

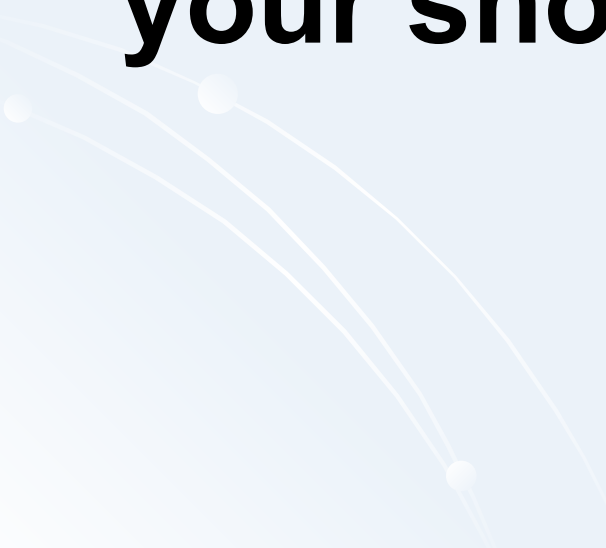
# **Consumer Behavior and Utility Maximization**

Mr. Griffin

Montgomery High school

AP Economics


# Do Now

- **Imagine you are in the supermarket with \$10 to spend...What would be in your shopping cart?**
- 

# UTILITY



# Utility

- **Utility = want-satisfying power of a good/service**
    - **Utility  $\neq$  Usefulness**
    - **Utility is subjective**
    - **Utility is difficult to quantify (*Utils*)**
- 

# Utility: A Tool to Analyze Purchase Decisions

- The Purpose of Utility Analysis
  - The purpose of utility analysis = analyzing how people behave rather than how they think
  - Theory of consumer choice = each consumer spends his or her income in a way that yields the greatest satisfaction
  - Utility = amount of satisfaction

# Utility: A Tool to Analyze Purchase Decisions

- Total versus Marginal Utility

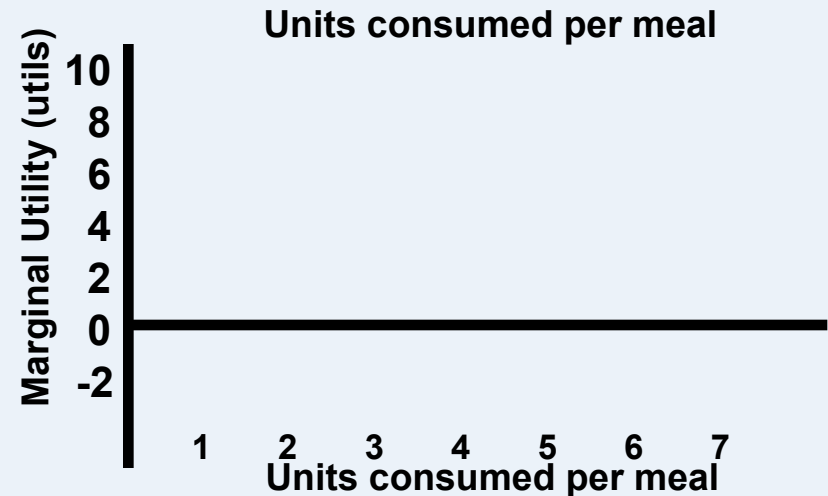
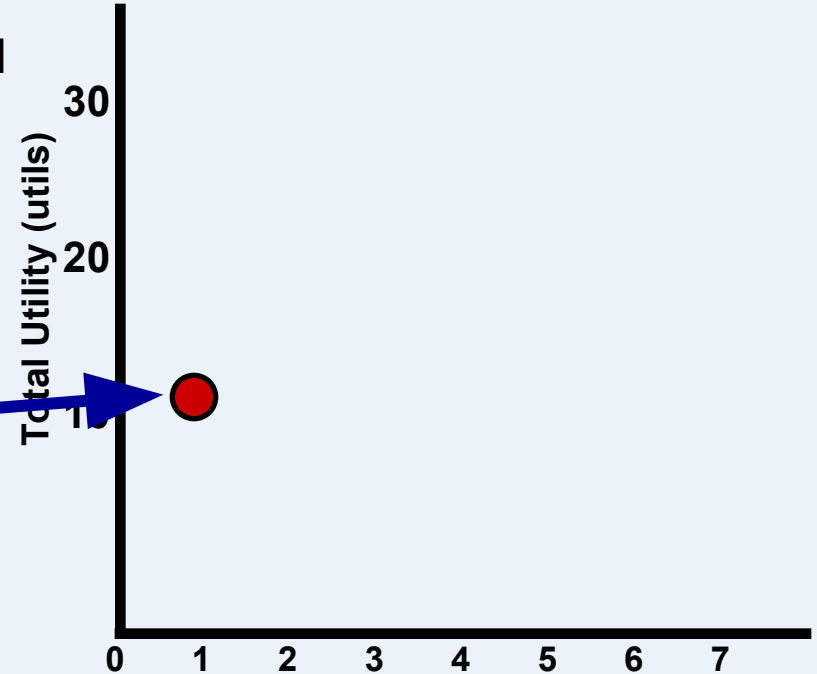
- Total utility = total benefit to a consumer from **all** the units of a good purchased
- Marginal utility = **extra** benefit from the **last** unit of a good purchased. Also, the change in total utility from the purchase of 1 more unit of the good.
- $\uparrow$  number of goods purchased  $\Rightarrow \uparrow$  total utility but a  $\downarrow$  marginal utility

# TOTAL AND MARGINAL UTILITY

Tacos consumed per meal	Total Utility, Utils	Marginal Utility, Utils
-------------------------------	----------------------------	-------------------------------

0  
1

0  
10



# TOTAL AND MARGINAL UTILITY

Tacos consumed per meal	Total Utility, Utils	Marginal Utility, Utils
-------------------------------	----------------------------	-------------------------------

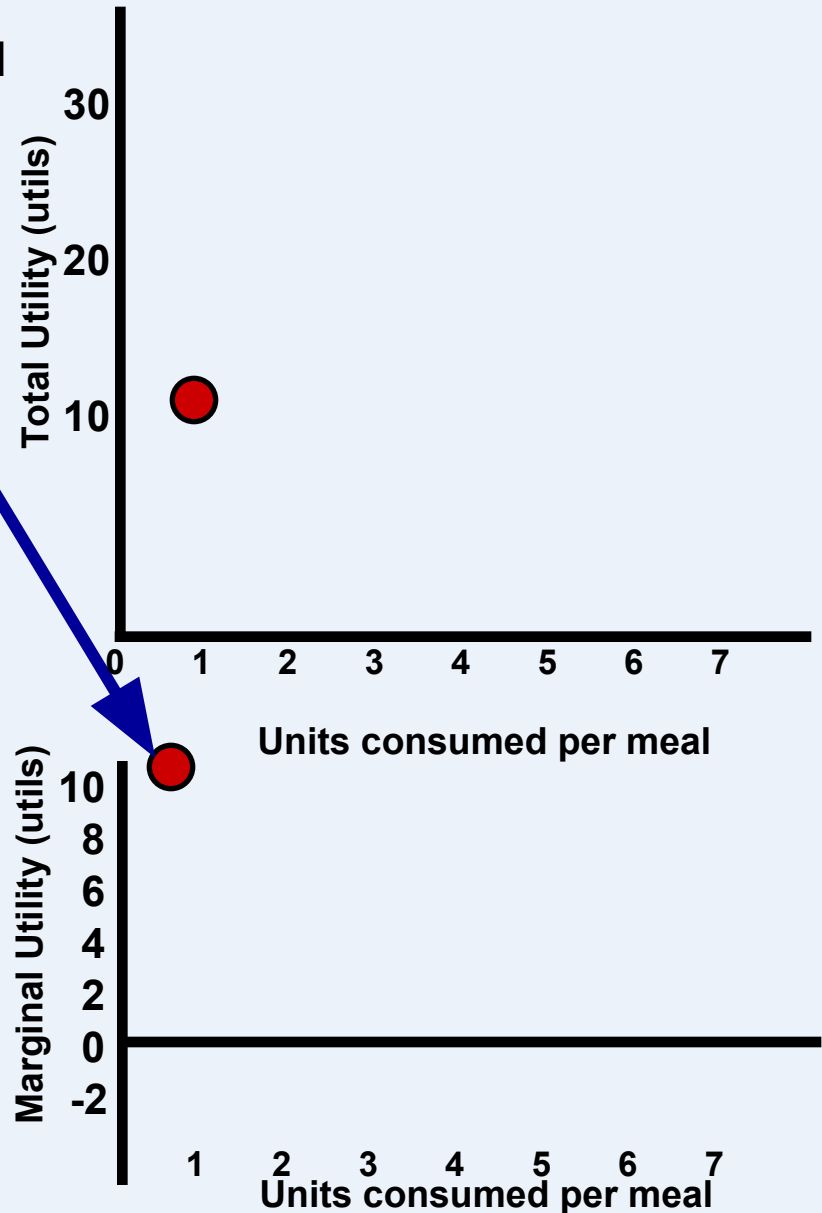
0

0

10

1

10





# TOTAL AND MARGINAL UTILITY

Tacos consumed per meal	Total Utility, Utils	Marginal Utility, Utils
-------------------------------	----------------------------	-------------------------------

0

0



10

1

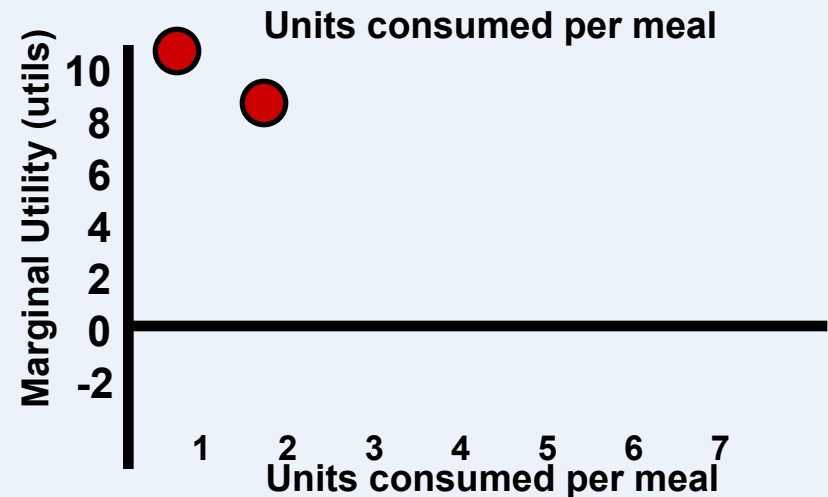
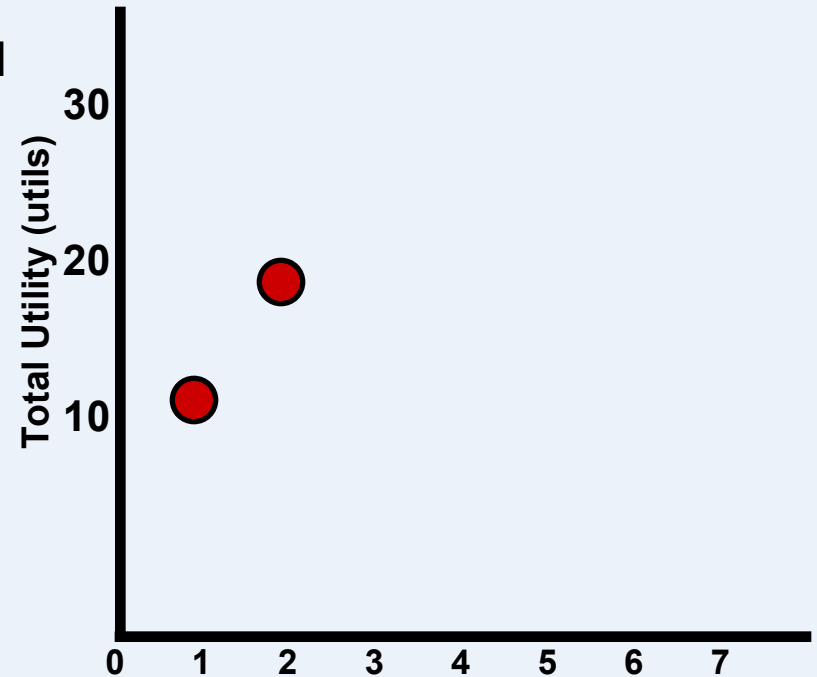
10



8

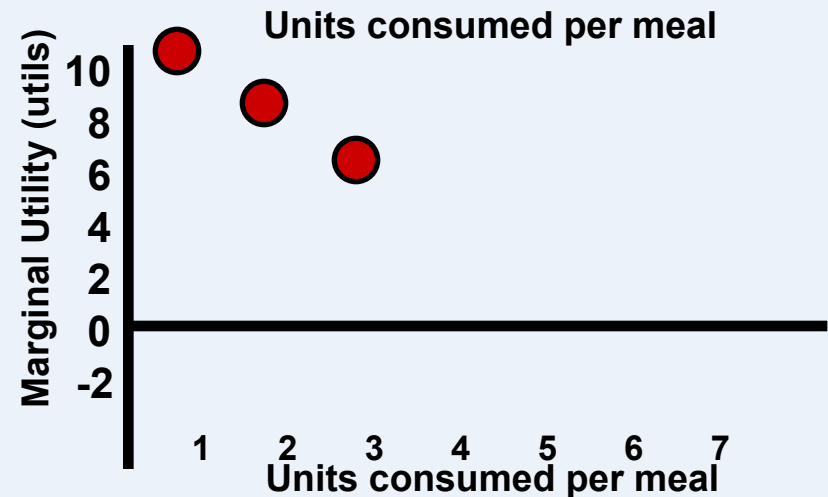
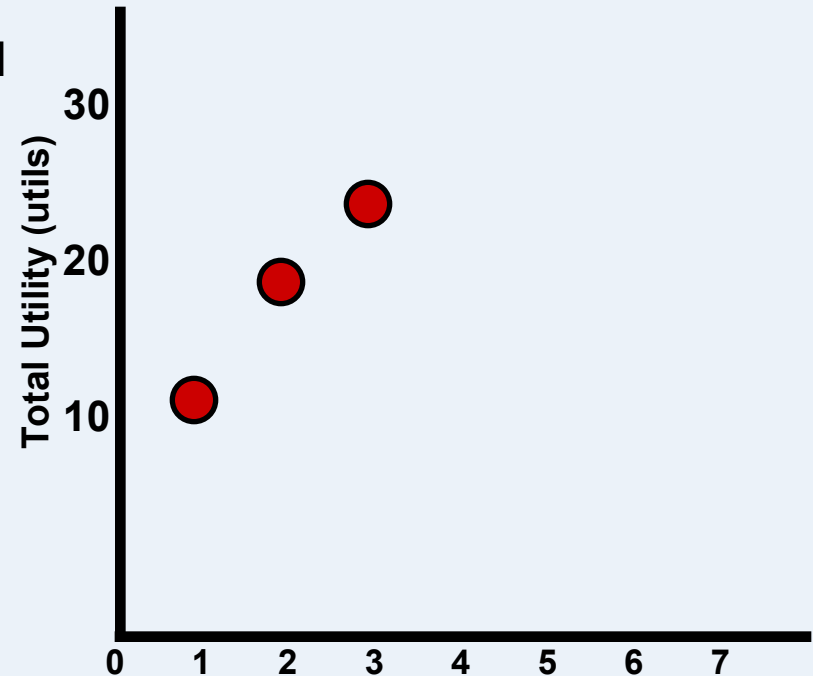
2

18



# TOTAL AND MARGINAL UTILITY

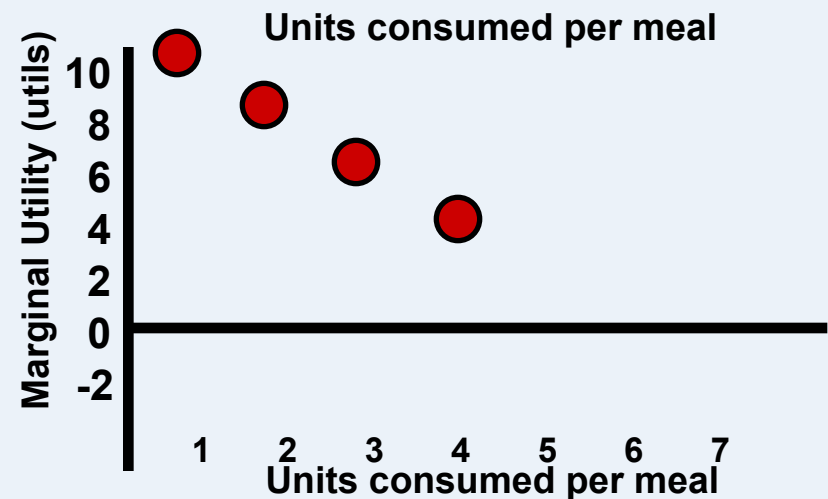
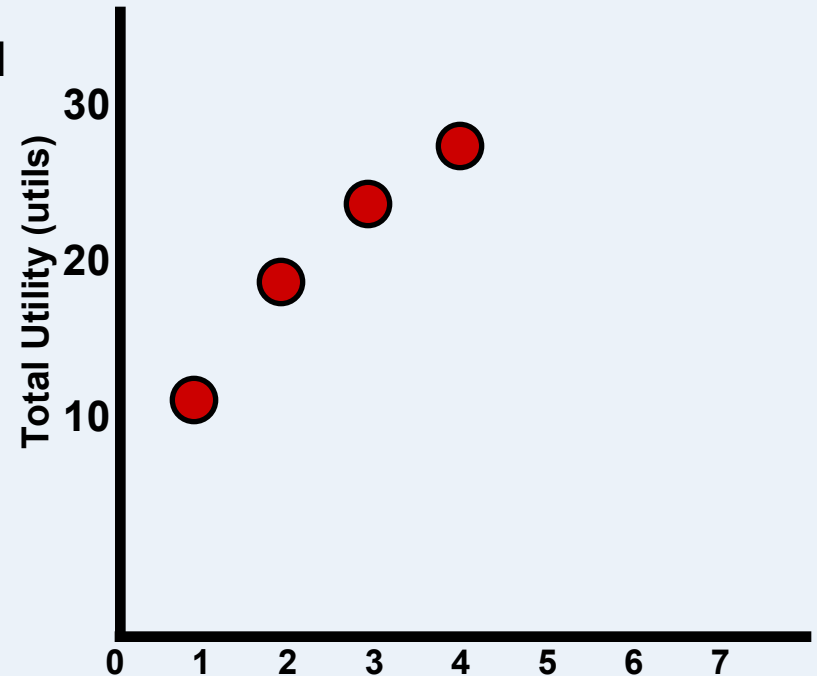
Tacos consumed per meal	Total Utility, Utils	Marginal Utility, Utils
0	0	
1	10	10
2	18	8
3	24	6



# TOTAL AND MARGINAL UTILITY

Tacos consumed per meal	Total Utility, Utils	Marginal Utility, Utils
-------------------------------	----------------------------	-------------------------------

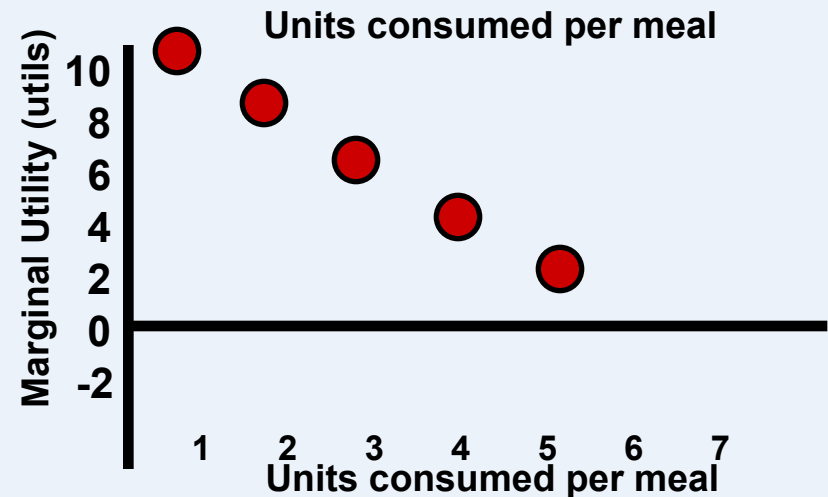
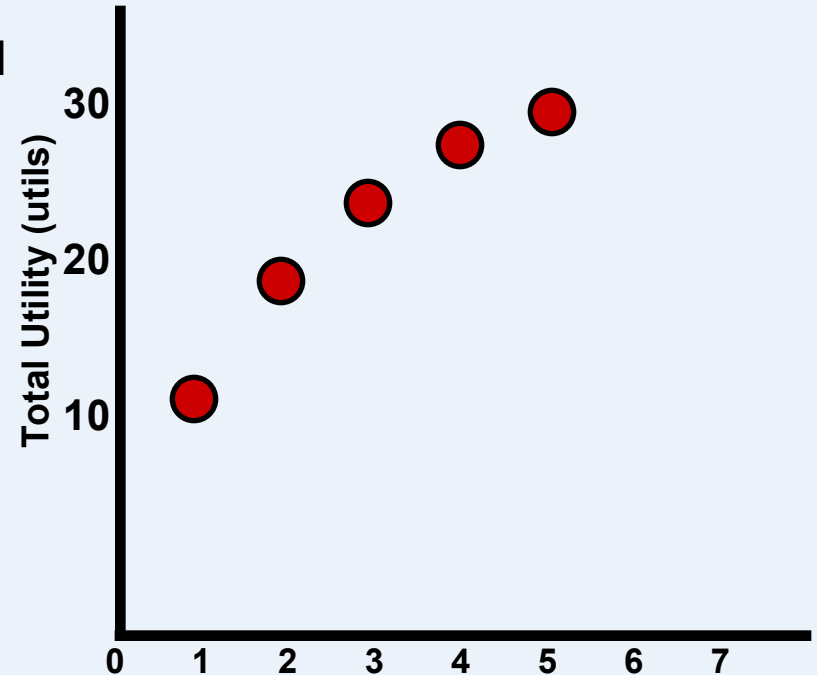
0	0	
1	10	10
2	18	8
3	24	6
4	28	4



# TOTAL AND MARGINAL UTILITY

Tacos consumed per meal	Total Utility, Utils	Marginal Utility, Utils
-------------------------------	----------------------------	-------------------------------

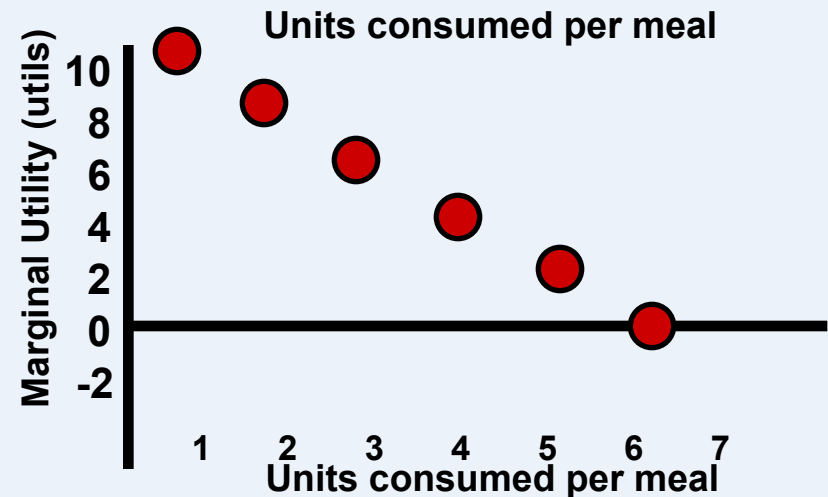
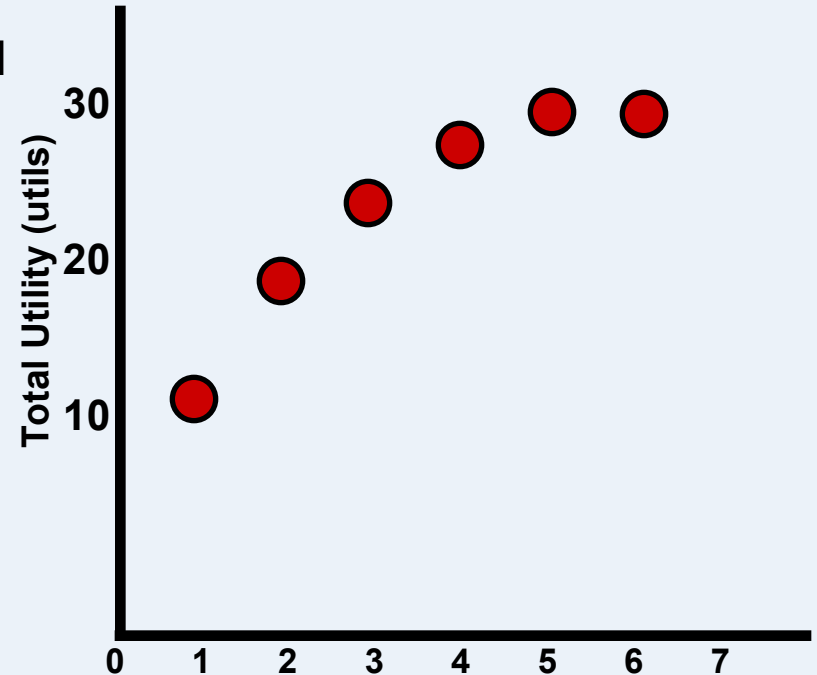
0	0	
1	10	10
2	18	8
3	24	6
4	28	4
5	30	2



# TOTAL AND MARGINAL UTILITY

Tacos consumed per meal	Total Utility, Utils	Marginal Utility, Utils
-------------------------------	----------------------------	-------------------------------

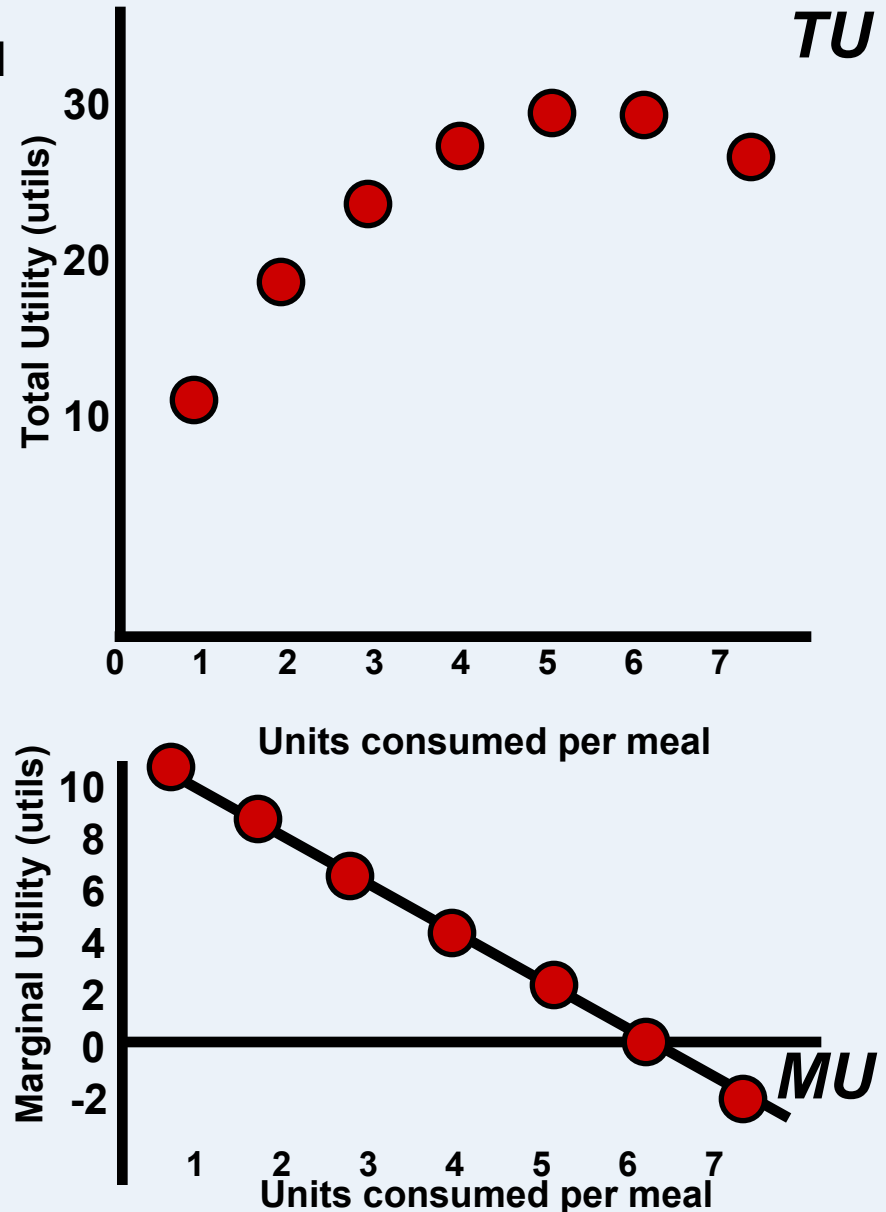
0	0		10
1	10		8
2	18		6
3	24		4
4	28		2
5	30		0
6	30		0



# TOTAL AND MARGINAL UTILITY

Tacos consumed per meal	Total Utility, Utils	Marginal Utility, Utils
-------------------------------	----------------------------	-------------------------------

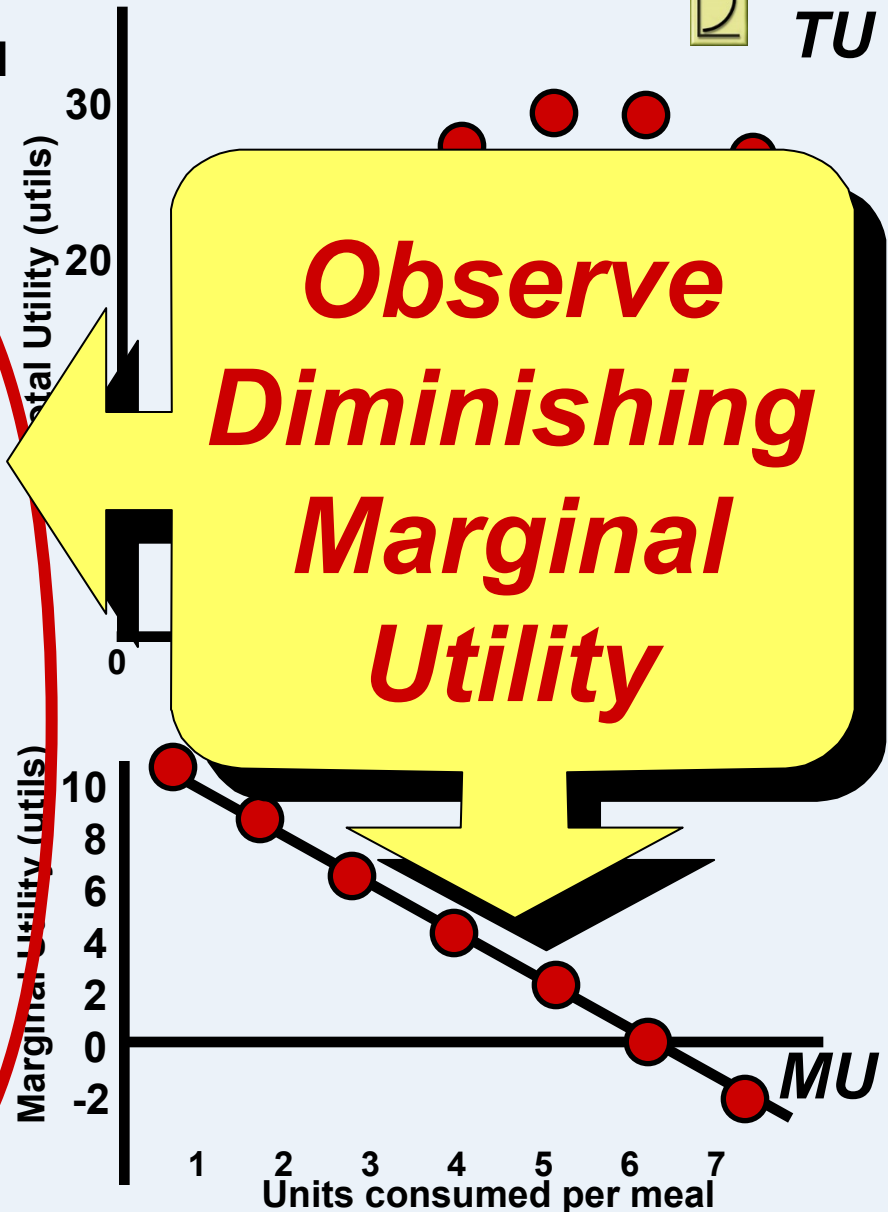
0	0		10
1	10		8
2	18		6
3	24		4
4	28		2
5	30		0
6	30		0
7	28		-2



# TOTAL AND MARGINAL UTILITY

Tacos consumed per meal	Total Utility, Utils	Marginal Utility, Utils
-------------------------------	----------------------------	-------------------------------

0	0	10
1	10	8
2	18	6
3	24	4
4	28	2
5	30	0
6	30	-2
7	28	



# Law of Diminishing Marginal Utility

- **Law of diminishing marginal utility:**


Added satisfaction declines as a consumer acquires additional units of a product.

- e.g. Your desire for a car may be very strong?  
What about for a second car? A third?

- Additional units of a good/service are worth less and less to a consumer in money terms.



# Using Marginal Utility

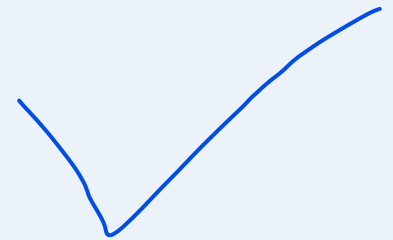
- The Optimal Purchase Rule
    - Buy the quantity of each good at which price and marginal utility are exactly equal.
    - If marginal utility is greater (less) than price, the consumer can improve well being by purchasing more (less).
- 

# Marginal Utility and Demand

- From Diminishing Marginal Utility to Downward-Sloping Demand Curves
  - Law of diminishing marginal utility  $\Rightarrow$  negative slope of demand curves
  - $\uparrow$  price  $\Rightarrow$   $\downarrow$  quantity demanded  $\Rightarrow$   $\uparrow$  marginal utility
  - Restores equality between price and marginal utility

# Marginal Utility and Demand

- From Diminishing Marginal Utility to Downward-Sloping Demand Curves
  - If successive units of a good yield smaller and smaller amounts of extra utility, then the consumer will buy additional units of the good only if its price falls.



# THEORY OF CONSUMER BEHAVIOR

## Consumer Choice and

*For simplicity, assume the following  
for the typical consumer:*

- *Rational Behavior – want to maximize total utility*
- *Clear-cut Preferences*
- *Budget Constraint (limited income)*
- *Every good has a price tag*
- *So, consumers must compromise!*

# Consumer Choice as a Trade-Off: Opportunity Cost

- Decision to purchase something  $\Rightarrow$  decision to forgo something else
- Opportunity cost of spending an extra dollar on good X = the utility from good Y the purchaser could have gotten by spending that dollar on good Y

# THEORY OF CONSUMER BEHAVIOR

## *Utility Maximizing Rule*

*The consumer's money income should be allocated so that the last dollar spent on each product yields the same amount of extra (marginal) utility.*

illustrated.

# UTILITY MAXIMIZING COMBINATION



<i>Unit of product</i>	<u>Product A:</u> <u>Price = \$1</u>		<u>Product B:</u> <u>Price = \$2</u>	
	<i>Marginal utility, utils</i>	<i>Marginal utility per dollar (MU/price)</i>	<i>Marginal utility, utils</i>	<i>Marginal utility per dollar (MU/price)</i>
<b>First</b>	<b>10</b>	<b>10</b>	<b>24</b>	<b>12</b>

***How should the \$10  
income be allocated?***

# UTILITY MAXIMIZING COMBINATION

**\$ 10 income**

Unit of product	<u>Product A:</u> <u>Price = \$1</u>		<u>Product B:</u> <u>Price = \$2</u>	
	Marginal utility, utils	Marginal utility per dollar (MU/price)	Marginal utility, utils	Marginal utility per dollar (MU/price)
First	10	10	24	12

***Examine the two marginal utilities***



# UTILITY MAXIMIZING COMBINATION

**\$ 10 income**

Unit of product	<u>Product A:</u> <u>Price = \$1</u>		<u>Product B:</u> <u>Price = \$2</u>	
	Marginal utility, utils	Marginal utility per dollar (MU/price)	Marginal utility, utils	Marginal utility per dollar (MU/price)
First	10	10	24	12

***Examine the two  
marginal utilities  
...per dollar***

# UTILITY MAXIMIZING COMBINATION

**\$ 10 income**

Unit of product	<u>Product A:</u> <u>Price = \$1</u>		<u>Product B:</u> <u>Price = \$2</u>	
	Marginal utility, utils	Marginal utility per dollar (MU/price)	Marginal utility, utils	Marginal utility per dollar (MU/price)
First	10	10	24	12



***Decision: Buy 1  
Product B for \$2***

# UTILITY MAXIMIZING COMBINATION

**\$ 10 income**

**Product A:**

**Price = \$1**

**Product B:**

**Price = \$2**

Unit of product	Marginal utility, utils	Marginal utility per dollar (MU/price)	Marginal utility, utils	Marginal utility per dollar (MU/price)
First	10	10	24	12
Second	8	8	20	10
Third	6	6	16	8
Fourth	4	4	12	6
Fifth	3	3	9	4.5
Sixth	2	2	6	3
Seventh	1	1	4	2

***What next?***

# UTILITY MAXIMIZING COMBINATION

**\$ 10 income**

**Product A:**

**Price = \$1**

**Product B:**

**Price = \$2**

Unit of product	Marginal utility, utils	Marginal utility per dollar (MU/price)	Marginal utility, utils	Marginal utility per dollar (MU/price)
First	10	10 ✓	24	12 ✓
Second	8	8	20	10 ✓
Third	6	6	16	8
Fourth	4	4	12	6
Fifth	3	3	8	4
Sixth	2	2	4	2
Seventh	1	1	2	1

**What next?**

**Buy one of each**

# UTILITY MAXIMIZING COMBINATION

**\$ 10 income**

**Product A:**

**Price = \$1**

**Product B:**

**Price = \$2**

Unit of product	Marginal utility, utils	Marginal utility per dollar (MU/price)	Marginal utility, utils	Marginal utility per dollar (MU/price)
First	10	10	24	12
Second	8	8	20	10
Third	7	7	18	9
Fourth	6	6	16	8
Fifth	5	5	14	7
Sixth	4	4	12	6
Seventh	3	3	10	5
Eighth	2	2	8	4
Ninth	1	1	6	3
Tenth	1	1	4	2

***and then...***  
***(\$5 left)***

# UTILITY MAXIMIZING COMBINATION

**\$ 10 income**

**Product A:**

**Price = \$1**

**Product B:**

**Price = \$2**

Unit of product	Marginal utility, utils	Marginal utility per dollar (MU/price)	Marginal utility, utils	Marginal utility per dollar (MU/price)
First	10	10	24	12
Second	8	8	20	10
Third	7	7	18	9
Fourth	6	6	16	8
Fifth	5	5	14	7
Sixth	4	4	12	6
Seventh	3	3	10	5
Eighth	2	2	8	4
Ninth	1	1	6	3
Tenth	1	1	4	2

***third unit of product B***

# UTILITY MAXIMIZING COMBINATION

**\$ 10 income**

**Product A:**

**Price = \$1**

**Product B:**

**Price = \$2**

*Unit of  
product*

*Marginal  
utility,  
utils*

*Marginal  
utility per  
dollar  
(MU/price)*

*Marginal  
utility,  
utils*

*Marginal  
utility per  
dollar  
(MU/price)*

**First**

**10**

**10**

**24**

**12**

**Second**

**8**

**8**

**20**

**10**

**Third**

**7**

**18**

**9**

**On**

**Seventh**

**3**

**3**

**4**

**2**

**\$3 left...**

**16**

**6**

# UTILITY MAXIMIZING COMBINATION

**\$ 10 income**

**Product A:**

**Price = \$1**

**Product B:**

**Price = \$2**

Unit of product	Marginal utility, utils	Marginal utility per dollar (MU/price)	Marginal utility, utils	Marginal utility per dollar (MU/price)
First	10	10 ✓	24	12 ✓
Second	8	8 ✓	20	10 ✓
Third	7	7	9	4.5 ✓
Fourth	6	6	8	4 ✓
Fifth	5	5	6	3 ✓
Sixth	4	4	3	1.5
Seventh	3	3	2	1

**\$3 left...**

**Buy both!**



# UTILITY MAXIMIZING COMBINATION

**\$ 10 income**

**Product A:**

**Price = \$1**

**Product B:**

**Price = \$2**

*Unit of  
product*

*Marginal  
utility,  
utils*

*Marginal  
utility per  
dollar  
(MU/price)*

*Marginal  
utility,  
utils*

*Marginal  
utility per  
dollar  
(MU/price)*

**First**

**10**

**10**

**24**

**12**

**Second**

**8**

**8**

**20**

**10**

***Income is gone...***

***the last dollar spent on  
each good gave the same  
utility (8) per dollar***

**18**

**9**

**8**

**16**

**6**

**6**

**Seventh**

**3**

**3**

**4**

**2**

# UTILITY MAXIMIZING COMBINATION

## *Algebraic Restatement of the Utility Maximization Rule*

$$\frac{\text{MU of product A}}{\text{Price of A}} = \frac{\text{MU of product B}}{\text{Price of B}}$$

$$\frac{8 \text{ Utils}}{\$1} = \frac{16 \text{ Utils}}{\$2}$$

# UTILITY MAXIMIZATION AND THE DEMAND CURVE

## ***Deriving the Demand Schedule and Curve***

*Recall our basic determinants of demand:*

- ✓ • **Preferences or Tastes**
- ✓ • **Money Income**
- ✓ • **Prices of Other Goods**

# UTILITY MAXIMIZATION AND THE DEMAND CURVE

## ***Deriving the Demand Schedule and Curve***

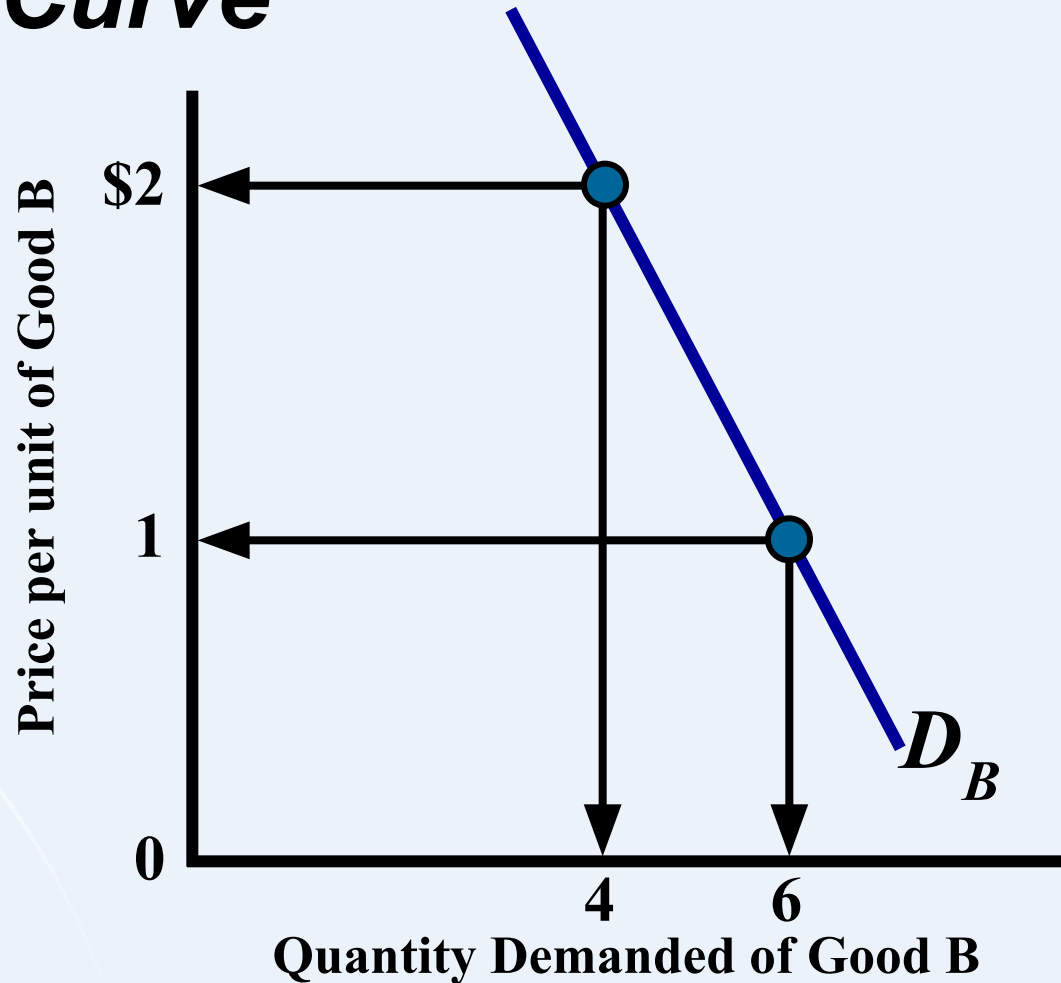
*Create a demand schedule from the  
purchase decisions as the price of  
the product is varied ...*

<b><i>Price per unit of B</i></b>	<b><i>Quantity Demanded</i></b>
<b>\$2</b>	<b>4</b>
<b>1</b>	<b>6</b>

***Graphically***

# UTILITY MAXIMIZATION AND THE DEMAND CURVE

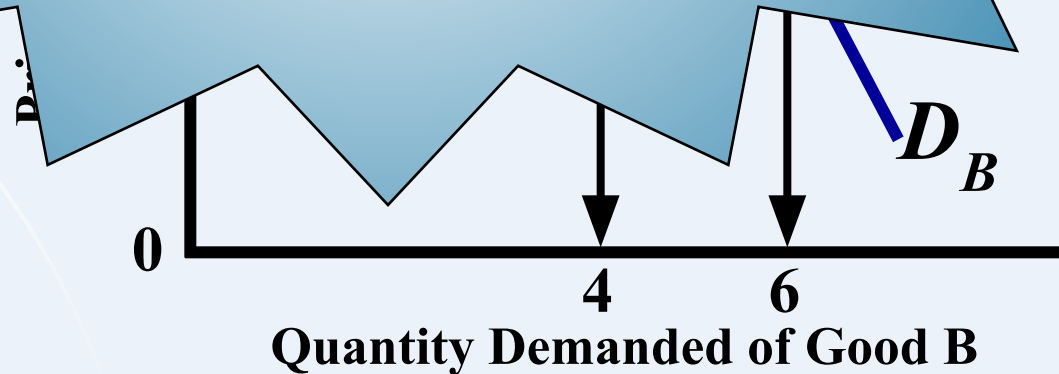
## *Deriving the Demand Schedule and Curve*



# UTILITY MAXIMIZATION AND THE DEMAND CURVE

*Deriving the Demand Schedule*

## *Income and Substitution Effects Revisited*



# THE LAW OF DEMAND

## A Closer

### ***The Income Effect***

Look

*A lower price increases real income (purchasing power) - and vice versa*

### ***The Substitution Effect***

*A lower price relative to other goods attracts new buyers - and vice versa*

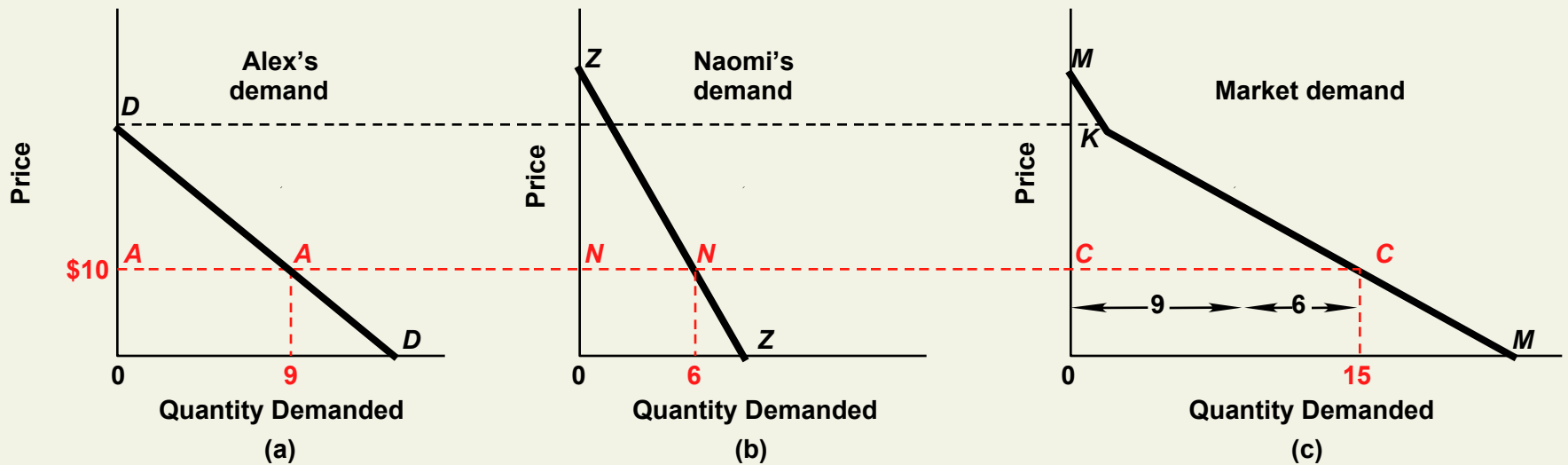


# From Individual to Market Demand Curves

- Market Demand as a Horizontal Sum
  - Market demand curve = the horizontal sum of the individual demand curves
- The “Law” of Demand
  - Negative slope for market demand curves
    - Individual demand curves usually have negative slopes
    - Lower price draws new customers into the market



# Total Market Demand vs. Individual Consumer Demand



# APPLICATIONS AND EXTENSIONS

- ***iPods***

- ***How do they compare to portable CD players?***
- ***How much would you value a second iPod? A third?***
- ***How do Apple's continued enhancements entice buyers?***

- ***Cash vs. Noncash Gifts***

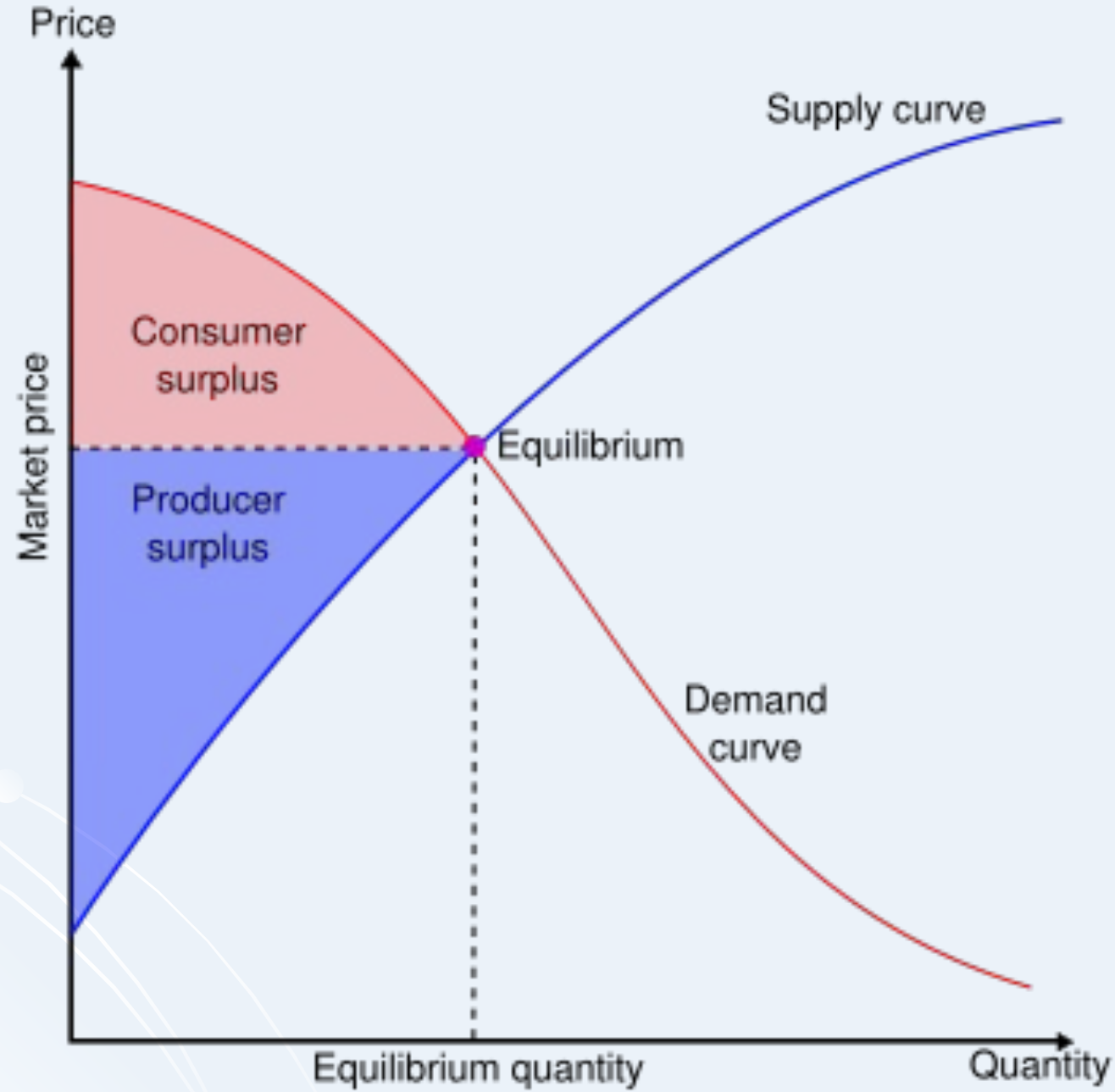
- ***Which do you prefer? Why?***

# Consumer Surplus

- Voluntary purchase  $\Rightarrow$  benefit  $>$  costs
- Consumer surplus = net benefit to the buyer
- **Consumer Surplus** = the difference between the maximum price a consumer is (or consumers are) willing to pay for a product and the price that they actually pay
- ***Graphically, it is the area that lies below the demand curve and above the price line up to the quantity purchased.***

# Producer Surplus

- **Producer Surplus** = the difference between the actual price a producer receives (or producers receive) and the minimum acceptable price.
- ***Graphically, it is the area that lies above the supply curve and below the price line up to the quantity sold.***



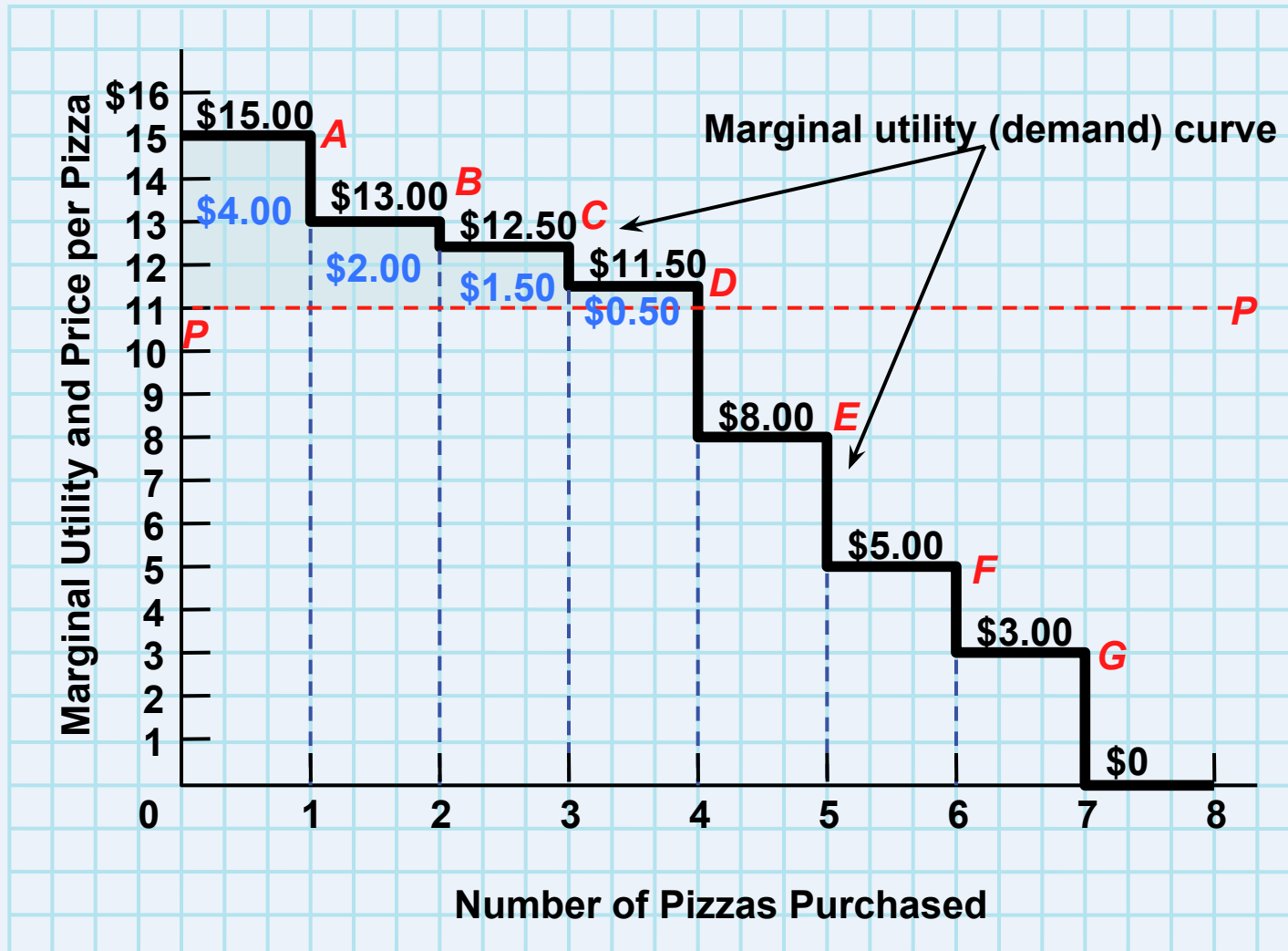
# Calculating Marginal Net Utility (Surplus)

**TABLE 3**

Calculating Marginal Net Utility  
(Consumer's Surplus) from  
Your Pizza Purchases

Quantity	Marginal Utility	Price	Marginal Net Utility (Surplus)
0	\$15.00	\$11.00	\$4.00
1	13.00	11.00	2.00
2	12.50	11.00	1.50
3	11.50	11.00	0.50
4			
Total			<u>\$8.00</u>

# Graphic Calculation of Consumer's Surplus

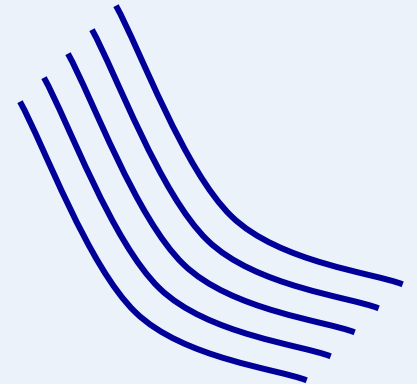


# Resolving the Diamond-Water Paradox

- Diamonds are unnecessary, but scarce  $\Rightarrow$  high price and high marginal utility
- Water is necessary, but plentiful  $\Rightarrow$  low price and low marginal utility
- Given the enormous amounts of water consumed, the total utility derived from water is much greater than from diamonds. **But**, the relative prices relate to marginal (not total) utility.



# Indifference Curve Analysis



# Geometry of Available Choices: The Budget Line

- Budget line

- Graphical representation of all possible combinations of a household's purchases of two goods, given their prices and a fixed amount of money to spend

- Properties of the Budget Line

- Represents the maximum amounts of the goods the consumer can afford

# Geometry of Available Choices: The Budget Line

- Changes in the Budget Line
  - $\Delta$  income  $\Rightarrow$  parallel shift in the budget line
  - $\Delta$  relative prices of the goods  $\Rightarrow$   
 $\Delta$  slope of the budget line



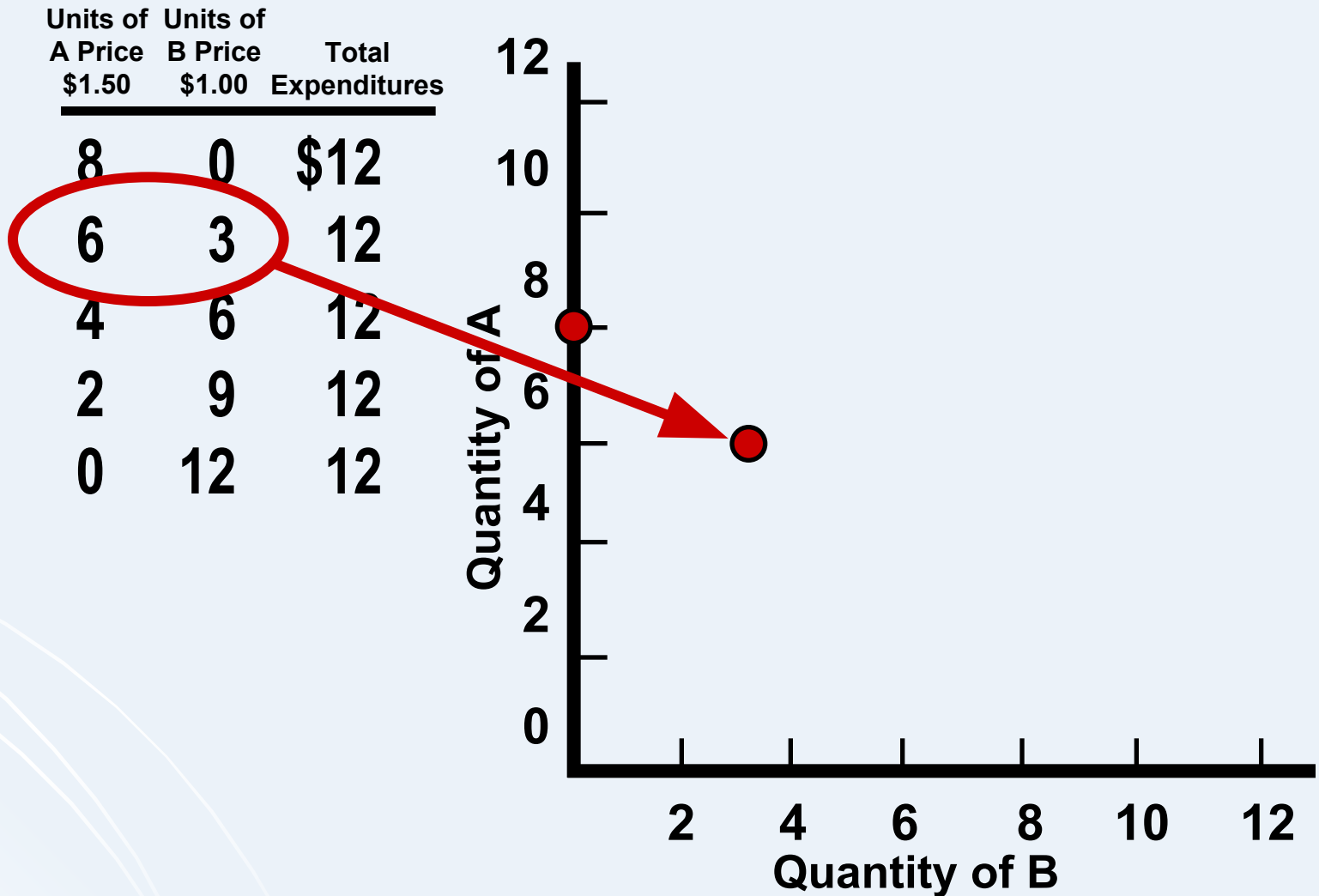
# THE BUDGET LINE:

*What is Attainable*



# THE BUDGET LINE:

*What is Attainable*



# THE BUDGET LINE:

*What is Attainable*

Units of A Price \$1.50	Units of B Price \$1.00	Total Expenditures
-------------------------------	-------------------------------	-----------------------

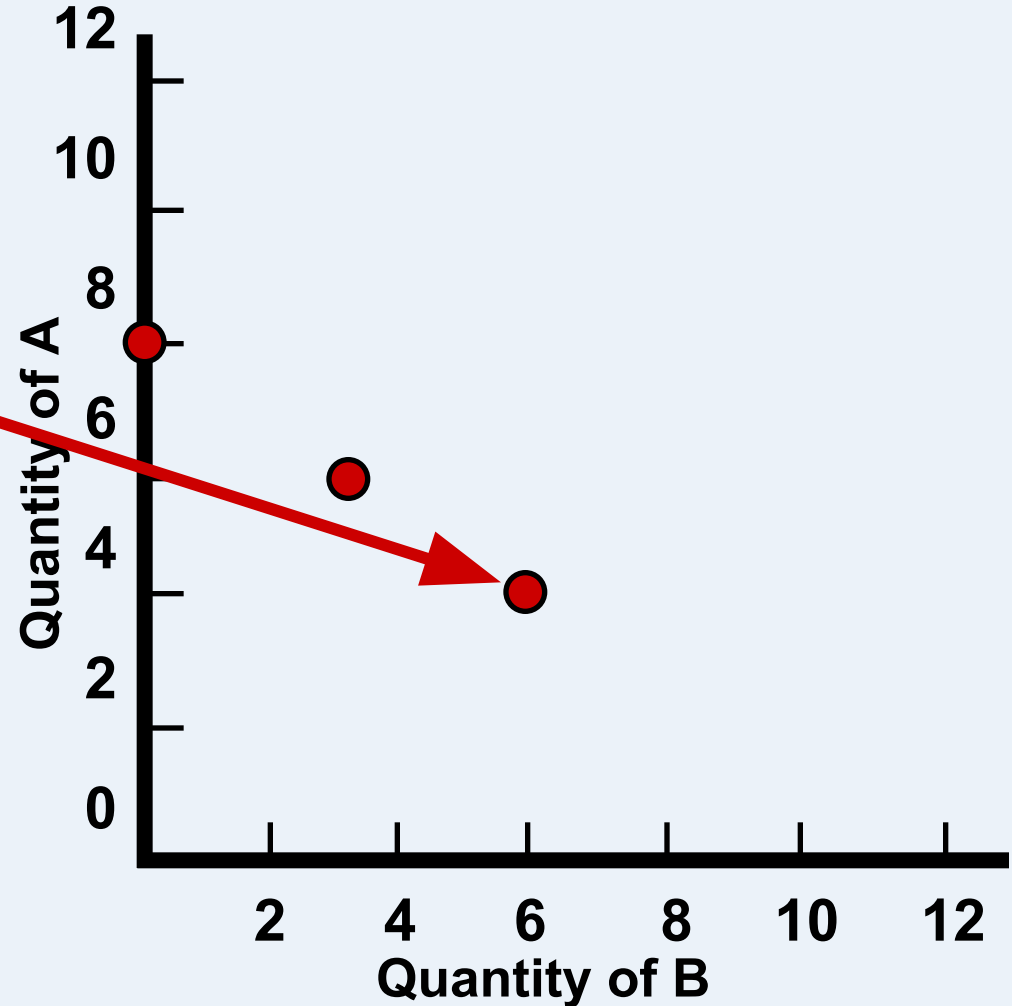
8	0	\$12
---	---	------

6	3	12
---	---	----

4	6	12
---	---	----

2	9	12
---	---	----

0	12	12
---	----	----



# THE BUDGET LINE:

*What is Attainable*

Units of A Price \$1.50	Units of B Price \$1.00	Total Expenditures
-------------------------------	-------------------------------	-----------------------

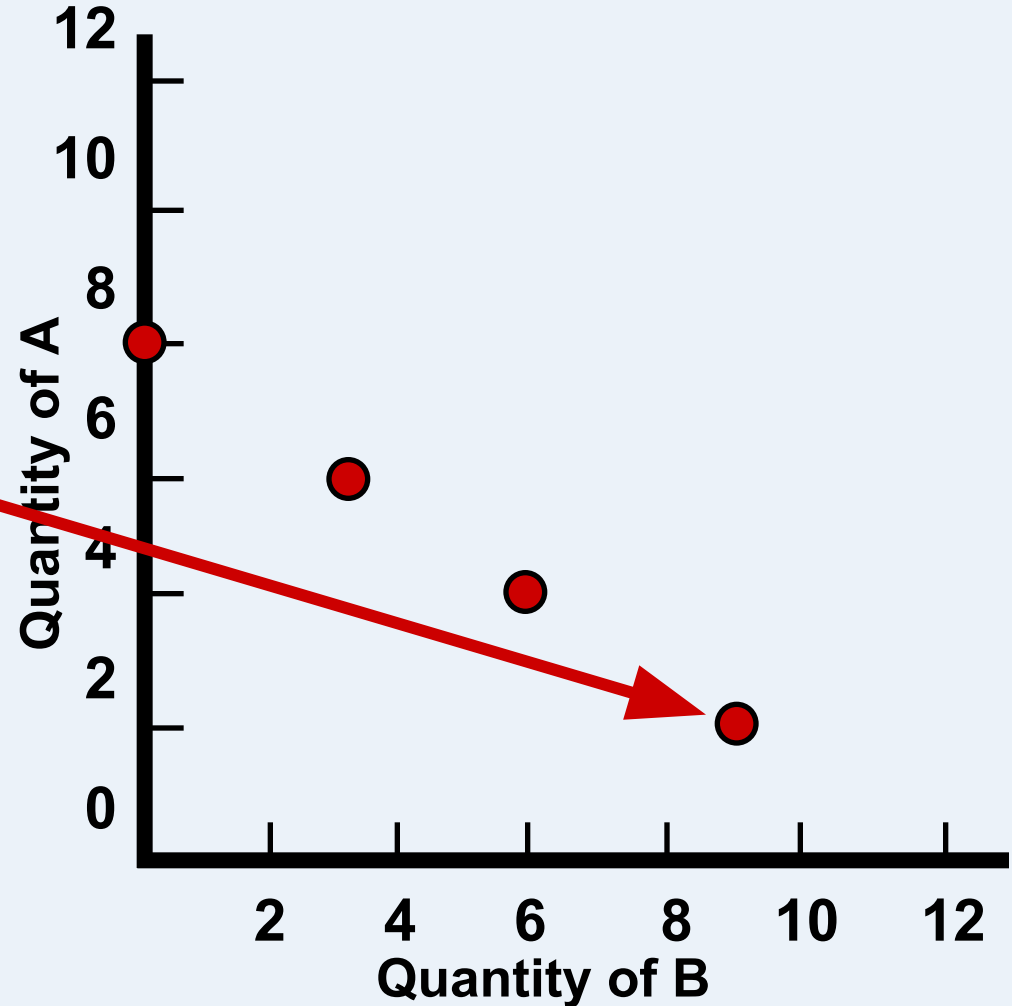
8	0	\$12
---	---	------

6	3	12
---	---	----

4	6	12
---	---	----

2	9	12
---	---	----

0	12	12
---	----	----



# THE BUDGET LINE:

*What is Attainable*

Units of A Price \$1.50	Units of B Price \$1.00	Total Expenditures
-------------------------------	-------------------------------	-----------------------

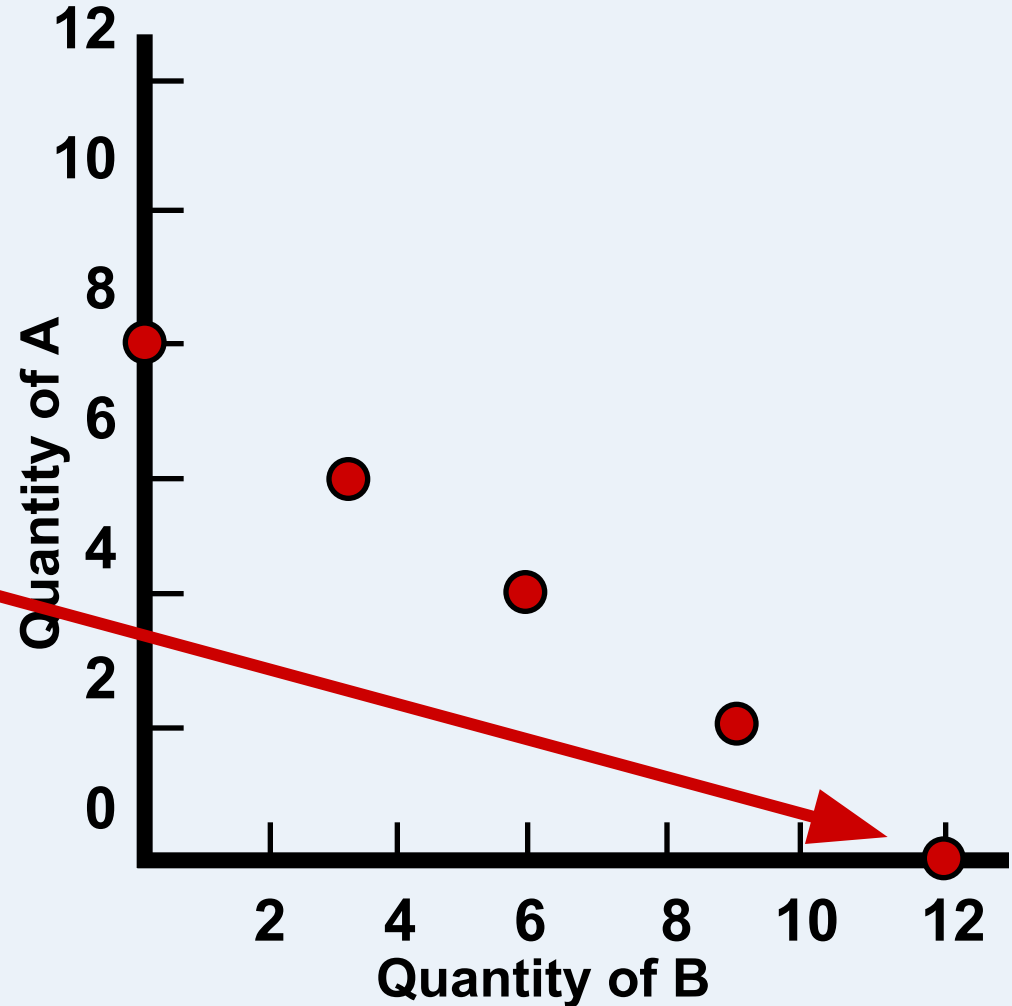
8	0	\$12
---	---	------

6	3	12
---	---	----

4	6	12
---	---	----

2	9	12
---	---	----

0	12	12
---	----	----





# THE BUDGET LINE:

*What is Attainable*

Units of A Price \$1.50	Units of B Price \$1.00	Total Expenditures
-------------------------------	-------------------------------	-----------------------

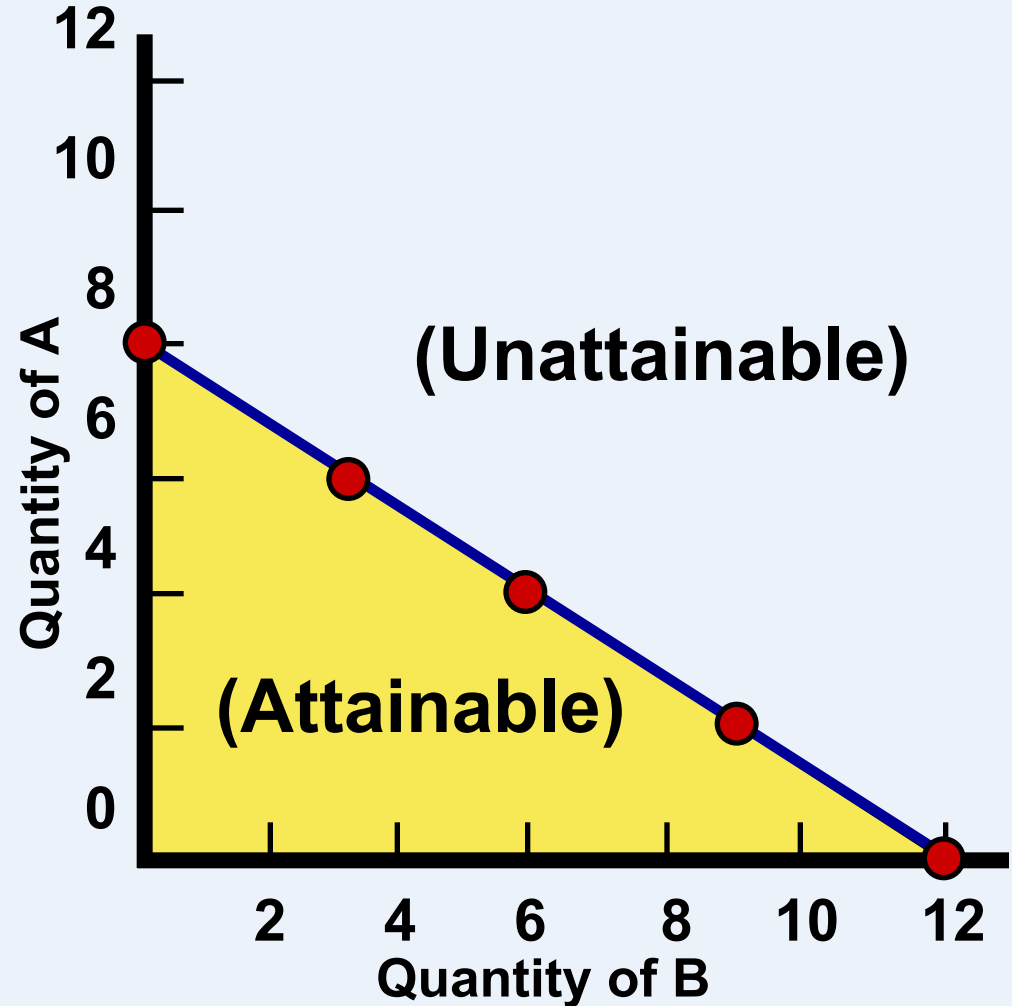
8	0	\$12
---	---	------

6	3	12
---	---	----

4	6	12
---	---	----

2	9	12
---	---	----

0	12	12
---	----	----



# THE BUDGET LINE:

*What is Attainable*

Units of A Price \$1.50	Units of B Price \$1.00	Total Expenditure
-------------------------------	-------------------------------	----------------------

8 0

4

An Increase in income makes the purchase of more of either or both items possible.

4 6 8 10 12  
Quantity of B

# THE BUDGET LINE:

*What is Attainable*

Units of A	Units of B	Total
6	0	\$9.00
4	3	\$9.00
2	6	\$9.00
0	9	\$9.00

**Price changes cause  
a change in the quantity  
demanded of the items.**



# Properties of the Indifference Curve

- Indifference curve = a line connecting all combinations of the goods that are equally desirable
- Properties of the indifference curve:
  - higher is better
  - never intersect
  - negative slope
  - bowed in (convex)

# The Slopes of Indifference Curves and Budget Lines

- Slope of the indifference curve = marginal rate of substitution of the two goods
- The slope of the budget line = relative prices of the two goods



# INDIFFERENCE CURVES

## *What is Preferred*

Units of A Price \$1.50	Units of B Price \$1.00	Total Expenditures
-------------------------------	-------------------------------	-----------------------

8	0	\$12
---	---	------

6	3	12
---	---	----

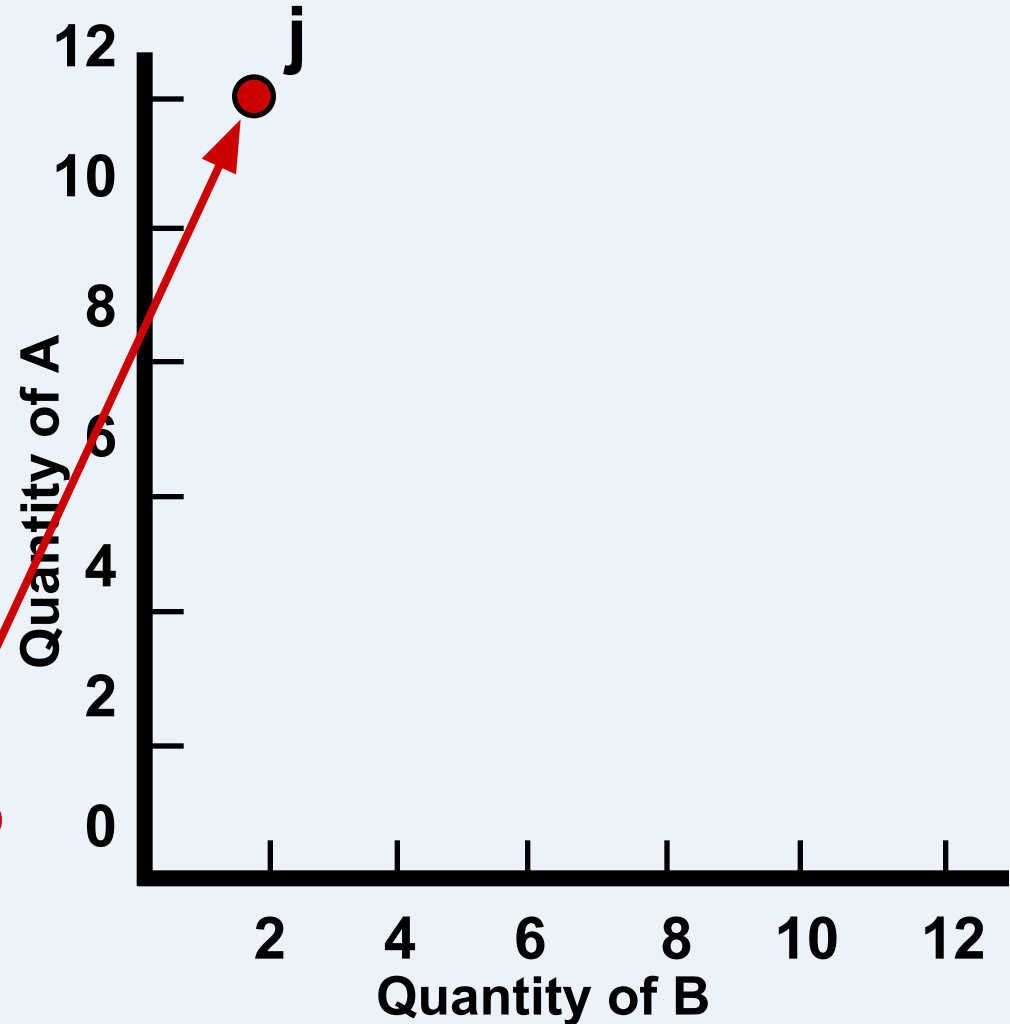
4	6	12
---	---	----

2	9	12
---	---	----

0	12	12
---	----	----

### **An Indifference Schedule**

Combi- nation	Units of A	Units of B
j	12	2



# INDIFFERENCE CURVES

## *What is Preferred*

Units of A Price \$1.50	Units of B Price \$1.00	Total Expenditures
-------------------------------	-------------------------------	-----------------------

8	0	\$12
---	---	------

6	3	12
---	---	----

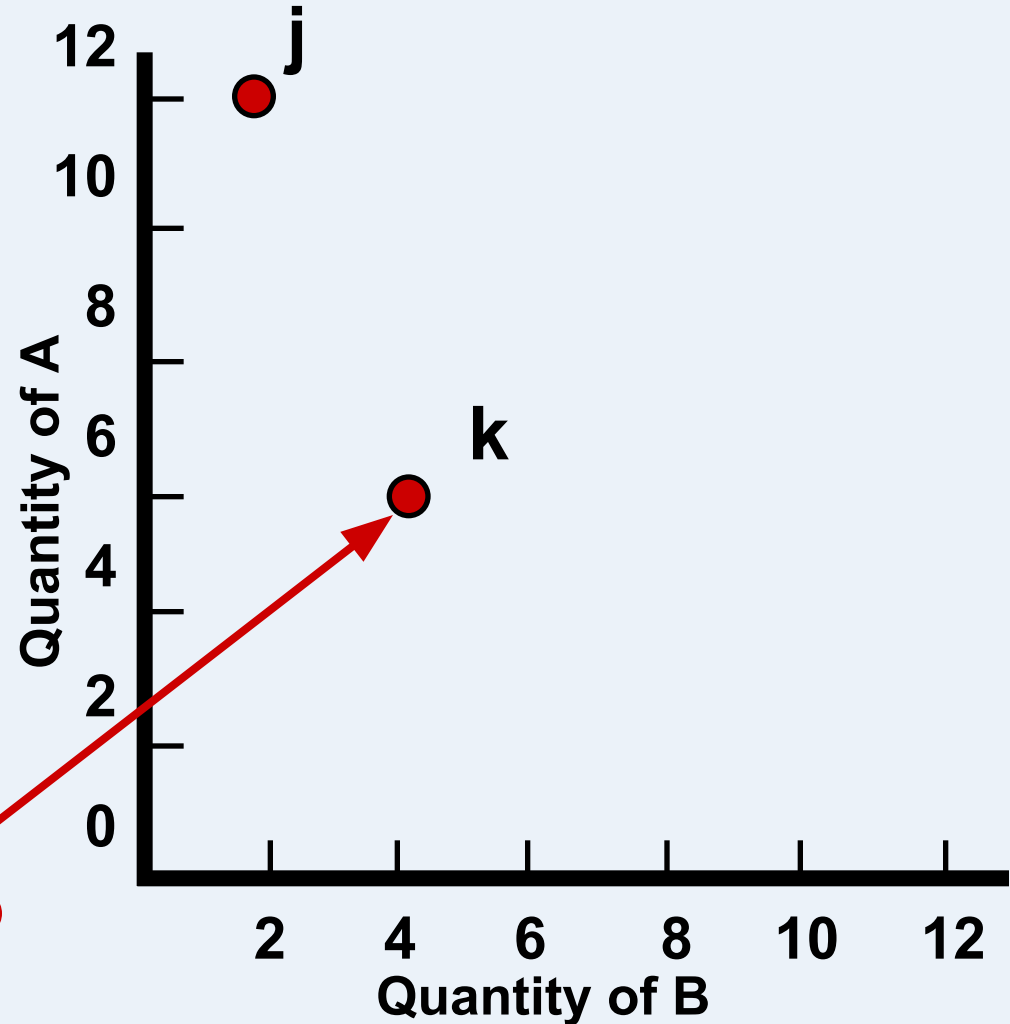
4	6	12
---	---	----

2	9	12
---	---	----

0	12	12
---	----	----

### **An Indifference Schedule**

Combi- nation	Units of A	Units of B
j	12	2
k	6	4



# INDIFFERENCE CURVES

## *What is Preferred*

Units of A Price \$1.50	Units of B Price \$1.00	Total Expenditures
-------------------------------	-------------------------------	-----------------------

8	0	\$12
---	---	------

6	3	12
---	---	----

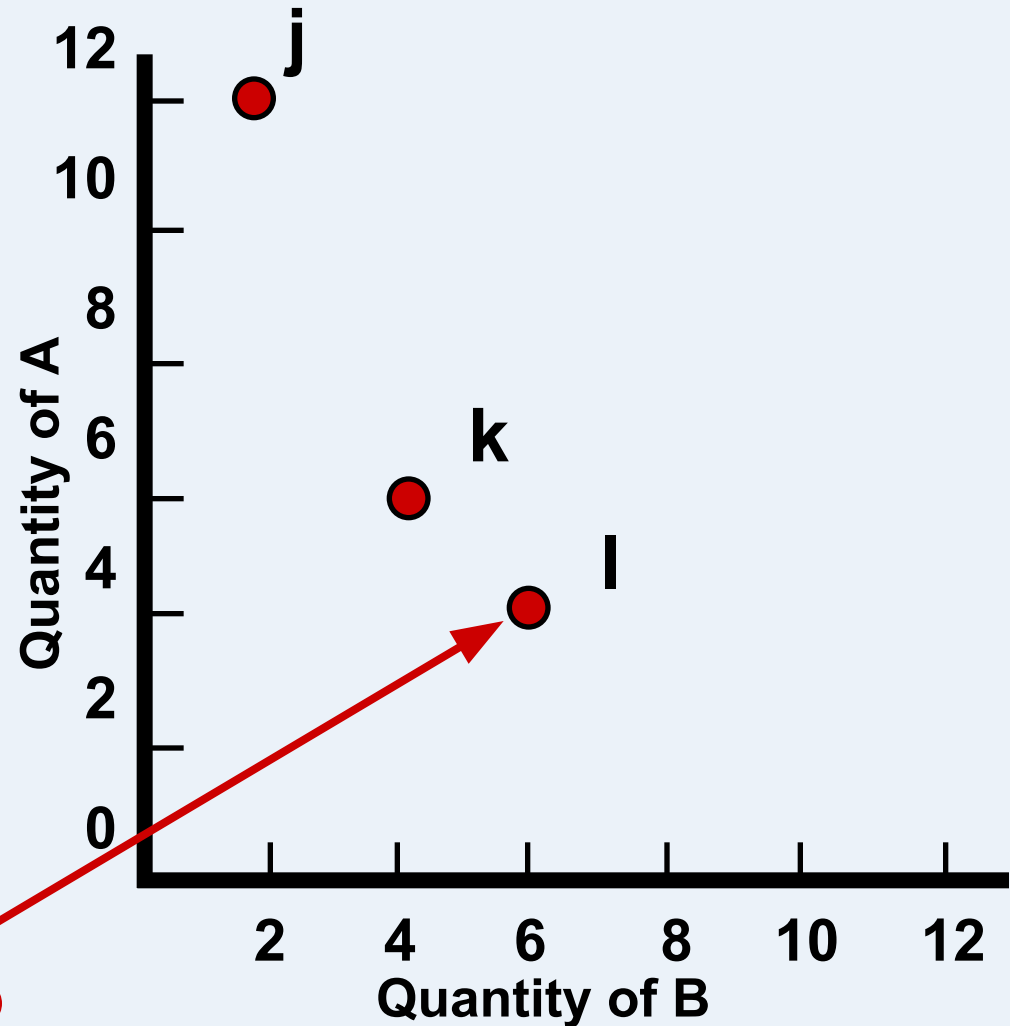
4	6	12
---	---	----

2	9	12
---	---	----

0	12	12
---	----	----

### **An Indifference Schedule**

Combi- nation	Units of A	Units of B
j	12	2
k	6	4
<b>l</b>	<b>4</b>	<b>6</b>





# INDIFFERENCE CURVES

## *What is Preferred*

Units of A Price \$1.50	Units of B Price \$1.00	Total Expenditures
-------------------------------	-------------------------------	-----------------------

8	0	\$12
---	---	------

6	3	12
---	---	----

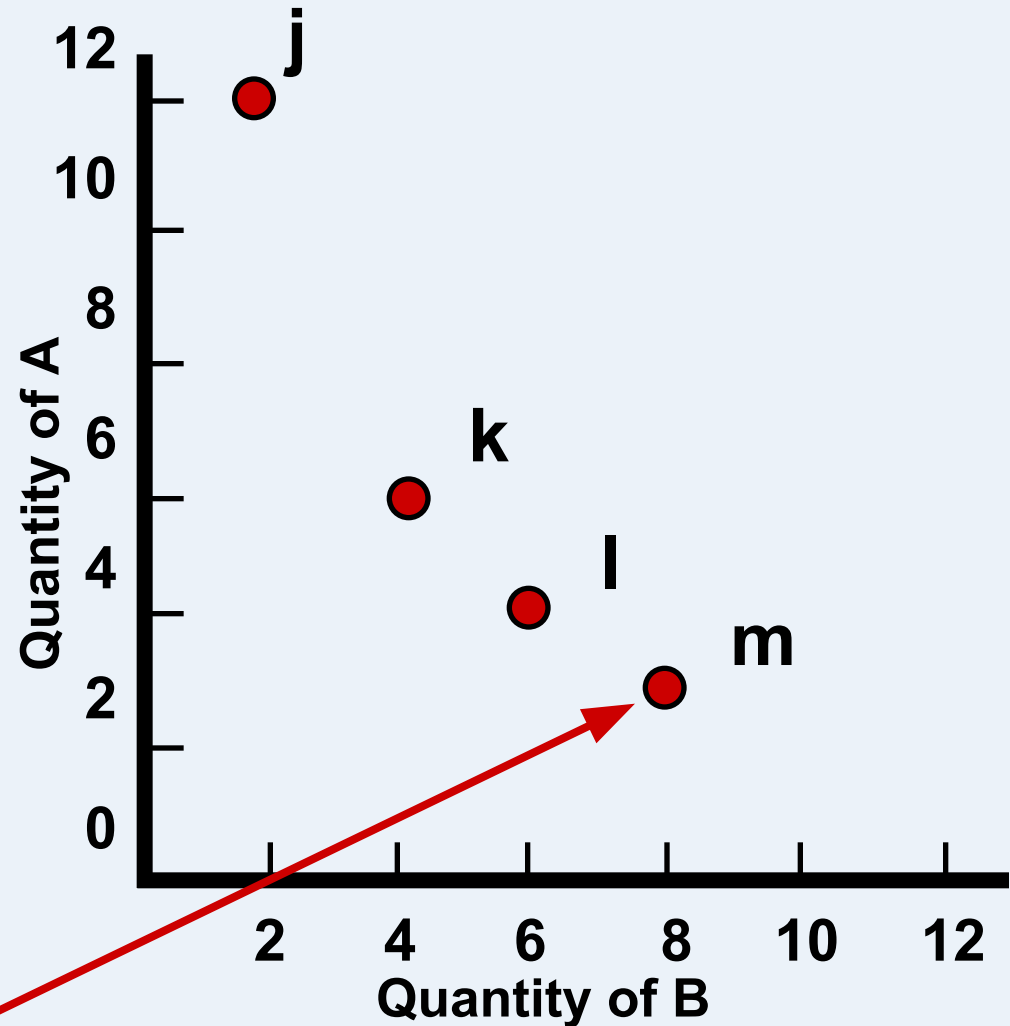
4	6	12
---	---	----

2	9	12
---	---	----

0	12	12
---	----	----

### **An Indifference Schedule**

Combi- nation	Units of A	Units of B
j	12	2
k	6	4
l	4	6
m	3	8



# INDIFFERENCE CURVES

## *What is Preferred*

Units of A Price \$1.50	Units of B Price \$1.00	Total Expenditures
-------------------------------	-------------------------------	-----------------------

8	0	\$12
---	---	------

6	3	12
---	---	----

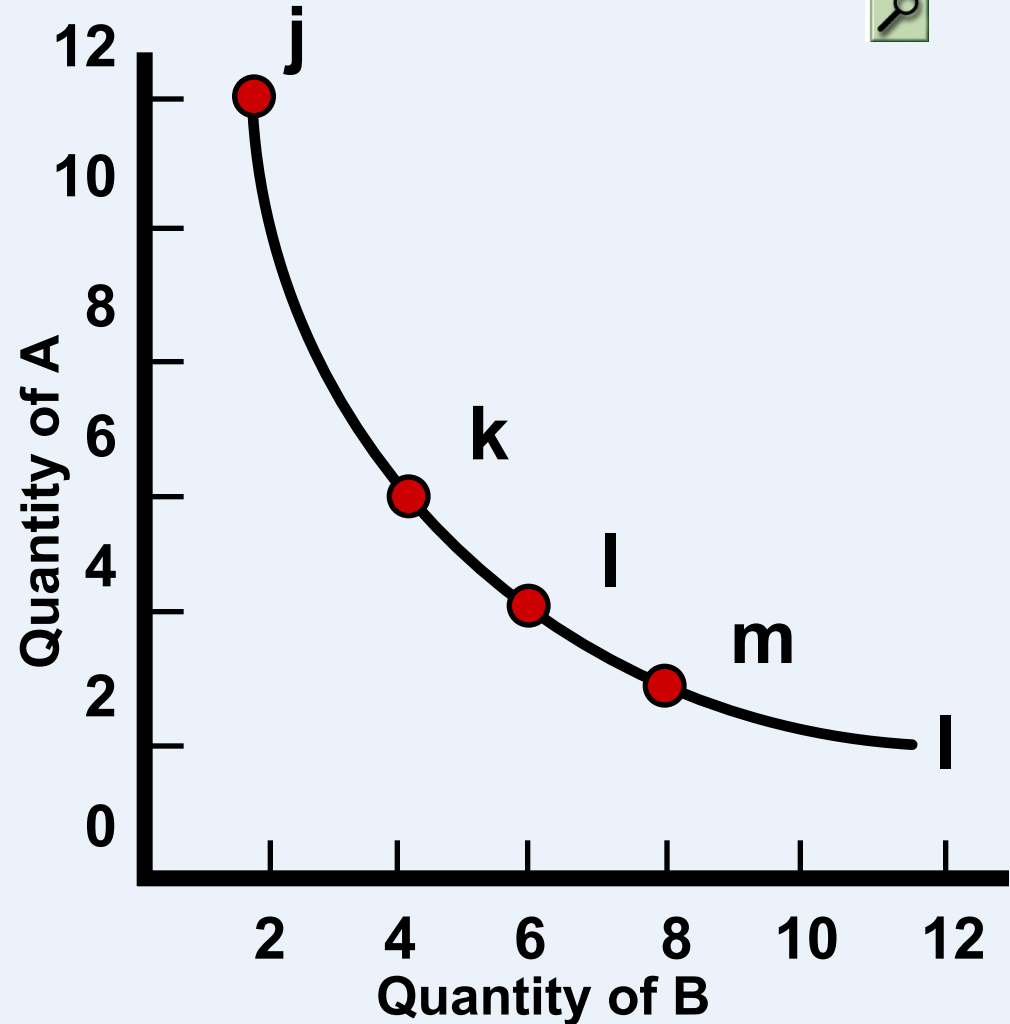
4	6	12
---	---	----

2	9	12
---	---	----

0	12	12
---	----	----

### **An Indifference Schedule**

Combi- nation	Units of A	Units of B
j	12	2
k	6	4
l	4	6
m	3	8



# INDIFFERENCE CURVES

## *What is Preferred*

Units of A Price \$1.50	Units of B Price \$1.00	Total Expenditures
-------------------------------	-------------------------------	-----------------------

8	0	\$12
---	---	------

6	3	12
---	---	----

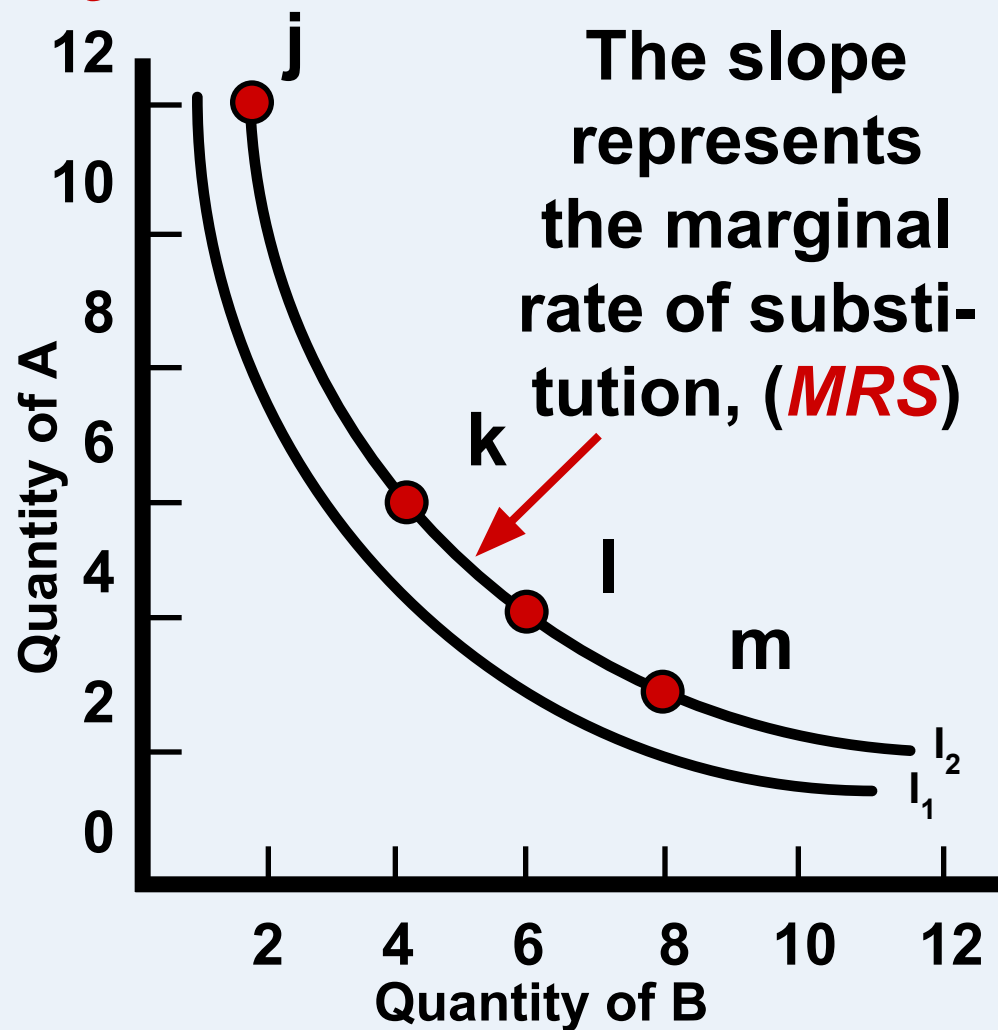
4	6	12
---	---	----

2	9	12
---	---	----

0	12	12
---	----	----

### **An Indifference Schedule**

Combi- nation	Units of A	Units of B
j	12	2
k	6	4
l	4	6
m	3	8



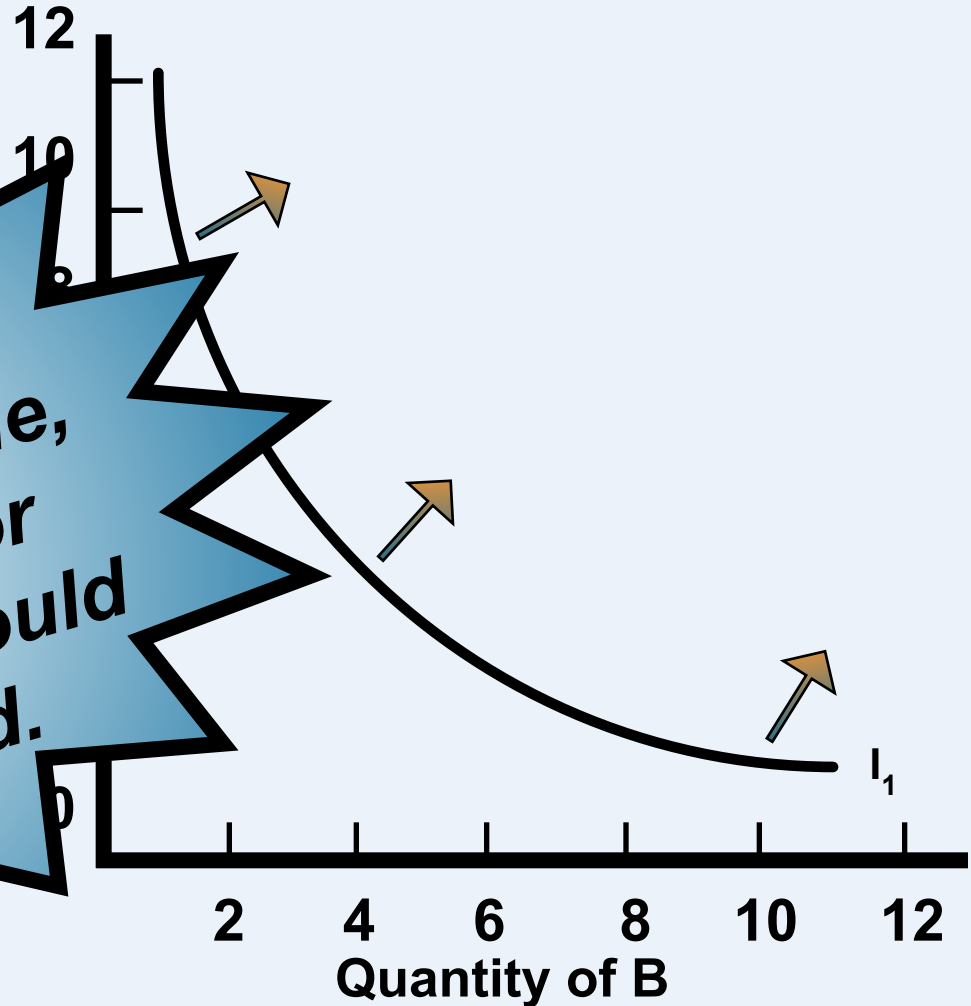
# INDIFFERENCE CURVES

## *What is Preferred*

Units of A Price	Units of B Price	Total
\$1.50	\$1.00	Expenditures

8	0	\$12
6	3	10
4	6	8
3	8	6

If the consumer had greater income, more of either or both products could be purchased.



# INDIFFERENCE CURVES

## *What is Preferred*

Units of A Price \$1.50	Units of B Price \$1.00	Total Expenditures
8	0	\$12
6	3	12
4	6	12
2	9	12

**A higher  
combination  
of choices will  
be preferred.**

Quantity of B

$I_4$   
 $I_3$   
 $I_2$   
 $I_1$

# INDIFFERENCE CURVES

## *What is Preferred*

Units of A Price \$1.50	Units of B Price \$1.00	Total Expenditures
8	0	\$12
6	3	12

12

10

8

*An  
Indifference  
Map*

A family of all  
such expressions of  
indifference can be  
developed for every  
level of income.

I<sub>4</sub>I<sub>3</sub>I<sub>2</sub>I<sub>1</sub>

2

4

6

8

10

12

Quantity of B

m

3

8

# The Slopes of Indifference Curves and Budget Lines

- Tangency Conditions
  - Utility maximization point on the budget line tangent to an indifference curve
  - Marginal rate of substitution = price ratio at that point



# EQUILIBRIUM AT TANGENCY

Units of A Price \$1.50	Units of B Price \$1.00	Total Expenditures
-------------------------------	-------------------------------	-----------------------

8	0	\$12
---	---	------

6	3	12
---	---	----

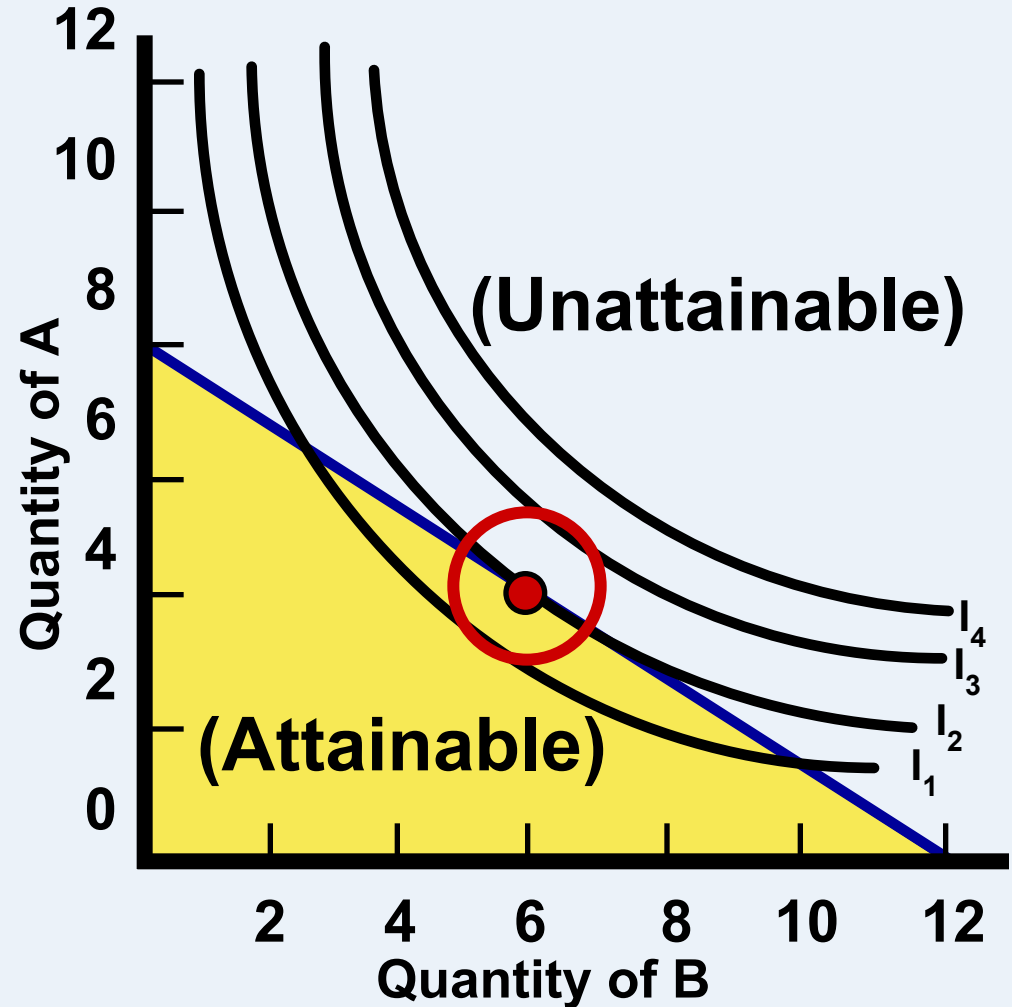
4	6	12
---	---	----

2	9	12
---	---	----

0	12	12
---	----	----

**An Indifference  
Schedule**

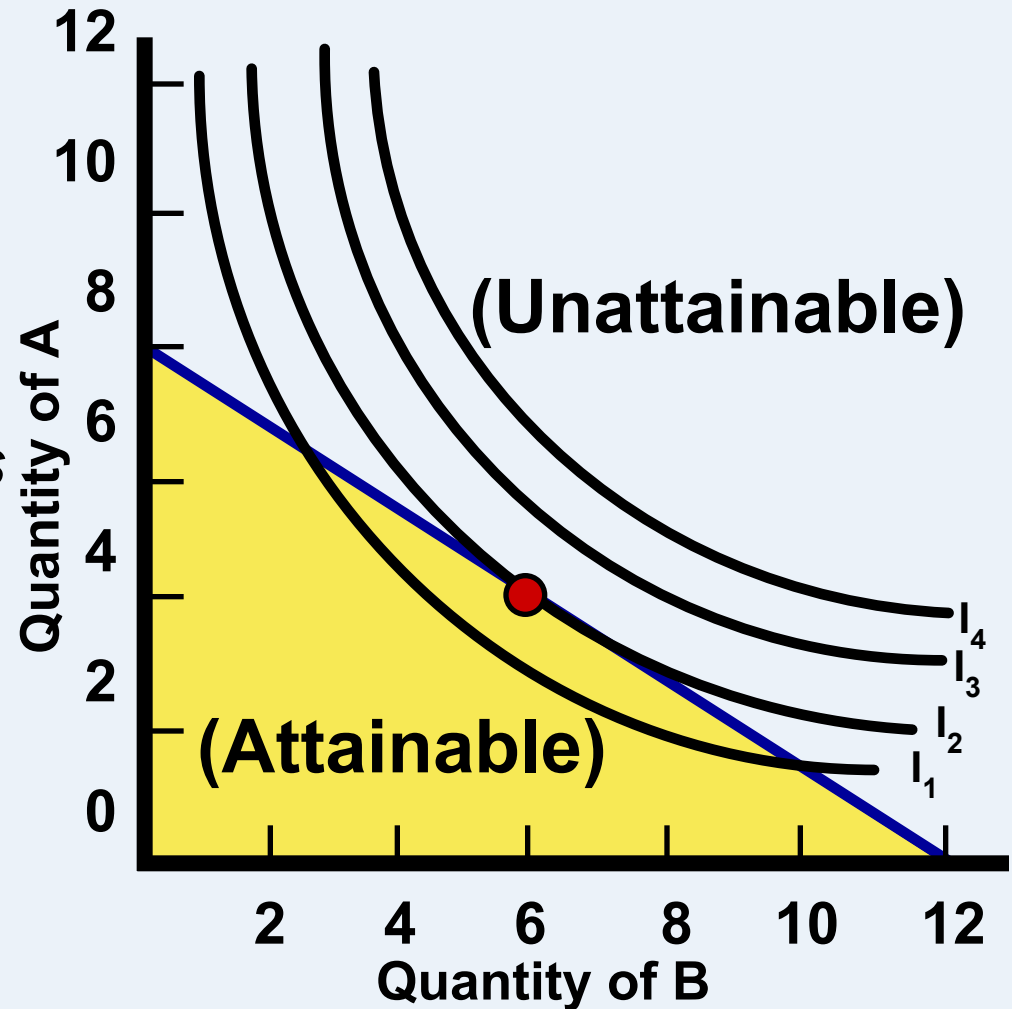
Combi- nation	Units of A	Units of B
j	12	2
k	6	4
l	4	6
m	3	8





# EQUILIBRIUM AT TANGENCY

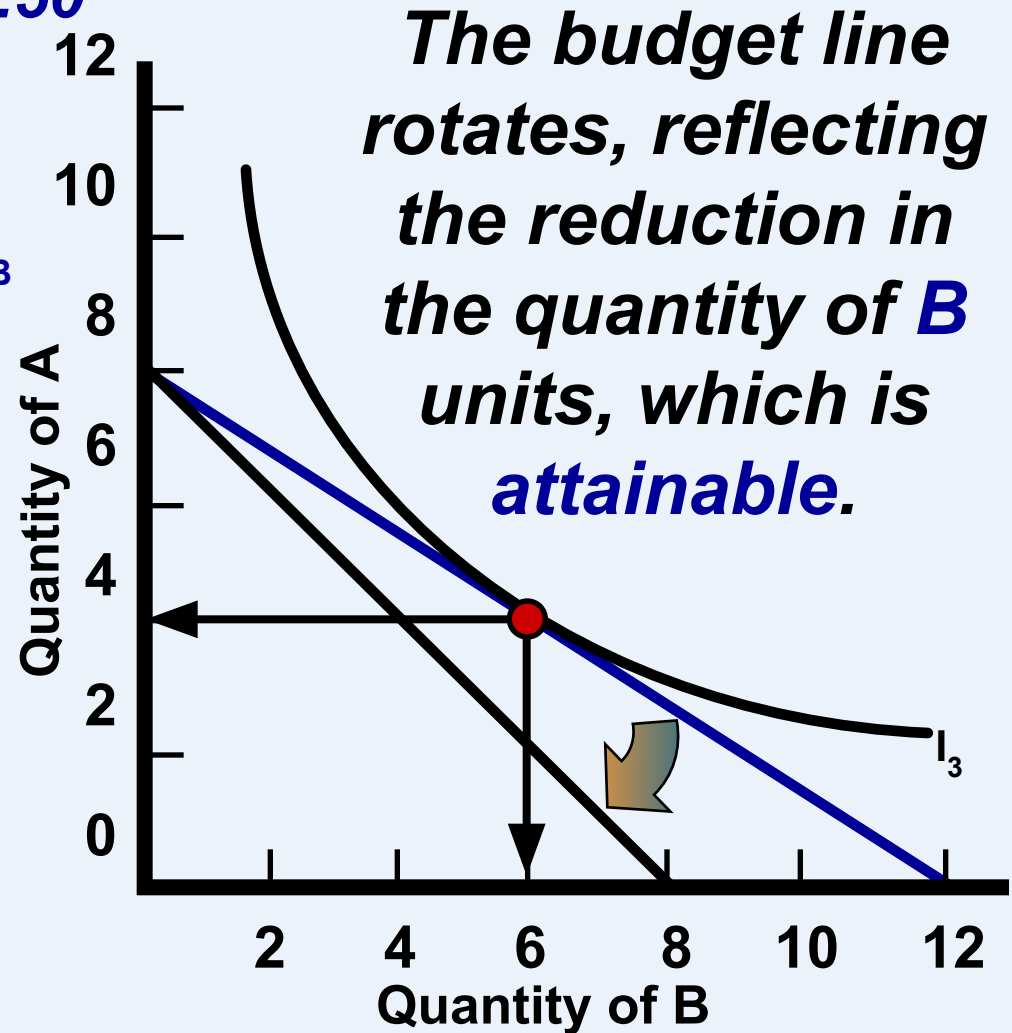
*Equilibrium occurs when the consumer selects the combination which reaches the highest attainable indifference curve.*



# EQUILIBRIUM AT TANGENCY

*What happens if the price of **B** increases to **\$1.50***

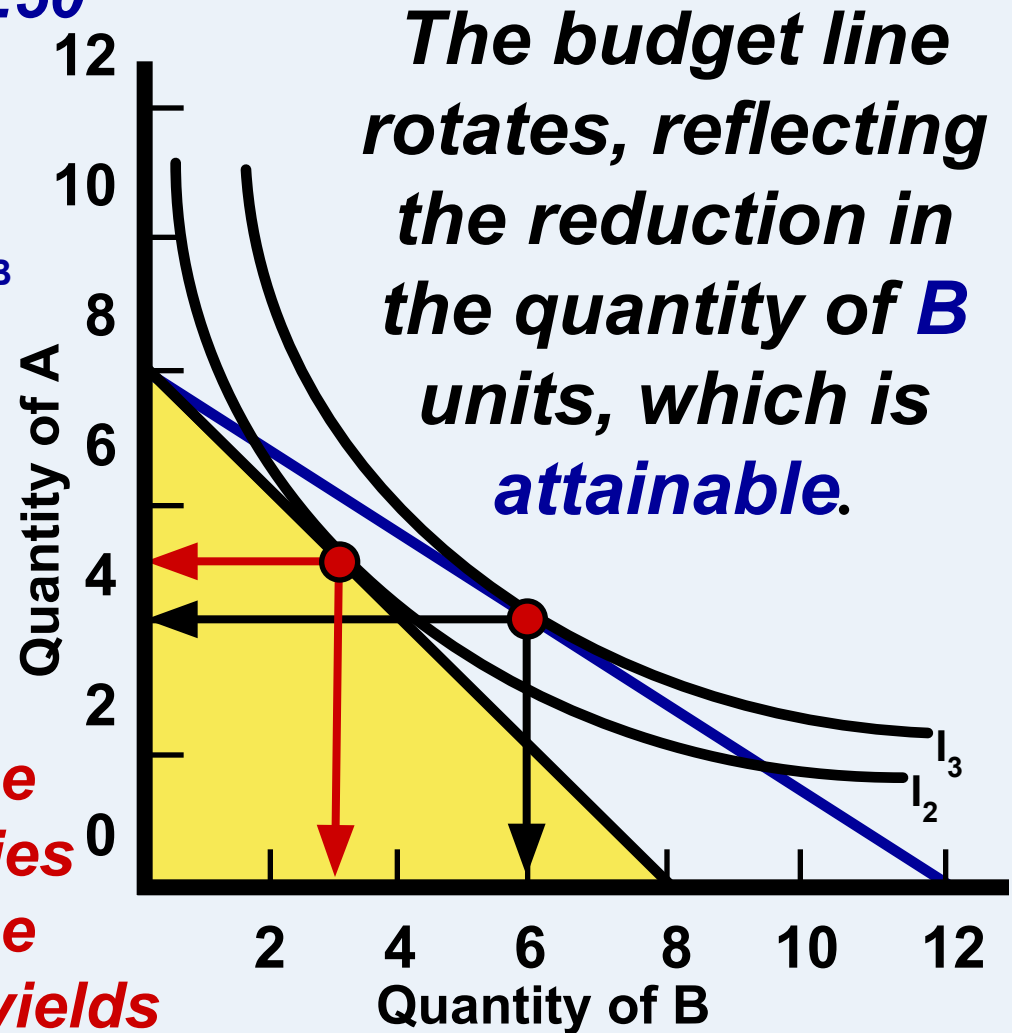
Price <sub>B</sub>	Quantity <sub>B</sub>
\$1.00	6



# EQUILIBRIUM AT TANGENCY

*What happens if the price of **B** increases to **\$1.50***

Price <sub>B</sub>	Quantity <sub>B</sub>
\$1.00	6
<b>1.50</b>	<b>3</b>

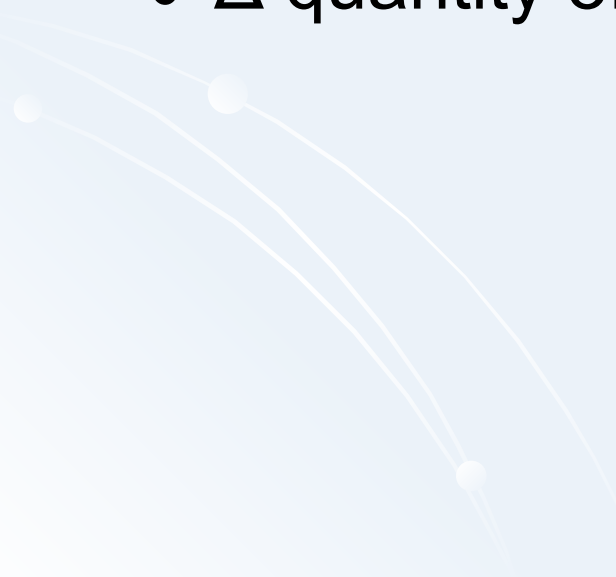


*By recording the various quantities demanded at the various prices yields the Demand schedule*

# The Slopes of Indifference Curves and Budget Lines

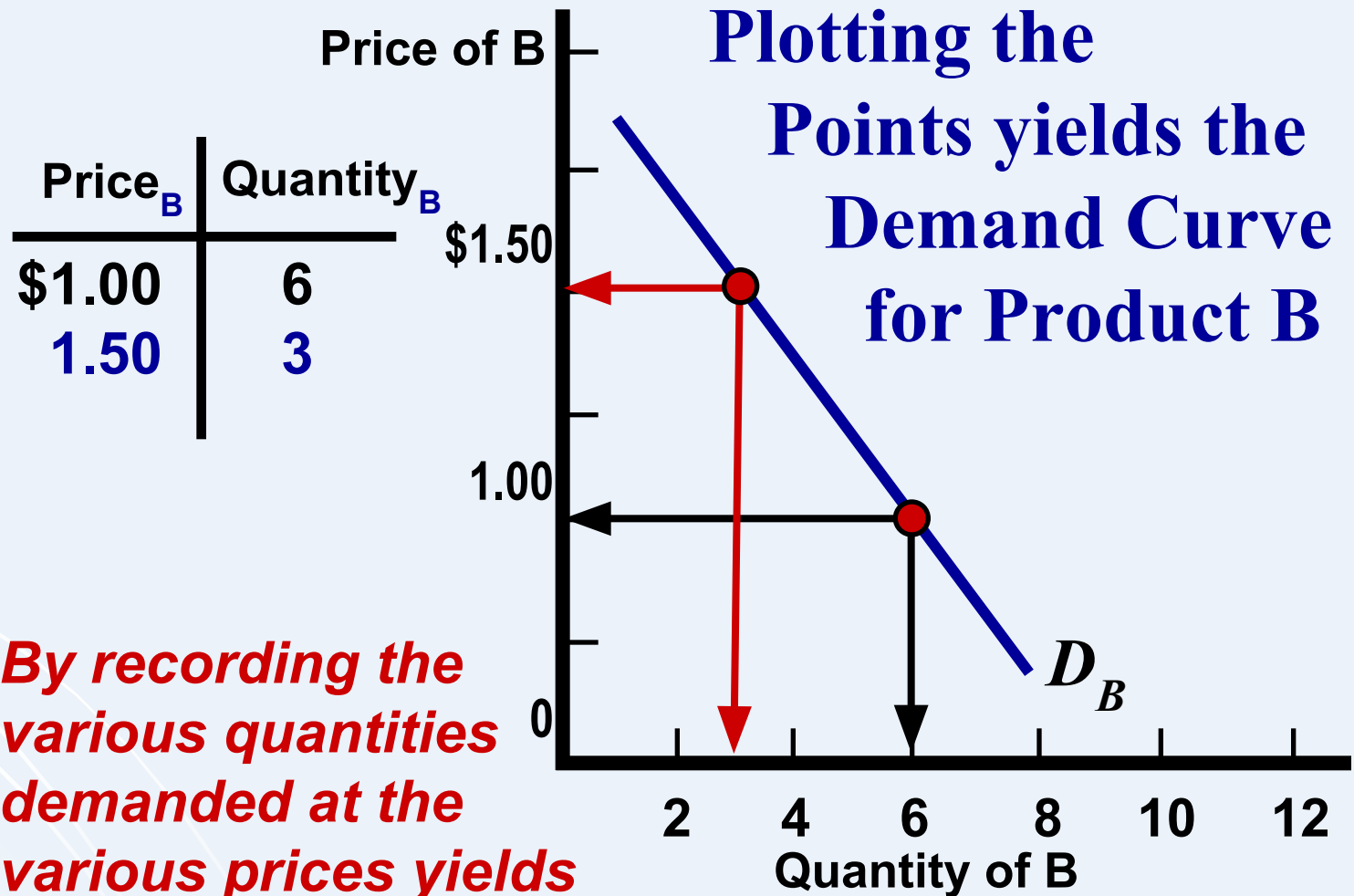
- Consequences of Income Changes:  
Inferior Goods
  - Inferior goods: indifference curves located such that  $\uparrow$  income  $\Rightarrow$ 
    - $\uparrow$  purchases of one good
    - $\downarrow$  purchases of the other

# The Slopes of Indifference Curves and Budget Lines

- Consequences of Price Changes: Deriving the Demand Curve
    - $\Delta$  slope of the budget line
    - $\uparrow$  quantity purchased of that good
    - $\Delta$  quantity of the other good
- 

# DERIVING THE DEMAND CURVE

*What happens if the price of **B** increases to **\$1.50***



*By recording the various quantities demanded at the various prices yields the Demand schedule*

# Key Terms

budget line

indifference curve

marginal rate of substitution  
(MRS)

indifference map

equilibrium position