1. The Substitution Effect

- If the price goes up for a product, consumer buy less of that product and more of another substitute product (and vice versa)



2. The Income Effect

- If the price goes down for a product, the purchasing power increases for consumers - allowing them to purchase more.

7

Why does the Law of Demand occur?

3. Law of Diminishing Marginal Utility



U-TIL-IT-Y

- Utility = Satisfaction
- We buy goods because we get utility from them
- The law of diminishing marginal utility states that as you consume more units of any good, the additional satisfaction from each additional unit will eventually start to decrease
- In other words, the more you buy of ANY GOOD the less satisfaction you get from each new unit.

Discussion Questions:

1. What does this have to do with the Law of Demand?
2. How does this effect the pricing of businesses?

8



Can you see the Law of Diminishing Marginal Utility in Disneyland's pricing strategy?

Theme Park Tickets	Ages 3-9	Ages 10+	Change
1-Day Park Hopper@Ticket	\$87.00	\$97.00	N/A
2-Day Park Hopper@Ticket Valid now thru January 3, 2011.	\$131.00	\$151.00	\$54
3-Day Park Hopper@Bonus Ticket Save up to \$20 per person when you buy online!	\$174.00 \$154.00	\$204.00 \$184.00	\$33
4-Day Park Hopper@Bonus Ticket Save up to \$30 per person when you buy online!	\$199.00 \$169.00	\$229.00 \$199.00	\$15
5-Day Park Hopper@Bonus Ticket Save up to \$40 per person when you buy online!	\$249.00 \$179.00	\$249.00 \$209.00	\$10
6-Day Park Hopper@Bonus Ticket Save up to \$40 per person when you buy online!	\$244.00 \$184.00	\$254.00 \$214.00	\$5

Graphing Demand



10

The Demand Curve

- A **demand curve** is a graphical representation of a demand schedule.
- The demand curve is downward sloping showing the inverse relationship between price (on the y-axis) and quantity demanded (on the x-axis)
- When reading a demand curve, assume all outside factors, such as income, are held constant. (This is called *ceteris paribus*)

Let's draw a new demand curve for cereal...

11

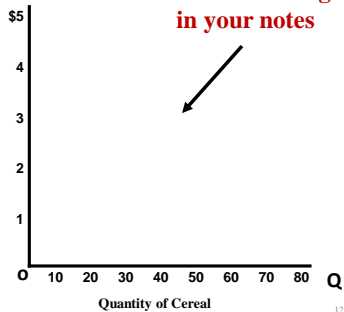
GRAPHING DEMAND

Demand Schedule

Price of Cereal

Draw this large in your notes

Price	Quantity Demanded
\$5	10
\$4	20
\$3	30
\$2	50
\$1	80

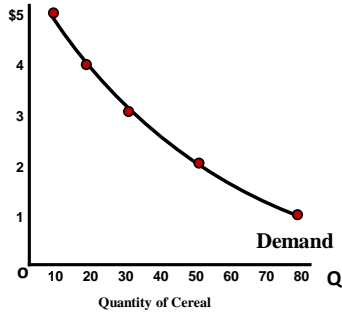


12

GRAPHING DEMAND

Demand Schedule Price of Cereal

Price	Quantity Demanded
\$5	10
\$4	20
\$3	30
\$2	50
\$1	80



13

The Demand and Market Demand

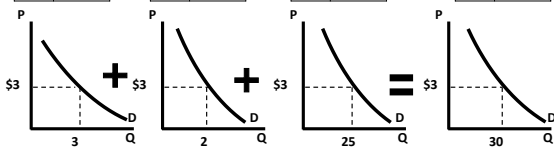
- Demand can be viewed from the individual consumer perspective
- For practical purposes
 - We use **Market Demand** which means we add all consumers together to construct our demand curve

14

Where do you get the Market Demand?

Billy **Jean** **Other Individuals** **Market**

Price	Q Demd		Price	Q Demd		Price	Q Demd		Price	Q Demd
\$5	1		\$5	0		\$5	9		\$5	10
\$4	2	+	\$4	1	+	\$4	17	=	\$4	20
\$3	3		\$3	2		\$3	25		\$3	30
\$2	5		\$2	3		\$2	42		\$2	50
\$1	7		\$1	5		\$1	68		\$1	80



Shifts in Demand

CHANGES IN DEMAND

- *Ceteris paribus*-“all other things held constant.”
- When the *ceteris paribus* assumption is dropped, movement no longer occurs along the demand curve. Rather, the entire demand curve shifts.
- A shift means that at the same prices, more people are willing and able to purchase that good.

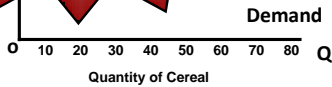
This is a change in demand, not a change in quantity demanded

Change in Demand

Demand Schedule

Price	Quantity Demanded
\$5	10
\$4	20
\$3	30
\$2	50
\$1	80

What if cereal makes you smarter?



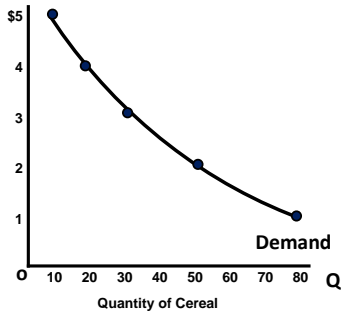
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Change in Demand

Demand Schedule

Price	Quantity Demanded
\$5	10
\$4	20
\$3	30
\$2	50
\$1	80

Price of Cereal



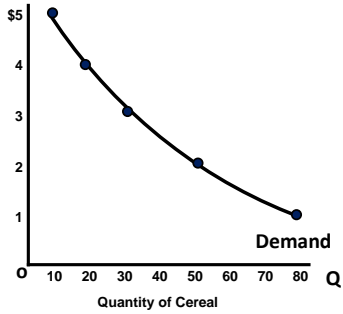
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Change in Demand

Demand Schedule

Price	Quantity Demanded
\$5	10
\$4	20
\$3	30
\$2	50
\$1	80

Price of Cereal



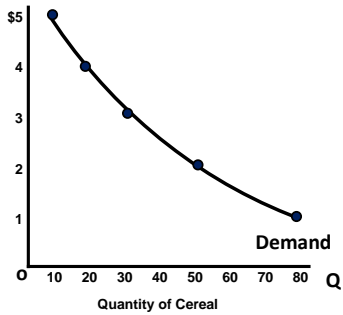
19

Change in Demand

Demand Schedule

Price	Quantity Demanded
\$5	10 30
\$4	20 40
\$3	30 50
\$2	50 70
\$1	80 100

Price of Cereal



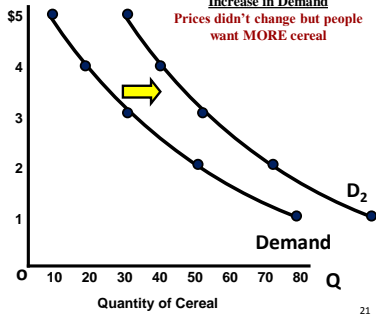
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Change in Demand

Demand Schedule

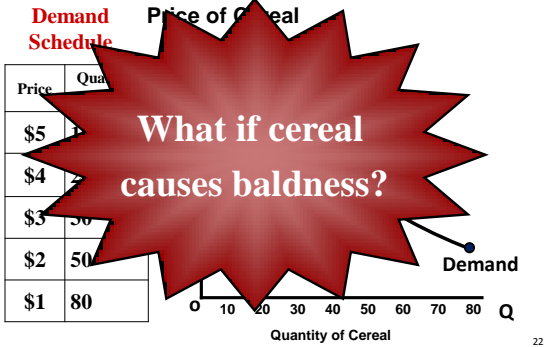
Price	Quantity Demanded
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\$4	20 40
\$3	30 50
\$2	50 70
\$1	80 100

Price of Cereal

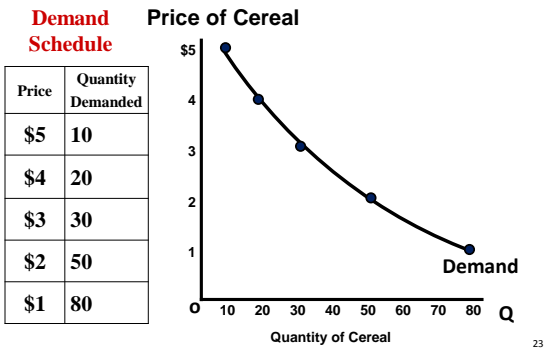


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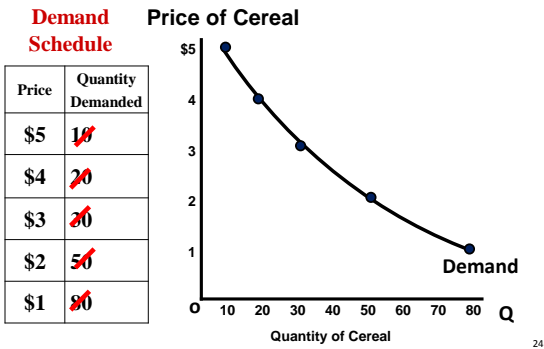
Change in Demand



Change in Demand



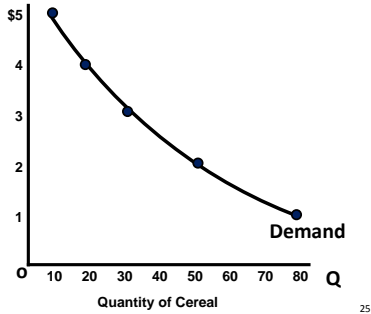
Change in Demand



Change in Demand

Demand Schedule Price of Cereal

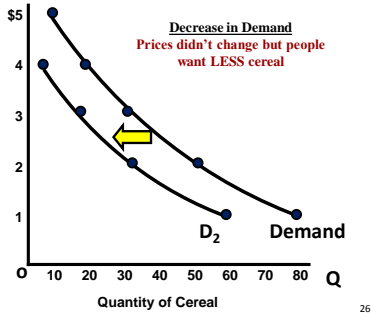
Price	Quantity Demanded
\$5	10 0
\$4	20 5
\$3	30 20
\$2	50 30
\$1	80 60



Change in Demand

Demand Schedule Price of Cereal

Price	Quantity Demanded
\$5	10 0
\$4	20 5
\$3	30 20
\$2	50 30
\$1	80 60

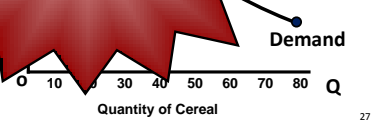


Change in Demand

Demand Schedule Price of Cereal

Price	Quantity Demanded
\$5	10
\$4	20
\$3	30
\$2	50
\$1	80

What if the price of MILK goes up?



What Causes a Shift in Demand?

Shifters (Determinates) of Demand:

1. Tastes and Preferences
2. Number of Consumers
3. Substitute Goods
4. Complementary Goods
5. Income
6. Future Expectations

Changes in PRICE don't shift the curve. It only causes movement along the curve.²⁸

Prices of Related Goods

The demand curve for one good can be affected by a change in the price of ANOTHER related good.

1. Substitutes are goods used in place of one another.
 - If the price of one increases, the demand for the other will increase (or vice versa)
 - Ex: If price of Pepsi falls, demand for coke will...
2. Complements are two goods that are bought and used together.
 - If the price of one increase, the demand for the other will fall. (or vice versa)
 - Ex: If price of peanut butter falls, demand for jelly will...

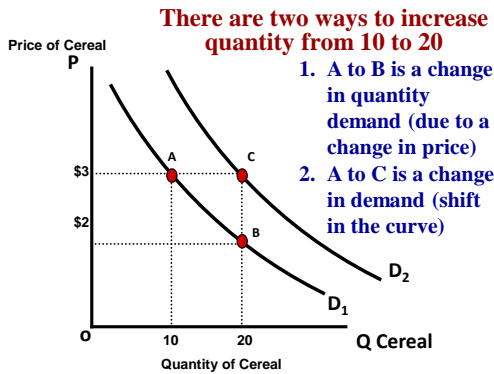
Income

The incomes of consumer change the demand, but how depends on the type of good.

1. Normal Goods
 - As income increases, demand increases
 - As income falls, demand falls
 - Ex: Luxury cars, Sea Food, jewelry, homes
2. Inferior Goods
 - As income increases, demand falls
 - As income falls, demand increases
 - Ex: Top Ramen, rice, used cars,



Change in Qd vs. Change in Demand



Practice

First identify the determinant (Shifter). Then decide if demand will increase or decrease

Hamburgers (a Normal Good)

1. Population boom
2. Incomes fall due to recession
3. Price for Carne Asada burritos falls to \$1
4. Price increases to \$5 for hamburgers
5. New health craze - "No ground beef"
6. Hamburger restaurants announce that they will significantly increase prices NEXT month
7. Government heavily taxes shake and fries causes their prices to quadruple (complementary).
8. Restaurants lower price of burgers to \$.50

32

Supply Defined

What is supply?

Supply is the different quantities of a good that sellers are **willing and able** to sell (produce) at different prices.

What is the Law of Supply?

There is a **DIRECT** (or positive) relationship between price and quantity supplied.

- As price increases, the quantity producers make increases
- As price falls, the quantity producers make falls.

Why? Because, at higher prices profit seeking firms have an incentive to produce more.

EXAMPLE: Mowing Lawns

33

Example of Supply

You own a lawn mower and you are willing to mow lawns.

How many lawns will you mow at these prices?

Supply Schedule →

Price per lawn mowed	Quantity Supplied
\$1	
\$5	
\$8	
\$15	
\$25	
\$1000	

34

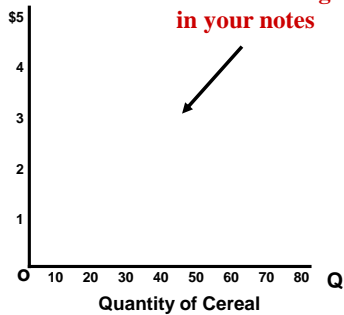
GRAPHING SUPPLY

Supply Schedule

Price of Cereal

Draw this large in your notes

Price	Quantity Supplied
\$5	50
\$4	40
\$3	30
\$2	20
\$1	10



35

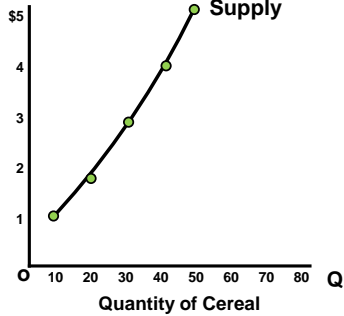
GRAPHING SUPPLY

Supply Schedule

Price of Cereal

Supply

Price	Quantity Supplied
\$5	50
\$4	40
\$3	30
\$2	20
\$1	10



36

GRAPHING SUPPLY

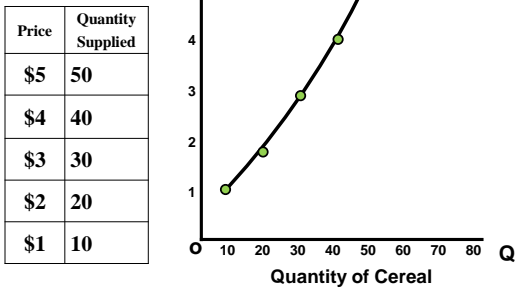
Supply Schedule



What if new companies start making cereal?

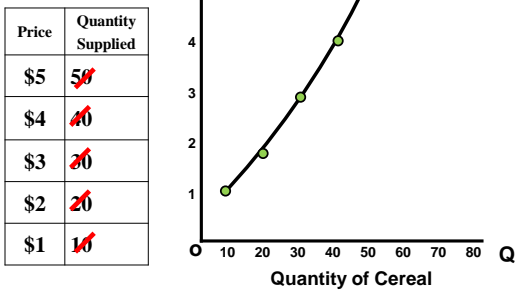
Change in Supply

Supply Schedule



Change in Supply

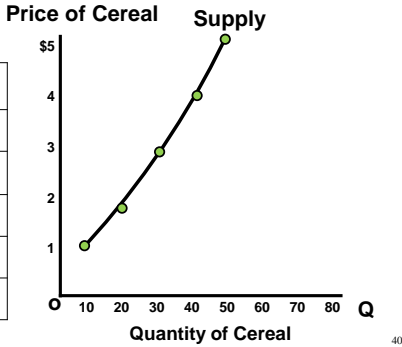
Supply Schedule



Change in Supply

Supply Schedule

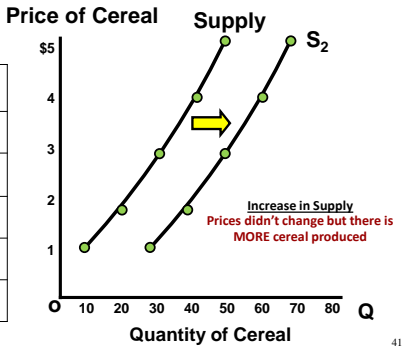
Price	Quantity Supplied
\$5	50 70
\$4	40 60
\$3	30 50
\$2	20 40
\$1	10 30



Change in Supply

Supply Schedule

Price	Quantity Supplied
\$5	50 70
\$4	40 60
\$3	30 50
\$2	20 40
\$1	10 30

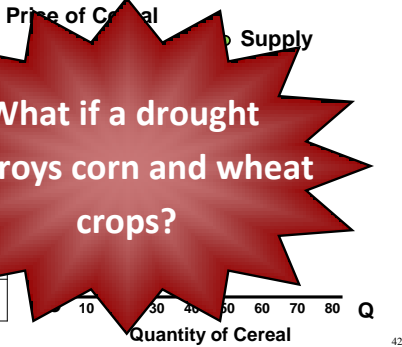


Change in Supply

Supply Schedule

Price	Quantity Supplied
\$5	10
\$4	20
\$3	30
\$2	40
\$1	50

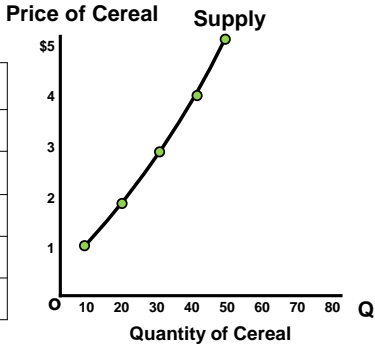
What if a drought destroys corn and wheat crops?



Change in Supply

Supply Schedule

Price	Quantity Supplied
\$5	50
\$4	40
\$3	30
\$2	20
\$1	10

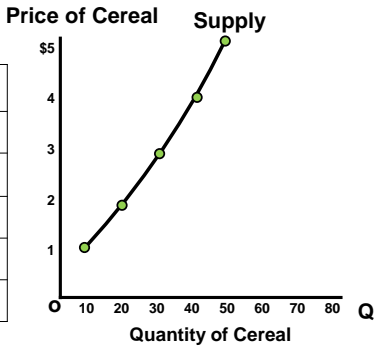


43

Change in Supply

Supply Schedule

Price	Quantity Supplied
\$5	50
\$4	40
\$3	30
\$2	20
\$1	10

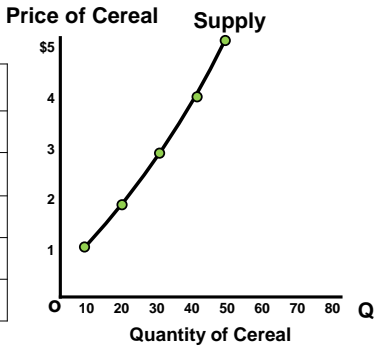


44

Change in Supply

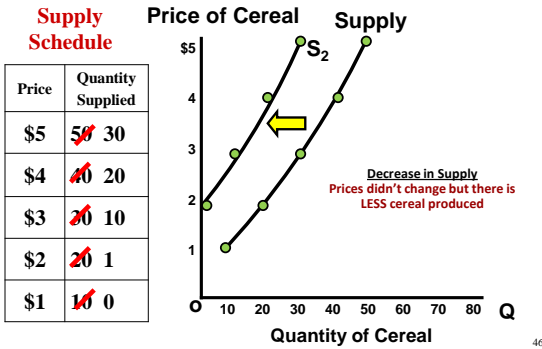
Supply Schedule

Price	Quantity Supplied
\$5	50 30
\$4	40 20
\$3	30 10
\$2	20 1
\$1	10 0

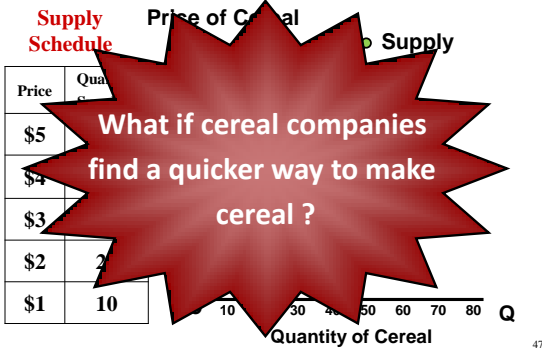


45

Change in Supply



Change in Supply



Determinants (SHIFTERS) of Supply

1. **Prices/Availability of inputs (resources)**
2. **Number of Sellers**
3. **Technology**
4. **Taxes (Government Action)**
5. **Subsidies (Government Action) - government payment that supports a business or market. Subsidies cause the supply of a good to increase.**
6. **Regulations (Government Action)**
7. **Opportunity Cost of Alternative Production (Price of substitute in production)**
8. **Expectations of Future Profit**

Changes in PRICE don't shift the curve. It only causes movement along the curve.

Supply Practice

1. Which determinant (SHIFTER)?
2. Increase or decrease?
3. Which direction will curve shift?

Hamburgers

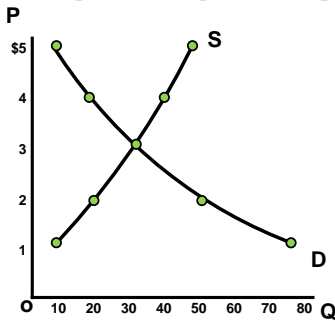
1. Mad cow disease kills 20% of cows
2. Price of burgers increase 30%
3. Government taxes burger producers
4. Restaurants can produce burgers and/or tacos. A demand increase causes the price for tacos to increase 500%
5. New bun baking technology cuts production time in half
6. Minimum wage increases to \$10

49

Supply and Demand are put together to determine equilibrium price and equilibrium quantity

Demand Schedule

P	Qd
\$5	10
\$4	20
\$3	30
\$2	50
\$1	80



Supply Schedule

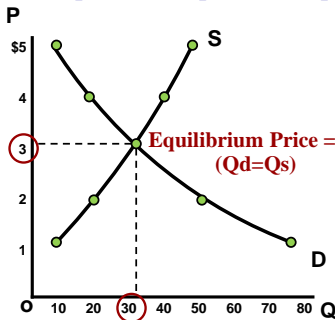
P	Qs
\$5	50
\$4	40
\$3	30
\$2	20
\$1	10

50

Supply and Demand are put together to determine equilibrium price and equilibrium quantity

Demand Schedule

P	Qd
\$5	10
\$4	20
\$3	30
\$2	50
\$1	80



Equilibrium Quantity is 30

51

S&D Analysis Practice

1. Before Change (Draw equilibrium)
2. The Change (S or D, Identify Shifter)
3. After Change (Price and Quantity After)

Analyze Hamburgers

1. Price of sushi (a substitute) increases
2. New grilling technology cuts production time in half
3. Price of burgers falls from \$3 to \$1.
4. Price for ground beef triples
5. Human fingers found in multiple burger restaurants.

58

Double Shifts

- Suppose that consumer incomes fall, and sports cars (Normal Good), also improve production technology.
- Use S&D Analysis to show what will happen to PRICE and QUANTITY.

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

59

Voluntary Exchange

In the free-market, buyers and sellers voluntarily come together to seek mutual benefits.

60

Example of Voluntary Exchange

Ex: You want to buy a truck so you go to the local dealership. You are willing to spend up to \$20,000 for a new 4x4. The seller is willing to sell this truck for no less than \$15,000. After some negotiation you buy the truck for \$18,000.

Analysis:

Buyer's Maximum- \$20,000

Sellers Minimum- \$15,000

Price- \$18,000

Consumer's Surplus-\$2,000

Producer's Surplus- \$3,000

61

Voluntary Exchange Terms

Consumer Surplus is the difference between what you are willing to pay and what you actually pay.

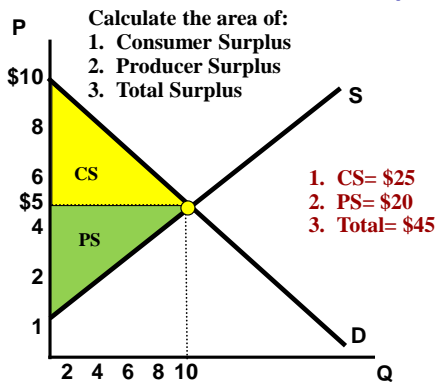
$$CS = \text{Buyer's Maximum} - \text{Price}$$

Producer Surplus is the difference between the price the seller received and how much they were willing to sell it for.

$$PS = \text{Price} - \text{Seller's Minimum}$$

62

Consumer and Producer's Surplus



63

Government Involvement

- #1-Price Controls: Floors and Ceilings
- #2-Import Quotas and tariffs
- #3-Subsidies
- #4-Excise Taxes

64

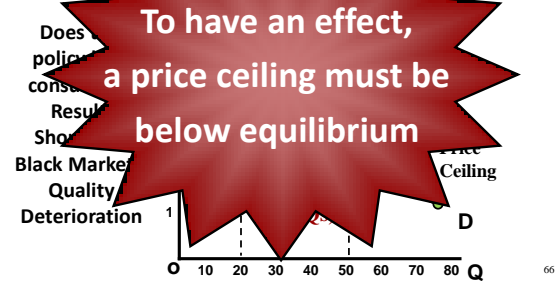
#1-PRICE CONTROLS

Who likes the idea of having a price ceiling on gas so prices will never go over \$2 per gallon?

65

Price Ceiling

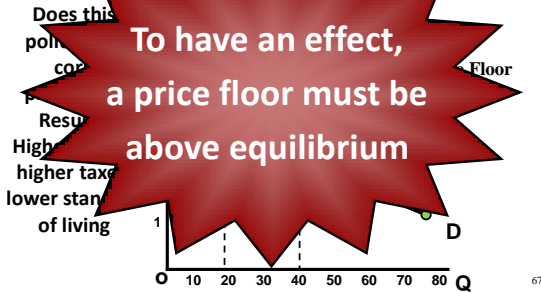
Maximum legal price a seller can charge for a product.
Goal: Make affordable from reaching Eq.



66

Price Floor

Minimum legal price a seller can sell a product.
 Goal: Keep price from falling to Eq.

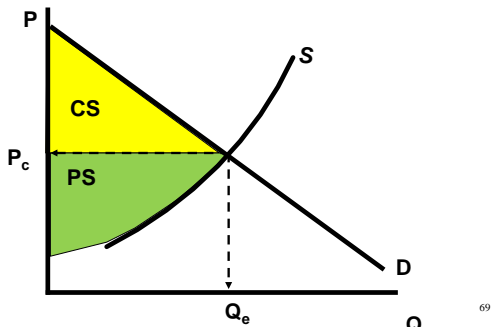


Practice Questions

- Which of the following will occur if a legal price floor is placed on a good below its free market equilibrium?
 - Surpluses will develop
 - Shortages will develop
 - Underground markets will develop
 - The equilibrium price will ration the good
 - The quantity sold will increase
- Which of the following statements about price control is true?
 - A price ceiling causes a shortage if the ceiling price is above the equilibrium price
 - A price floor causes a surplus if the price floor is below the equilibrium price
 - Price ceilings and price floors result in a misallocation of resources
 - Price floors above equilibrium cause a shortage

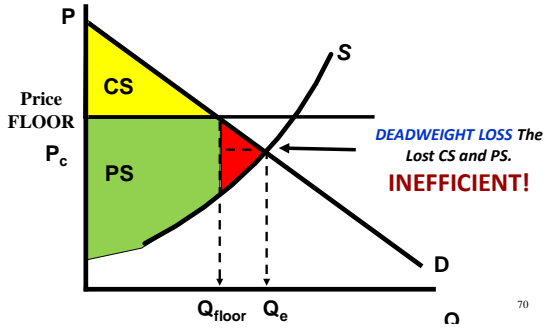
Are Price Controls Good or Bad?

To be "efficient" a market must maximize consumers and producers surplus



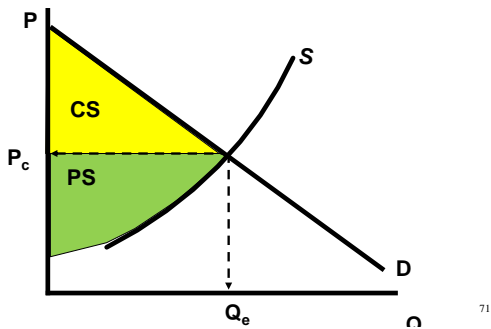
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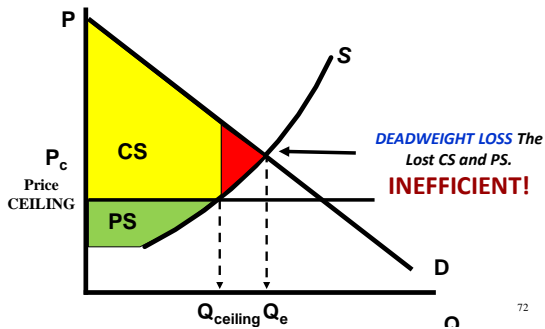
Are Price Controls Good or Bad?

To be "efficient" a market must maximize consumers and producers surplus



Are Price Controls Good or Bad?

To be "efficient" a market must maximize consumers and producers surplus





#2 Import Quotas and Tariffs

The government sets the maximum amount that can come in the country. A quota is a limit on the number of exports.

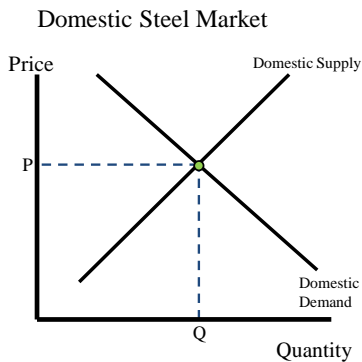
Purpose:

- To protect domestic producers from a cheaper world price.
- To prevent domestic unemployment

73

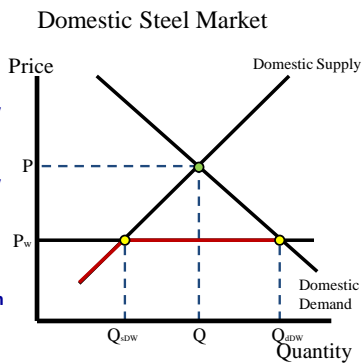
Analyzing the World Trade Graph

- The graph at the right is the domestic market for steel.
- How is the market price and quantity of steel determined? Explain.
- What should happen to price if this market opens up to free trade? Explain



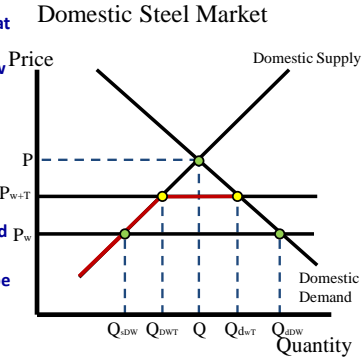
Analyzing the World Trade Graph

- If we trade at the world price, what quantity would be purchased? Explain
- What is the quantity of domestic production? Explain
- What is the quantity to be imported? Explain
- What will happen to price, imports, and domestic production if a tariff is placed upon steel? Explain



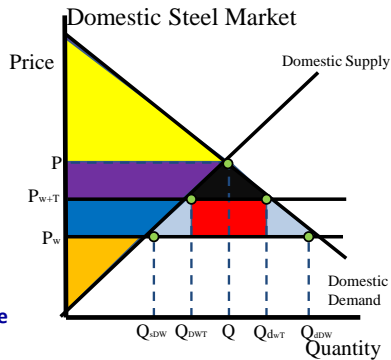
Analyzing the World Trade Graph

- What is the price that consumers will pay after the tariff? How does it compare to the no trade and trade price?
- Use the graph to explain whether or not domestic producers are helped or hurt by the tariff.
- What quantity will be imported after the tariff? Explain

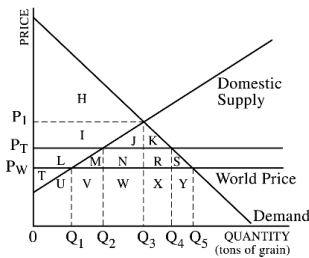


Analyzing the World Trade Graph

- Find
 - CS PS TS DWL no Trade
 - CS PS TS DWL free trade
 - CS PS TS DWL trade w/ Tax
 - Tax Revenue



International Trade and Quotas



- Identify the following:
1. CS with no trade
 2. PS with no trade
 3. CS if we trade at world price (P_w)
 4. PS if we trade at world price (P_w)
 5. Amount we import at world price (P_w)
 6. If the government sets a quota on imports of Q₂ - Q₄, what happens to CS and PS?

This graphs show the domestic supply and demand for grain. The letters represent area.

#4 Excise Taxes

Excise Tax = A per unit tax on producers

For every unit made, the producer must pay \$
NOT a Lump Sum (one time only)Tax

The goal is for them to make less of the goods that
the government deems dangerous or unwanted.



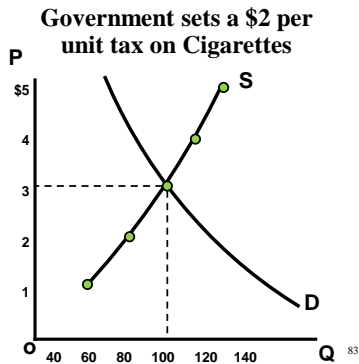
- Ex:
- Cigarettes “sin tax”
 - Alcohol “sin tax”
 - Tariffs on imported goods
 - Environmentally Unsafe Products
 - Etc.

82

Excise Taxes

Supply Schedule

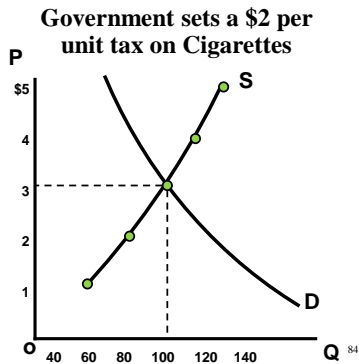
P	Qs
\$5	140
\$4	120
\$3	100
\$2	80
\$1	60



Excise Taxes

Supply Schedule

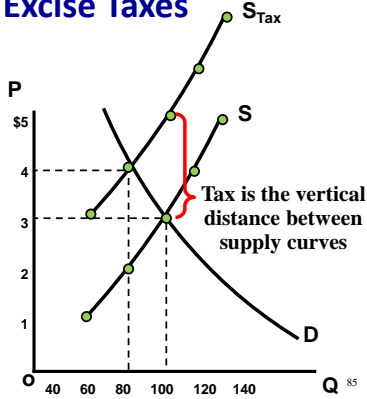
P	Qs
\$5 \$7	140
\$4 \$6	120
\$3 \$5	100
\$2 \$4	80
\$1 \$3	60



Excise Taxes

Supply Schedule

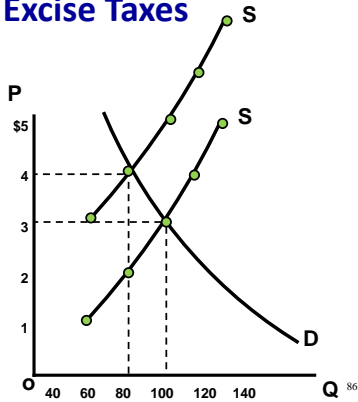
P	Qs
\$8 \$7	140
\$7 \$6	120
\$6 \$5	100
\$5 \$4	80
\$4 \$3	60



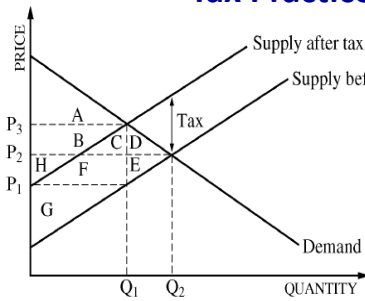
Excise Taxes

Identify the following:

1. Price before tax
2. Price consumers pay after tax
3. Price producers get after tax
4. Total tax revenue for the government after tax

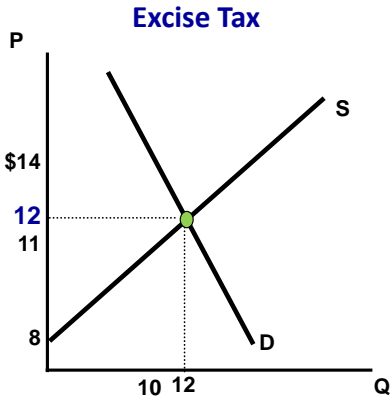


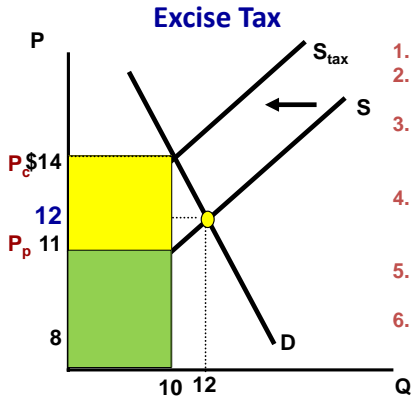
Tax Practice



1. CS Before Tax
2. PS Before Tax
3. CS After Tax
4. PS After Tax
5. Tax Revenue for Government
6. Dead Weight Loss due to tax
7. Amount of tax revenue producers pay

87



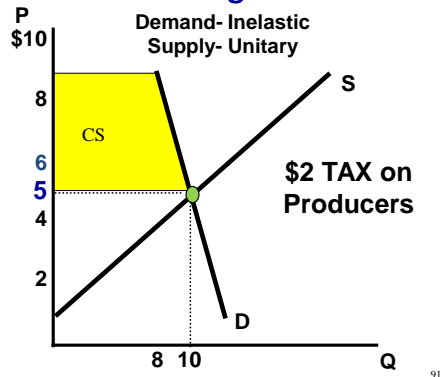


- Calculate**
1. Tax
 2. Total Tax Revenue
 3. Amount of Tax paid by consumers
 4. Amount of Tax paid by producers
 5. Total Expenditures
 6. Total Revenue for firms

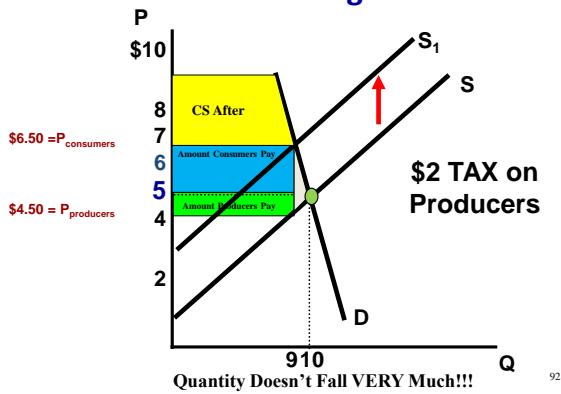
Elasticity and Excise Taxes

Who ends up paying for an excise tax?

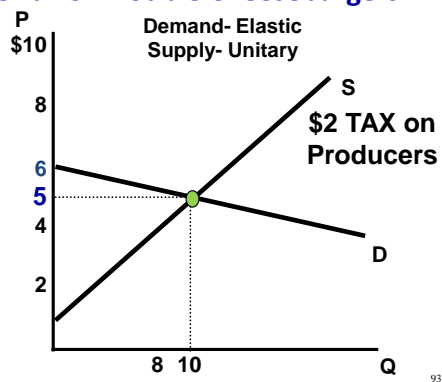
Excise Tax on Cigarettes



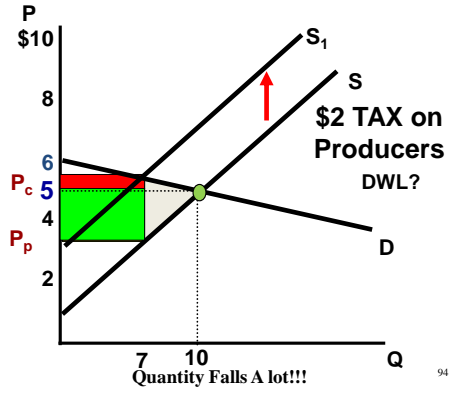
Excise Tax on Cigarettes



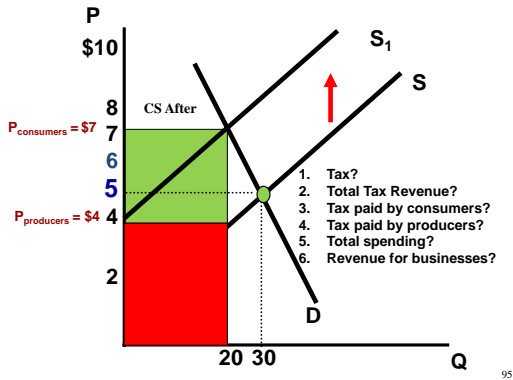
Excise Tax on Double Cheeseburgers



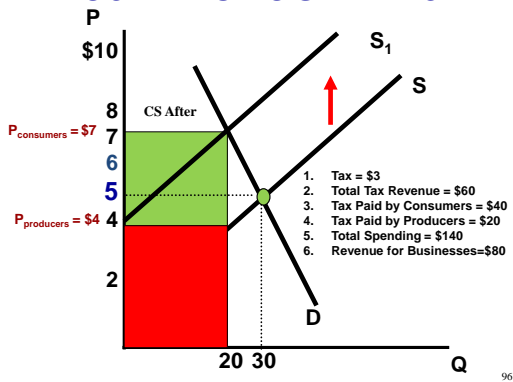
Excise Tax on Double Cheeseburgers



EXCISE TAX ON CIGARETTES



EXCISE TAX ON CIGARETTES



1. Elasticity of Demand

Elasticity of Demand-

- Measurement of consumers responsiveness to a change in price.
- What will happen if price increase? How much will it effect Quantity Demanded

Who cares?

- Used by firms to help determine prices and sales
- Used by the government to decide how to tax

Inelastic

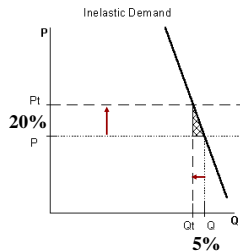


Inelastic Demand

Inelastic = Insensitive to a change in price.

- If price increases, quantity demanded will fall a little
- If price decreases, quantity demanded increases a little.

In other words, people will continue to buy it.



An INELASTIC demand curve is steep!

(looks like an "l")

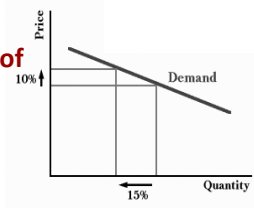
Examples:

- Gasoline
- Milk
- Diapers
- Chewing Gum
- Medical Care
- Toilet paper

Elastic Demand

General Characteristics of Elastic Goods:

- Many Substitutes
- Luxuries
- Large portion of income
- Plenty of time to decide
- Elasticity coefficient greater than 1



$$\frac{\% \Delta \text{in quantity}}{\% \Delta \text{in price}}$$

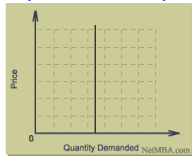
Elastic or Inelastic?

- Beef- Elastic- 1.27
- Gasoline- INelastic - .20
- Real Estate- Elastic- 1.60
- Medical Care- INelastic - .31
- Electricity- INelastic - .13
- Gold- Elastic - 2.6

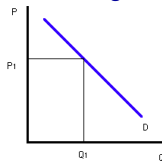
What about the demand for insulin for diabetics?

What if % change in quantity demanded equals % change in price?

Perfectly INELASTIC (Coefficient = 0)



Unit Elastic (Coefficient =1) 45 Degrees



Total Revenue Test

Uses elasticity to show how changes in price will affect total revenue (TR).

(TR = Price x Quantity)



Elastic Demand-

- Price increase causes TR to decrease
- Price decrease causes TR to increase

Inelastic Demand-

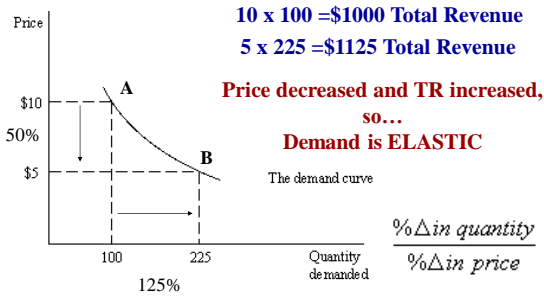
- Price increase causes TR to increase
- Price decrease causes TR to decrease

Unit Elastic-

- Price changes and TR remains unchanged

Ex: If demand for milk is INelastic, what will happen to expenditures on milk if price increases?

Is the range between A and B, elastic, inelastic, or unit elastic?



2. Price Elasticity of Supply

Elasticity of Supply-

- Elasticity of supply shows how **sensitive producers** are to a change in price.

Elasticity of supply is based on time limitations.

Producers need time to produce more.

$$\frac{\% \Delta \text{ in quantity}}{\% \Delta \text{ in price}}$$

Inelastic = Insensitive to a change in price (Steep curve)

- Most goods have **INelastic supply in the short-run**

Elastic = Sensitive to a change in price (Flat curve)

- Most goods have **elastic supply in the long-run**

Perfectly Inelastic = Q doesn't change (Vertical line)

- Set quantity supplied**

3. Cross-Price Elasticity of Demand

- Cross-Price elasticity shows how sensitive a product is to a change in price of another good**
- It shows if two goods are **substitutes or complements**

$$\frac{\% \text{ change in quantity of product "b"}}{\% \text{ change in price of product "a"}}$$

P increases 20%



Q decreases 15%

- If coefficient is **negative** (shows **inverse relationship**) than the goods are **complements**
- If coefficient is **positive** (shows **direct relationship**) than the goods are **substitutes**

4. Income-Elasticity of Demand

- Income elasticity shows how sensitive a product is to a change in INCOME
- It shows if goods are normal or inferior

$$\frac{\% \text{ change in quantity}}{\% \text{ change in income}}$$

Income increases 20%, and quantity decreases 15%
then the good is a... INFERIOR GOOD

- If coefficient is negative (shows inverse relationship) than the good is inferior
- If coefficient is positive (shows direct relationship) than the good is normal

Ex: If income falls 10% and quantity falls 20%...

Elasticity of Demand

1. The price of a laptop computer increases by 10 percent and we observe a 20 percent decrease in quantity demanded
2. The price of a package of chewing gum increases by 10 percent and we observe a 5 percent decrease in quantity demanded.
3. The price of oranges increases by 5 percent and the quantity demanded decreases by 5 percent.

Income Elasticity

1. Mike's income rises 3 percent and we observe his consumption of hamburger meat rise 1 percent
2. Consumer income increases by 5 percent and we observe consumption of noodles decrease by 2 percent.

Cross Price Elasticity

1. The price of **good Y increases by 2 percent** and the **consumption of good X decreases 4 percent**.
2. The price of **good Y increases 3 percent** and **consumption of good X increases 6 percent**.

Using TR and Common Sense

- Suppose the price of a particular good increases from \$95 to \$105. As a consequence, you decrease your purchases of the good from 21 units to 19 units.
 - Is demand for this good **elastic, inelastic, or unit elastic?**
- Suppose your income increases from \$95 to \$105. As a result, you increase your purchases of a particular good from 39 units to 41 units.
 - Is this good a **normal good or an inferior good?**
- Suppose the price of good A increases from \$95 to \$105. As a consequence, you decrease your purchases of good B from 81 units to 79 units.
 - Are these goods **substitutes or complements?**

Elasticity Practice

Calculate Marginal Utility

# of Slices of Pizza	Total Utility (in dollars)	Marginal Utility/Benefit
0	0	
1	8	
2	14	
3	19	
4	23	
5	25	
6	26	
7	26	
8	24	

How many slices would you buy if the price per slice was \$2?

121

Calculate Marginal Utility

# of Slices of Pizza	Total Utility (in dollars)	Marginal Utility/Benefit	Marginal Cost
0	0	0	\$2
1	8	8	\$2
2	14	6	\$2
3	19	5	\$2
4	23	4	\$2
5	25	2	\$2
6	26	1	\$2
7	26	0	\$2
8	24	-2	\$2

How many slices would you buy if the price per slice was \$2?

122

Calculate Marginal Utility

# of Slices of Pizza	Total Utility (in dollars)	Marginal Utility/Benefit	Marginal Cost
0	0	0	2
1	8	8	2
2	14	6	2
3	19	5	2
4	23	4	2
5	25	2	2
6	26	1	2
7	26	0	2
8	24	-2	2

You will continue to consume until Marginal Benefit = Marginal Cost

How many pizzas would you buy if the price per slice was \$2?

123

CONSUMER BEHAVIOR

You plan to take a vacation and want to maximize your utility. Based on the info below, which should you choose?

Destination	Marginal Utility (In Utils)
Tahiti	3000
Chicago	1000

124

CONSUMER BEHAVIOR

You plan to take a vacation and want to maximize your utility. Based on the info below, which should you choose?

Destination	Marginal Utility (In Utils)	Price	Marginal Utility Per Dollar
Tahiti	3000	\$3,000	1 Util
Chicago	1000	\$500	2 Utils

Calculating Marginal Utility Per Dollar allows you to compare products with different prices.

125

Utility Maximizing Rule

The consumer's money should be spent so that the marginal utility per dollar of each good equals each other.

$$\frac{MU_x}{P_x} = \frac{MU_y}{P_y}$$

126

Utility Maximization and Consumer Behavior

- Chuck is currently purchasing 3 pairs of jeans and 5 t-shirts per year. The price of jeans is \$30, and t-shirts cost \$10. At his current rate of consumption, his marginal utility of jeans is 60 and his marginal utility of t-shirts is 30.
- Is Chuck maximizing his utility? Would you suggest he buy more jeans and fewer t-shirts, or more t-shirts and fewer jeans?
 - Jeans $60/30=2$
 - T-Shirts $30/10=3$
 - No
 - Buy more T-Shirts and Fewer Pants

Utility Maximization Rule

- Mrs. Johnson spends her entire daily budget on potato chips, at a price of \$1 each, and onion dip at a price of \$2 each. At her current consumption bundle, the marginal utility of chips is 12 and the marginal utility of dip is 30. What should Mrs. Johnson do?
 - Chips $12/1 = 12$
 - Onion Dip $30/2 = 15$
 - Buy more dip and fewer chips

Utility Maximization Rule

- Mr. Gonzalez spends his entire weekly budget on magazines, at a price of \$4 each, and newspapers at a price of \$1.50 each. At his current consumption bundle, the marginal utility of magazines is 16 and the marginal utility of newspapers is 12. What should Mr. Gonzalez do?
 - Magazines $16/4 = 4$
 - Newspapers $12/1.5 = 8$
 - Buy More Newspapers and Fewer Magazines



Utility Maximization



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

If you only have \$25, what combination of movies and go carts maximizes your utility?



Utility Maximization



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

If you only have \$25, what combination of movies and go carts maximizes your utility?



Utility Maximization



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

If you only have \$25, what combination of movies and go carts maximizes your utility?
