

# Review For Midterm

Exam 1 covers from Chapter 1 up to and including Chapter 5.

# Review For Midterm

There are 8 multiple choice questions (5 pts each), 1 mandatory long answer question (30 pts), and 2 long answer questions (30 points each), of which you choose one.

# Chapter 1

- Economics
- Microeconomics
- Models
- Diminishing returns
- Variables, independent and dependent
- Functions
- intercepts

# Chapter 1

- linear function
- slope
- marginal effect

# Chapter 2

- Utility
- Ceteris paribus
- Assumptions of Preferences
- Indifference curves
- MRS
- Budget constraint
- $MRS = \frac{P_x}{P_y}$

# Chapter 3

- Demand function
- Normal good
- Inferior good
- Substitution effect
- Income effect
- Giffen Good

# Chapter 3

- Complements
- Substitutes
- Consumer Surplus
- Price elasticity of demand
- Cross price elasticity of demand
- Income elasticity of demand

# Chapter 4

- Probability
- Expected value
- Fair gamble
- Risk averse, loving, neutral



# Chapter 5

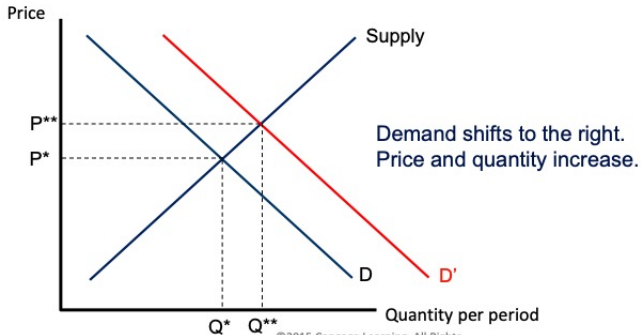
- Best response
- Nash equilibrium
- Normal form
- Extensive form
- Dominant strategy

# Chapter 5

- Games
- Information set
- Pure strategy
- Mixed strategy

# A Change in Demand

What happens if demand increases?

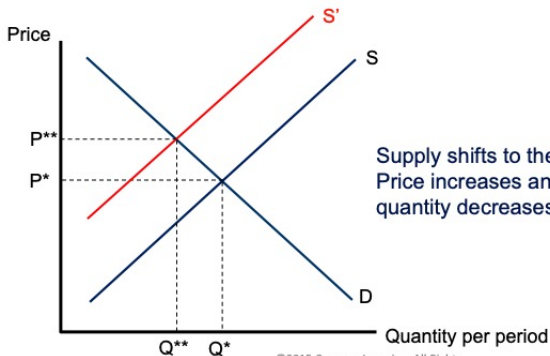


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Ch. 1 • 1

# A Change in Supply

What happens if supply decreases?

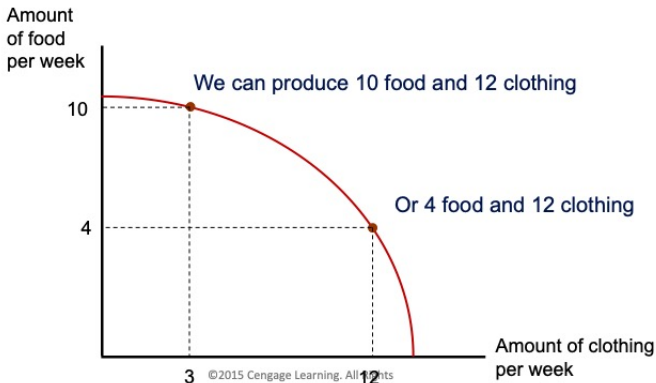


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Ch. 1 • 2

# The PPF

- A PPF shows the possible combination of two goods an economy can produce with a fixed amount of resources.

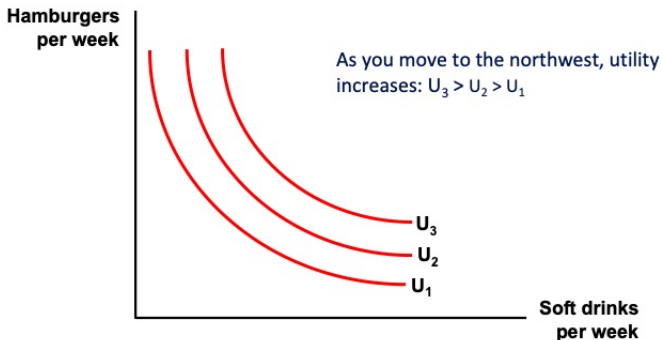


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Ch. 1 • 3

# Indifference Curve Maps

An **indifference curve map** shows the utility a person gets from all possible combinations of two goods.

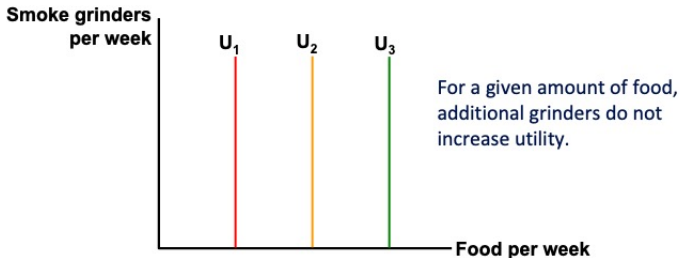


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Ch. 2 • 4

## Four Particular Preferences

- A **useless** good.
  - More of a useless good neither increases nor decreases utility.



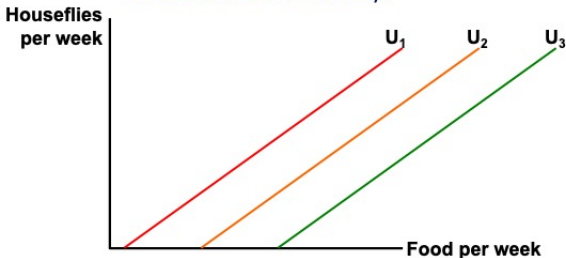
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## Four Particular Preferences

- An **economic bad**.
  - More of an **economic bad** decreases your utility.

Holding the amount of food constant, additional flies reduces utility.



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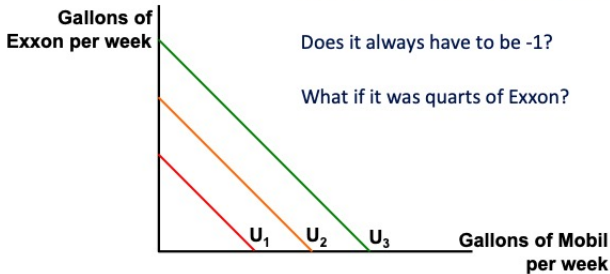
Ch. 2 • 6



# Four Particular Preferences

- **Perfect Substitutes**

- Two goods are perfect substitutes if the MRS is constant.



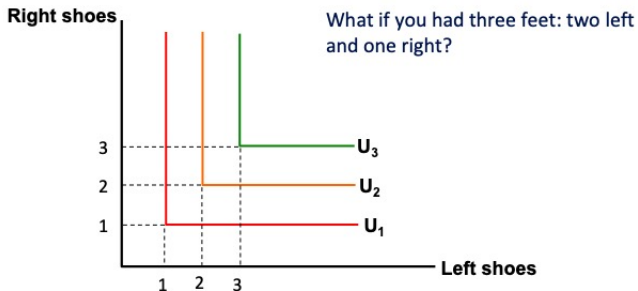
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# Four Particular Preferences

- **Perfect Complements:**

- Goods are perfect complements if they are consumed together in fixed proportions.

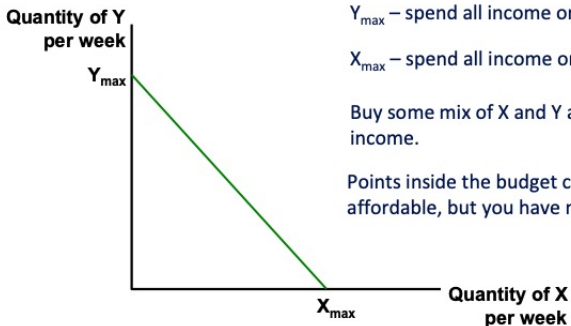


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Ch. 2 • 8

# Utility Maximization: A Graphical View

- Start by showing the **budget constraint**: this shows the limit that income places on the combinations of goods that can be bought.



$Y_{\max}$  – spend all income on good Y

$X_{\max}$  – spend all income on good X

Buy some mix of X and Y and spend all income.

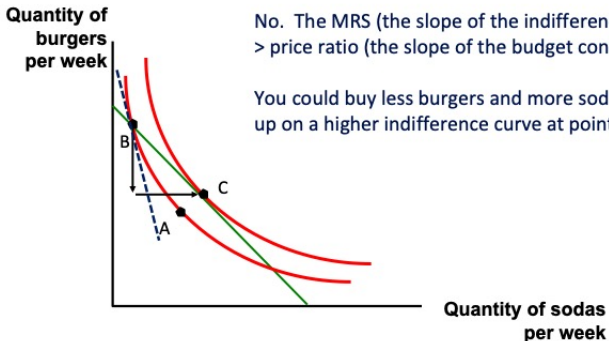
Points inside the budget constraint are affordable, but you have money left over.

# Utility Maximization: A Graphical View

Are you maximizing utility at point B?

No. The MRS (the slope of the indifference curve)  $>$  price ratio (the slope of the budget constraint)

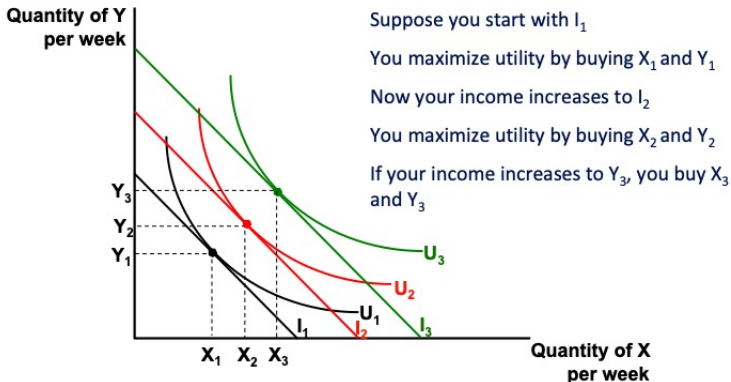
You could buy less burgers and more sodas and end up on a higher indifference curve at point C.



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# Changes in Income: A Normal Good



Suppose you start with  $I_1$

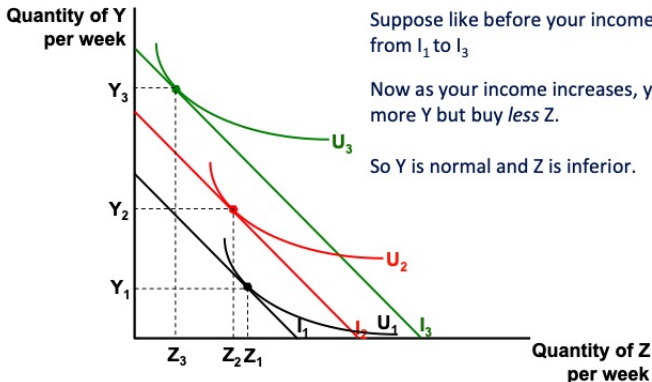
You maximize utility by buying  $X_1$  and  $Y_1$

Now your income increases to  $I_2$

You maximize utility by buying  $X_2$  and  $Y_2$

If your income increases to  $I_3$ , you buy  $X_3$  and  $Y_3$

# Changes in Income: An Inferior Good

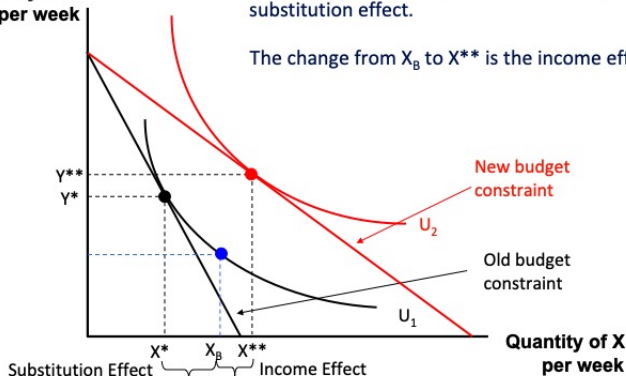


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Ch. 3 • 12

# Change in a Good's Price

Quantity of Y  
per week

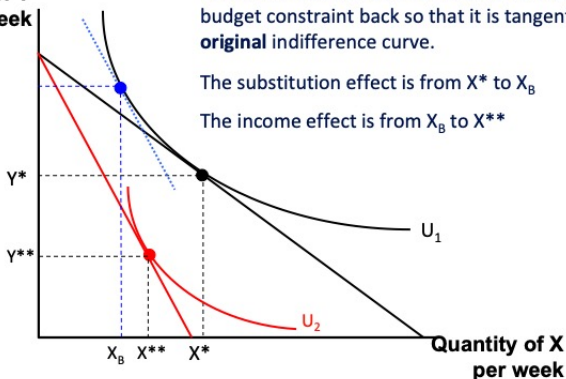


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## Substitution and Income Effects for Inferior Goods

Quantity of Y  
per week

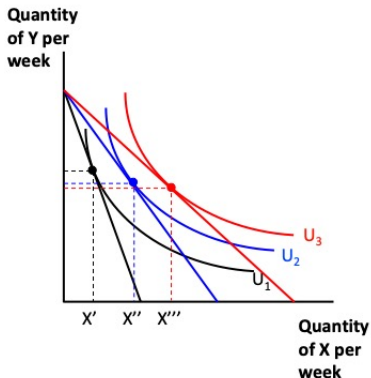


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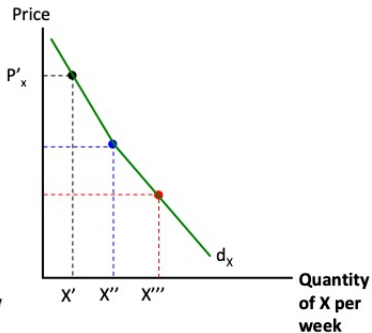
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# Deriving an Individual's Demand Curve



So as price falls, quantity demanded rises.

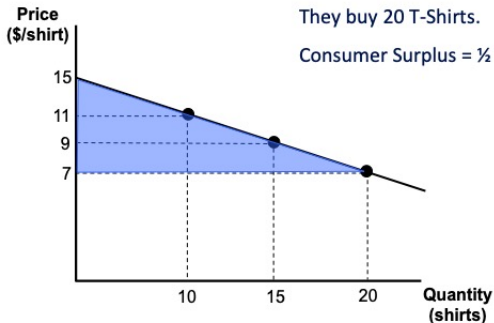


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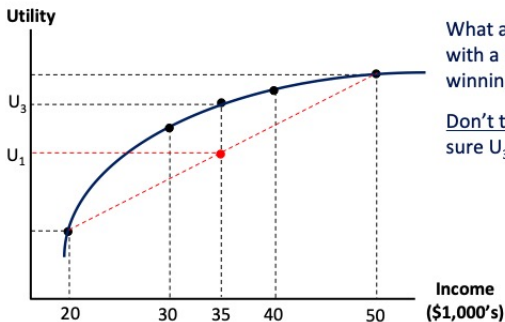
## Consumer Surplus and the Demand Curve

- If  $P = \$7$ , how many T-shirts will the consumer buy? Show their consumer surplus. How much consumer surplus do they obtain?



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# Diminishing Marginal Utility of Income



What about a fair gamble with a 50:50 chance of winning or losing \$15,000

Don't take gamble: can get a sure  $U_3$  or an expected  $U_1$

# Illustrating Games: Normal Form

**Player B**

		<b>Player B</b>	
		<i>Confess</i>	<i>Silent</i>
<b>Player A</b>	<i>Confess</i>	-3, -3	-1, -10
	<i>Silent</i>	-10, -1	-2, -2

# Illustrating Games: Extensive Form

