Review for Exam Example

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Preamble

Facts about the 1st exam

- On Exam day
- # Multiple Choice Questions
- Length
- Coverage

Items Needed

- Scantron
- Calculator
- Pencil

Hi, This is an example review. There is a table of contents for all major sections and parts. It is based on the textbook: Hubbard, Glenn and Anthony O'Brien, "Essentials of Economics", Texas Tech University custom eBook edition, Pearson Higher Education. All graphs are taken from the textbook.

How should you use this document?

- To reference during studying to check for complete coverage.
- To create flashcards.
- To memorize.
- To create your own version with your wording.
- To supplement your notes.
- To quiz yourself.

Tips for taking the exam

- Read each item carefully.
- Draw a picture of demand and supply.
- Do each step one at a time and/or eliminate options one by one.
- Skip unknown questions and come back to them later.
- Underline, circle, or arrow, decreases and increases.
- Think about what you would do in the situation.
- Read each item VERY carefully.

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Economics is the study of choices.

Foundation

Definitions:

1. The study of economics is the study of choices.
2. Choices arise because of scarcity.
3. Scarcity is a situation in which unlimited wants exceed limited resources.
4. Macroeconomics is about the entire economies decisions.
5. Microeconomics is about individuals making decisions.
6. Positive statements are statements with provable facts.
7. Normative statements are statements about how things ought to be or should be, without provable facts.
8. A market is: a group of buyers and sellers of goods and services and the mechanism by which they come together to trade.
9. An economy is a group of markets that answer THE fundamental economic problem.

The Three Economic Principles

1. People are rational
2. People respond to incentives
3. Optimal decisions are made at the margin

The fundamental economic problem

1. What stuff is produced?
2. How is stuff produced?
3. To whom is the stuff given?

Types of Economies

1. Market Economy → Market decides what, how, and to whom.
2. Centrally planned Economy → government decides what, how, and to whom.
3. Mixed Economy → Both decides what, how, and to whom.

Marginal Analysis

Definitions:

1. Opportunity Cost is the cost of the best alternative option.
2. Sunk Cost: A cost already occurred.
3. Marginal benefit: the additional benefit gained from receiving one more unit.
4. Marginal revenue: a specific type of marginal benefit
5. Marginal cost: the additional cost of one more unit.

Where is the optimal decisions?

- When Marginal Cost equals the Marginal benefit.
- MC = MB
- When the additional cost and the additional benefit gained from the next piece are equal.

Formulas:

Marginal revenue(MR)	=	New Revenue – Old Revenue
Marginal cost(MR)	=	Cost per item
	=	New Total Cost – Old Total Cost

Advantage

Definitions:

1. Comparative Advantage is producing at a lower opportunity cost.
2. Absolute Advantage is producing more with the same amount of resources.
3. Absolute advantage answers the question of who can make more of good X. Comparative advantage answers the question of who can make more of Good X per Good Y.

Generic Example

	Person A	Person B
Good X	c	d
Good Y	e	f

Where c,d,e,f are numbers

If $c > d$ Person A has AA in Good X

If $c < d$ Person B has AA in Good X

If $e > f$ Person A has AA in Good Y

If $e < f$ Person A has AA in Good Y

If $\frac{c}{e} > \frac{d}{f}$ Person A has CA in Good X

If $\frac{c}{e} < \frac{d}{f}$ Person B has CA in Good X

If $\frac{e}{c} > \frac{f}{d}$ Person A has CA in Good Y

If $\frac{e}{c} < \frac{f}{d}$ Person B has CA in Good Y

Demand

Definitions:

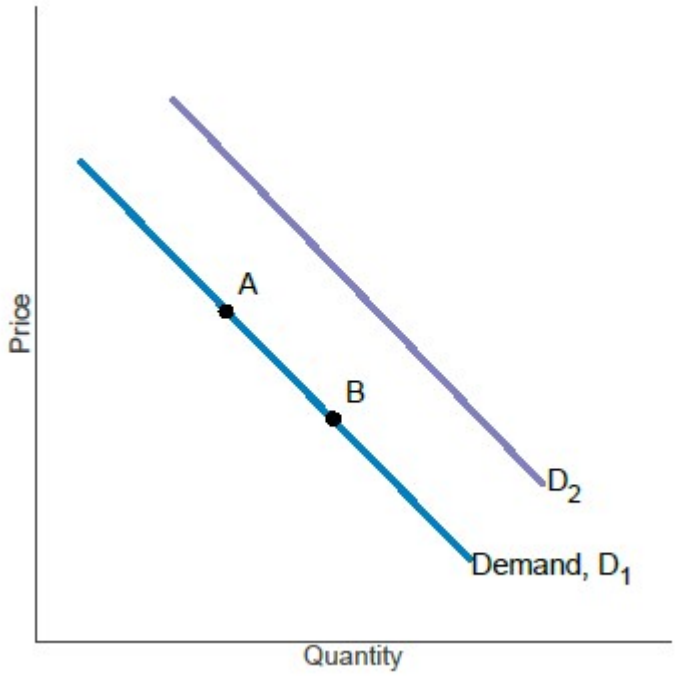
1. Law of Demand: Quantity and Price are inversely related. As prices increase (or decrease), quantity decreases (or increases). Negative Slope
2. Substitutes: Competitive related goods. When the price increases of good X, the demand of good Y increases.
3. Compliments: Non-competitive Related goods. When the price increases of good X, the demand of good Y decrease.
4. Normal Goods: When income increases, demand increases.
5. Inferior Goods: When income increases, demand decreases.
6. Δ Quantity demanded: movement along the **SAME** demand curve
7. Δ Demand: a shift in the demand curve

Demand Shifters

1. Income
2. Related Goods in consumption
3. Taste and preferences
4. Demographics and population
5. Future Prices

Examples

- ✏ Substitutes: Mittens and Gloves
- ✏ Substitutes: Chicken and Turkey
- ✏ Complements: Biscuits and Gravy
- ✏ Complements: Bread and Butter
- ✏ Tastes: Flavored water is going viral. (↑)
- ✏ Demographics: # College students increase during fall and spring.



Demand Increase	= $D_1 \rightarrow D_2$
Quantity Demanded Increase	= $A \rightarrow B$
Income ↑	= $D_1 \rightarrow D_2$
Price of Substitutes ↑	= $D_1 \rightarrow D_2$
Price of Complements ↓	= $D_1 \rightarrow D_2$
Population ↑	= $D_1 \rightarrow D_2$
Future Price ↑	= $D_1 \rightarrow D_2$
Taste ↑	= $D_1 \rightarrow D_2$
Price ↓	= $A \rightarrow B$
Demand Decrease	= $D_2 \rightarrow D_1$
Quantity Demanded Decrease	= $B \rightarrow A$
Income ↓	= $D_2 \rightarrow D_1$
Price of Substitutes ↓	= $D_2 \rightarrow D_1$
Price of Complements ↑	= $D_2 \rightarrow D_1$
Population ↓	= $D_2 \rightarrow D_1$
Future Price ↓	= $D_2 \rightarrow D_1$
Taste ↓	= $D_2 \rightarrow D_1$
Price ↑	= $B \rightarrow A$

Supply

Definitions:

1. Law of Supply: Quantity and Price are positively related. As prices increase (or decrease), quantity increases (or decreases). Positive Slope
2. Δ Quantity supplied: movement along the **SAME** supply curve
3. Δ Supply: a shift in the supply curve
4. Substitutes: Competitive related goods. The production of good X and good Y require only one be produced. When the price increases of good X, the supply of good Y decreases. And when the price of good X decreases, the supply of good Y increases.
5. Compliments: Non-competitive Related goods. The production of good X and good Y are done in tandem. When the price increases of good X, the supply of good Y increases. And when the price of good X decreases, the supply of good Y decreases.

Supply Shifters

1. Price of Inputs
2. Δ Technology
3. Price of related goods in production
4. # Firms in the market
5. Future Prices

Examples

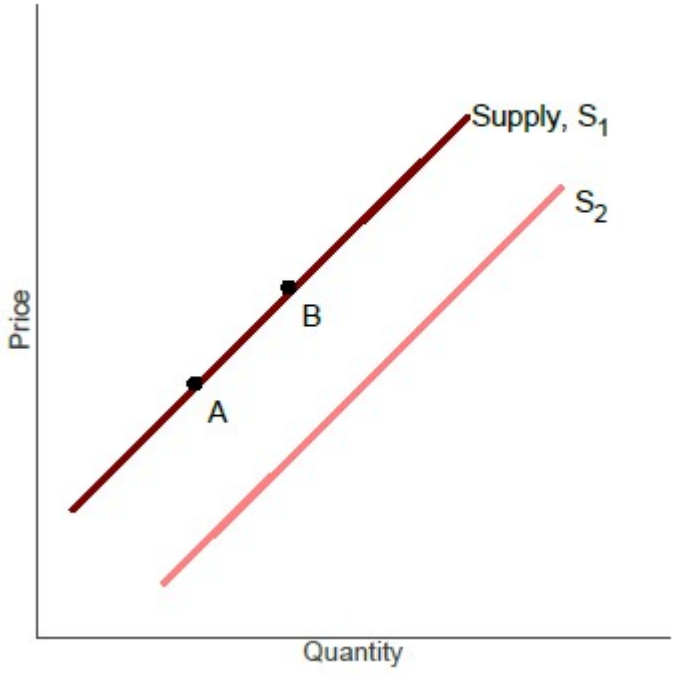
- Inputs: Oranges in Orange Juice
- Inputs: Labor in anything
- Δ Technology: New steel type for cars
- Δ Technology: AI in anything
- # Firms: Mickey mouse copyright ended, more firms in supply of themed items

Examples of substitutes in production are:

- Goats and Sheep
- Action games and adventure games
- Cows and Pigs
- Apples and oranges
- Left Twix and Right Twix

Examples of complements in production are:

- Orange Juice and Orange Peel
- Beef and Cow Hide
- Oil and natural gas
- lumber and sawdust
- Sugar and molasses



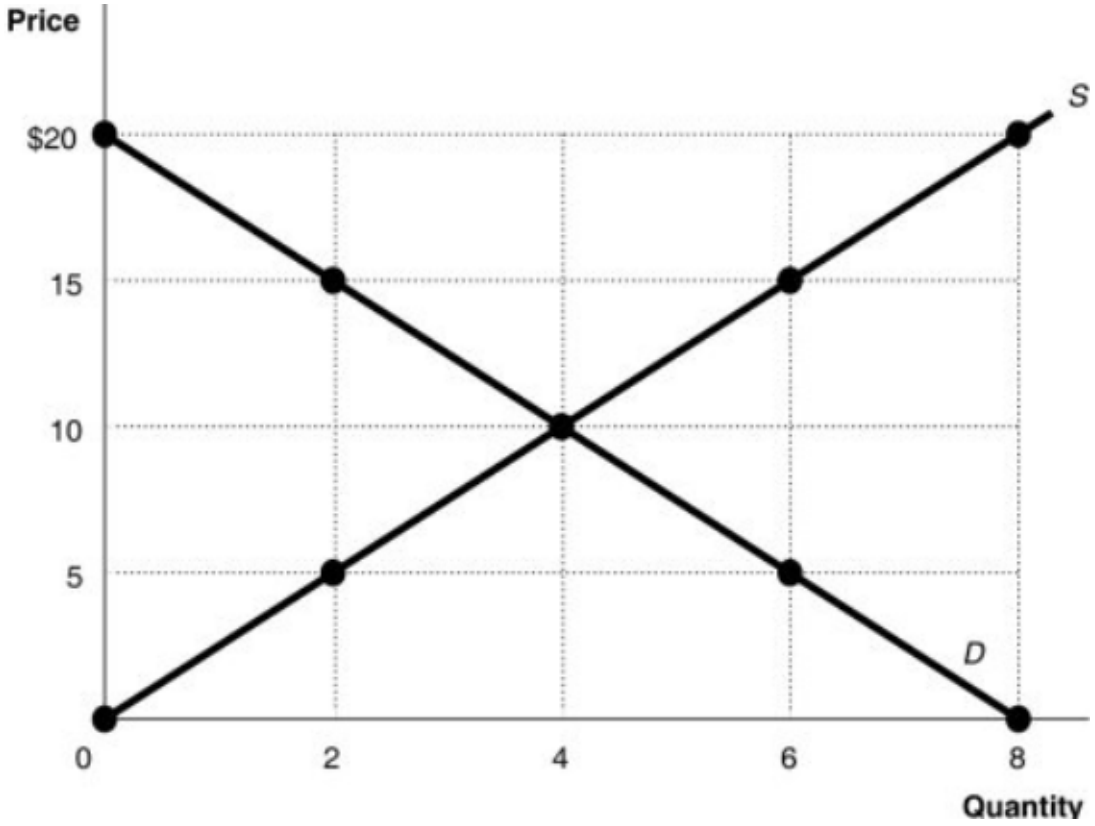
Supply Increase	= $S_1 \rightarrow S_2$
Quantity Supplied Increase	= $A \rightarrow B$
# Firms in the market ↑	= $S_1 \rightarrow S_2$
Price of Inputs ↓	= $S_1 \rightarrow S_2$
Δ Technology ↑	= $S_1 \rightarrow S_2$
Price of substitute production ↓	= $S_1 \rightarrow S_2$
Price of complement production ↑	= $S_1 \rightarrow S_2$
Future Prices ↓	= $S_1 \rightarrow S_2$
Price ↑	= $A \rightarrow B$
Supply Decrease	= $S_2 \rightarrow S_1$
Quantity Supplied Decrease	= $B \rightarrow A$
# Firms in the market ↓	= $S_2 \rightarrow S_1$
Price of Inputs ↑	= $S_2 \rightarrow S_1$
Δ Technology ↓	= $S_2 \rightarrow S_1$
Price of substitute production ↑	= $S_2 \rightarrow S_1$
Price of complement production ↓	= $S_2 \rightarrow S_1$
Future Prices ↑	= $S_2 \rightarrow S_1$
Price ↓	= $B \rightarrow A$

Equilibrium

Definitions:

1. Equilibrium: where demand equals supply *also* where marginal benefit equals marginal cost *also* where quantity supplied equals quantity demanded *also* where there is no shortage or surplus in the market
2. Surplus is when there is more quantity supplied then quantity demanded, because the price is set above the equilibrium
3. Shortage is when there is more quantity demanded then quantity supplied because the price is set below the equilibrium

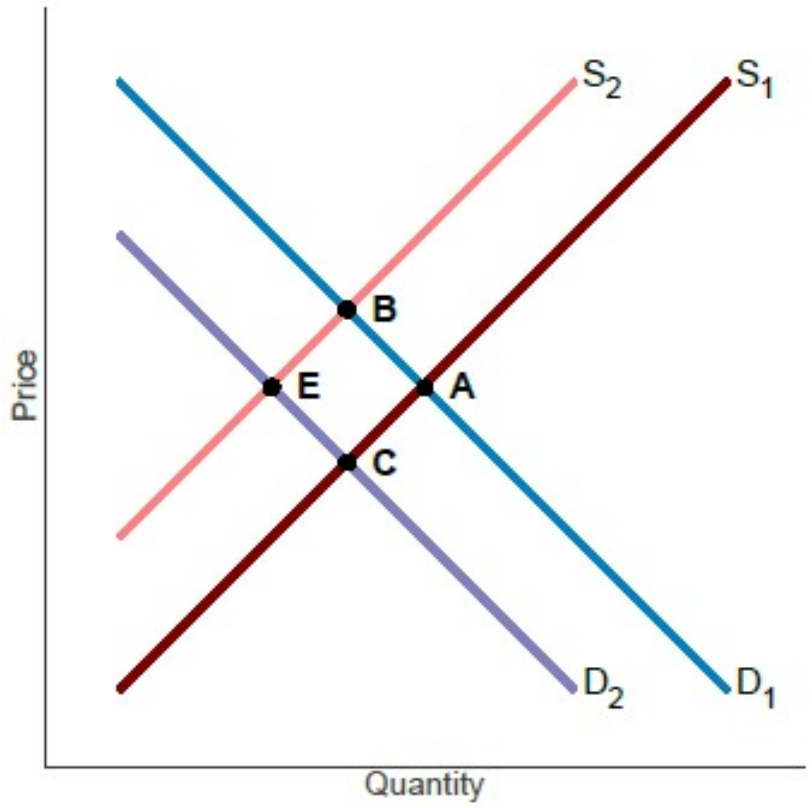
Surplus and Shortage Example



	Price	Q Demanded	Q Supplied
Equilibrium	10	4	4
Surplus	> 10	Q_D < 4	Q_S > 4
Shortage	< 10	Q_D > 4	Q_S < 4

Price	Q_D	Q_S	Q of Surplus or Shortage
15	2	6	4
5	6	2	4
20	0	8	8
0	8	0	8

Demand and Supply



$A \rightarrow B$	Supply Decrease	$Q^* \downarrow$ $P^* \uparrow$
$A \rightarrow C$	Demand Decrease	$Q^* \downarrow$ $P^* \downarrow$
$A \rightarrow E$	Demand Decrease, Supply Decrease	$Q^* \downarrow$ P^* ?
$B \rightarrow A$	Supply Increase	$Q^* \uparrow$ $P^* \downarrow$
$B \rightarrow C$	Demand Decrease, Supply Increase	Q^* ? $P^* \downarrow$
$B \rightarrow E$	Demand Decrease	$Q^* \downarrow$ $P^* \downarrow$
$C \rightarrow A$	Demand Increase	$Q^* \uparrow$ $P^* \uparrow$
$C \rightarrow B$	Demand Increase, Supply Decrease	Q^* ? $P^* \uparrow$
$C \rightarrow E$	Demand Decrease	$Q^* \downarrow$ $P^* \uparrow$
$E \rightarrow B$	Demand Increase	$Q^* \uparrow$ $P^* \uparrow$
$E \rightarrow A$	Demand Increase, Supply Increase	$Q^* \uparrow$ P^* ?
$E \rightarrow C$	Supply Decrease	$Q^* \downarrow$ $P^* \downarrow$

	Supply ↑		Supply ▬		Supply ↓	
Demand ↑	P ?	$Q \uparrow$	$P \uparrow$	$Q \uparrow$	$P \uparrow$	Q ?
Demand ▬	$P \downarrow$	$Q \uparrow$		▬	$P \uparrow$	$Q \downarrow$
Demand ↓	$P \downarrow$	Q ?	$P \downarrow$	$Q \uparrow$	P ?	$Q \downarrow$