

# Introduction to Macroeconomics

ECO1102 Section E, Winter 2013  
(Lecture #1, January 8)

# Today's Lecture...

- Introduce myself
- Learn a bit about you—What is the background of this class?
- Review the course outline
  - Note my e-mail address: Snadea2@Uottawa.ca.
- What I expect from you
  - What annoys me most?  
Answering e-mails from students who clearly have missed many classes (e.g., questions about exam dates and chapters covered that I have already answered a number of times in class).
- What you should expect from me
- Review some micro-economics concepts
  - APLIA—Assignment due by 23:00, Sunday, Jan. 13
- Start Chapter 5: Measuring a Nation's Income

# Microeconomics vs Macroeconomics

- *Microeconomics* looks at how households and firms make decisions and how they interact in specific markets
- *Types of questions microeconomics aims to answer:*
  - What is the effect of minimum wages on unemployment?
  - What is the effect of rent controls on the housing market?
  - Why is beer cheaper in Gatineau than in Ottawa?

# Microeconomics vs Macroeconomics (cont.)

- *Macroeconomics* looks at the economy as a whole.
  - Economy-wide phenomena, including inflation, unemployment, and economic growth
- *Types of questions macroeconomics aims to answer:*
  - What can the government of the poorest countries do to promote more rapid economic growth?
  - What can the government do to reduce unemployment?
  - What are the costs (and benefits) of government deficits?
  - What is the relationship between interest rates and the stock market?
  - What is inflation and why is it so high in some countries?

# A Refresher on Supply and Demand (Chapter 4 in MKMR)

## Key objectives:

- Review what determines the
  - demand for a good in a competitive market
  - supply of a good in a competitive market
- See how demand and supply together set the price of a good and the quantity sold

# Markets and Competition

- A *market* is a group of buyers and sellers of a particular good or service.

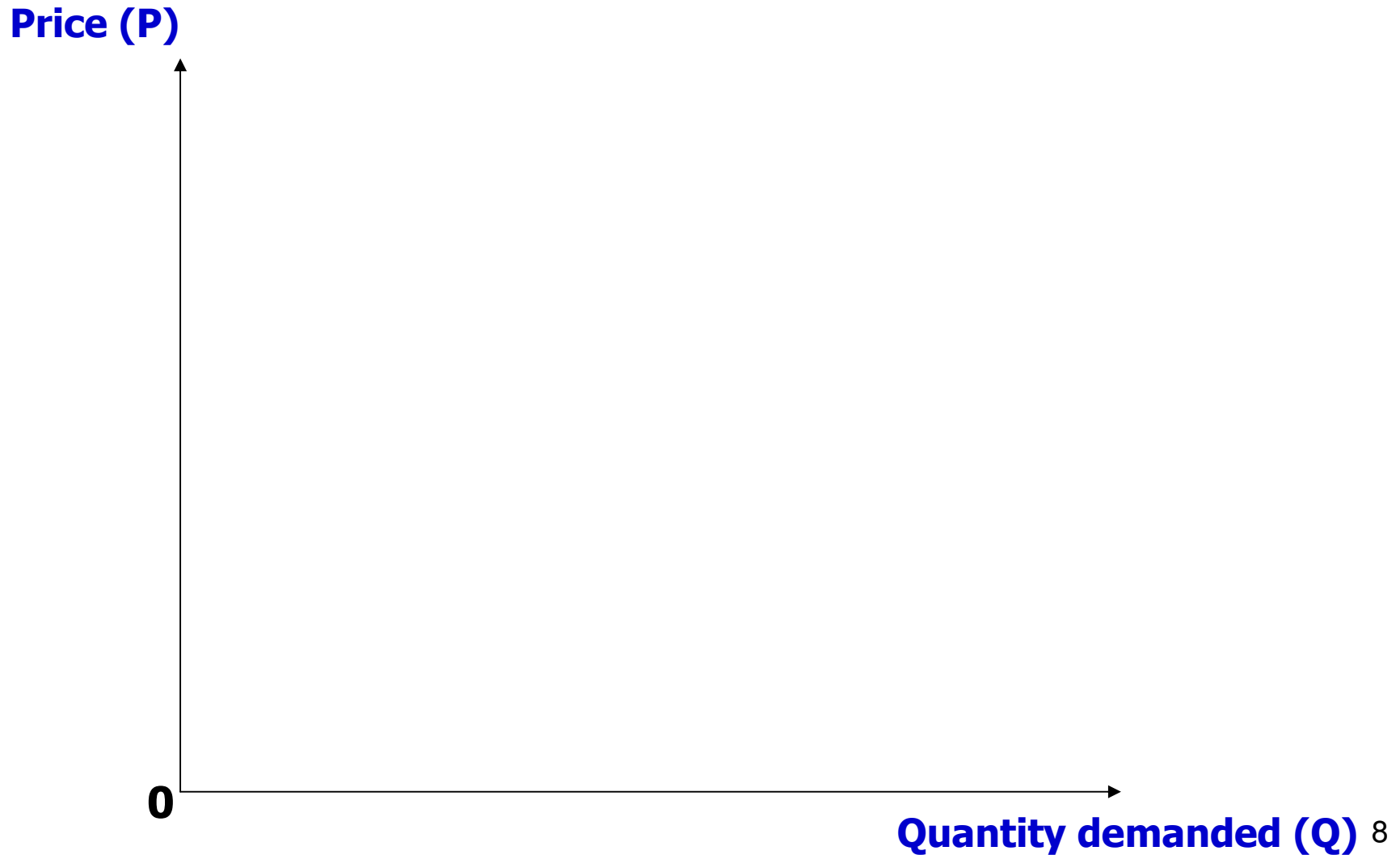


# The Demand Curve

## Definitions:

- The **demand curve** expresses the relationship between **price** and **quantity demanded**
- The **quantity demanded** of any good is the amount of the goods that buyers are willing to purchase at a given price.

# Relationship Between Quantity Demanded and Price



# Shifts in the Demand Curve

- Any change that alters the quantity demanded at every price will shift the demand curve
  - If change increases the quantity demanded for every price: **increase in demand (curve shifts to the right)**
  - If change decreases the quantity demanded for every price: **decrease in demand (curve shifts to the left)**

## Examples of Shifts in a Demand Curve (Fig. 4.3, p. 74)

Price of  
Ice-Cream  
Cone

Suppose consumer income increases

Suppose price of frozen yogurt decreases

0

Quantity of  
Ice-Cream Cones

# The Supply Curve

## Definitions:

- The **supply curve** expresses the relationship between **price** and **quantity supplied**
- The **quantity supplied** of a good is the amount of the good that **sellers** are willing and able to sell at a given price

# Relationship Between Quantity Supplied and Price

**Price (P)**



**0**

**Quantity supplied (Q)<sup>12</sup>**

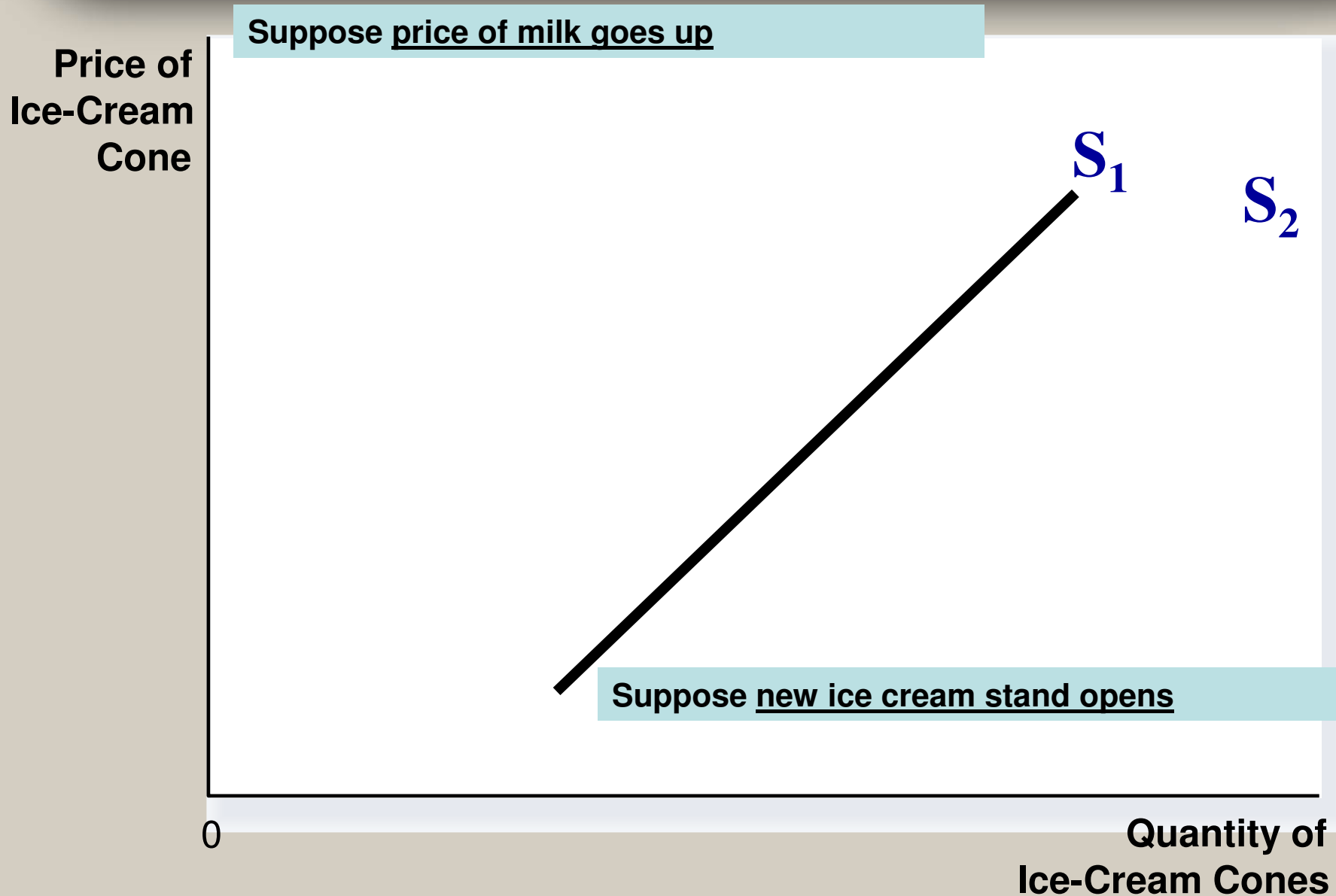


# Shifts in the Supply Curve

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# Examples of Shifts in the Supply Curve

(Fig., 4.7, p. 80)



# Example of Equilibrium

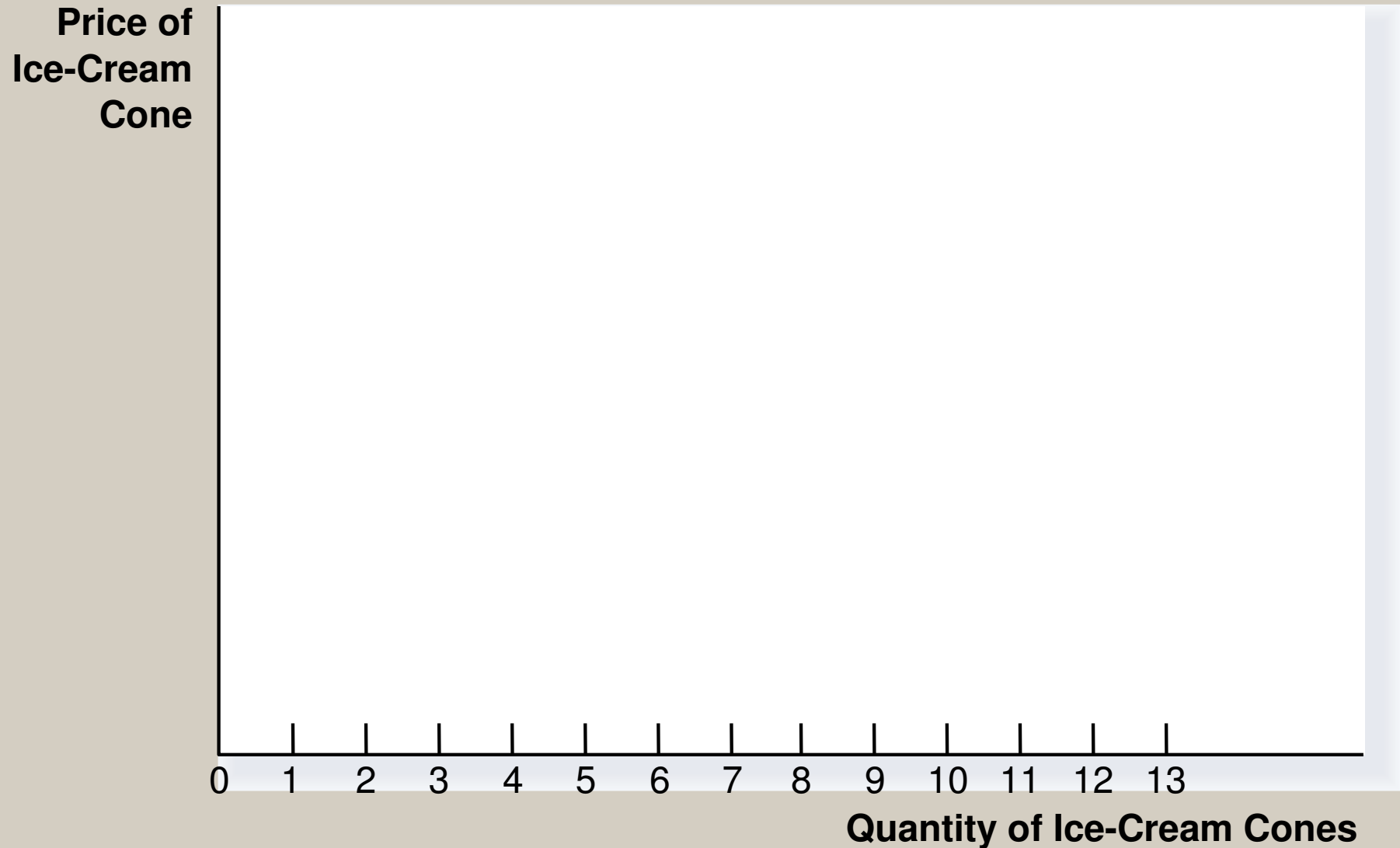
## Demand Schedule (Fig. 4.2, p. 73)

Price of Ice-Cream Cone	Market
\$0.00	19
0.50	16
1.00	13
1.50	10
2.00	7
2.50	4
3.00	1

## Supply Schedule (Fig., 4.6, p. 79)

Price of Ice-Cream Cone	Market
\$0.00	0
0.50	0
1.00	1
1.50	4
2.00	7
2.50	10
3.00	13

# The Equilibrium of Supply and Demand— Graphically (Fig., 4.8, p.78)



# Three Steps in Analyzing Changes in Equilibrium

1. Decide whether the event shifts the supply or demand curve (or both).
2. Decide whether the curve(s) shift(s) to the left or to the right.
3. Use the supply-and-demand diagram to see how the shift affects equilibrium price and quantity

## An example: Problem #3a, p. 91 (MKMR)

3. Consider the market for minivans. For each of the events listed here, identify which of the determinants of demand or supply are affected. Also indicate whether demand or supply is increased or decreased. Then show the effect on the price and quantity of minivans.
  - a. People decide to have more children.

# Chapter 5: Measuring a Nation's Income

## Key objective:

- Discuss some of the data that economists and policy makers use to monitor the performance of an economy, for example, how “rich” is a country.

# Gross Domestic Product (GDP)

## Definition:

- GDP is the market value of all final goods and services produced within a country in a given period of time (loosely speaking, it is how much a country is producing).
- Statistics Canada releases data on national and provincial GDP every three months.

# The Measurement of GDP

## From the definition of GDP

- “GDP is the Market Value . . . .”
- “. . . Of All Final . . . .”
- “. . . Goods and Services . . . .”

## The Measurement of GDP (cont.)

- “. . . Produced . . .”
- “. . . Within a Country . . .”
- “. . . In a Given Period of Time.”

# The Components of GDP

- GDP includes all items produced in the economy and sold *legally* in markets.
- What Is Not Counted in GDP?

- GDP ( $Y$ ) is the sum of the following:
  - Consumption ( $C$ )
  - Investment ( $I$ )
  - Government Purchases ( $G$ )
  - Net Exports ( $NX$ )

$$Y = C + I + G + NX$$

# The Components of GDP (cont.)

- *Consumption (C)*:
  - The spending by households on goods and services, with the exception of purchases of new housing.
- *Investment (I)*:
  - The spending on capital equipment, inventories, and structures, including new housing.
- *Government Purchases (G)*:
  - The spending on goods and services by local, state, and federal governments.
  - Does *not* include transfer payments (e.g., welfare, old age pension) because they are not made in exchange for currently produced goods or services.
- *Net Exports (NX)*:
  - Exports minus imports.

# GDP Measures both Income and Expenditure

## Note:

- GDP measures two things at once
  - Total income of everyone in the economy
  - Total expenditure on the economy's output of goods and services
- For an economy as a whole, income must equal expenditure because:
  - Every transaction has a buyer and a seller.
  - Every dollar of spending by some buyer is a dollar of income for some seller.

# Canadian GDP and Its Components, 2008

(Table 5.1, p.105)

	billions	% of GDP	per person
<b>Y</b>	\$1,600	100.0	\$48,009
<b>C</b>	891	56	26,735
<b>I</b>	371	23	11,132
<b>G</b>	314	20	9,422
<b>NX</b>	25	1	700

# Examples—What Is the Impact on GDP?

- A.** Debbie spends \$200 to buy her husband dinner
  
- B.** Sarah spends \$1800 on a new laptop to use in her publishing business. The laptop was built in China.
  
- C.** General Motors builds \$500 million worth of cars, but consumers only buy \$470 million of them.
  
- D.** Jane spends \$1200 on a computer to use in her editing business. She got last year's model on sale for a great price from a local manufacturer.

# Real vs Nominal GDP

- If GDP rises from one year to the next, one of two things must be true
  - The economy is producing more goods and services
  - Goods and services are being sold at higher prices
- ***Nominal GDP*** values the production of goods and services at *current prices*.
- ***Real GDP*** values the production of goods and services at constant prices (that is, it ignores price increases).

## Real vs Nominal GDP

- *Real GDP* is really the accurate measure of how much a country produced and of its standard of living.

*Example: Suppose all prices and incomes were to double tomorrow. Would you be richer?*

- An accurate view of the economy's performance (that is, how much is being produced) therefore requires adjusting nominal GDP to take into account price increases.
- This is done by using the *GDP deflator*.
- Correcting nominal GDP for changes in prices using the GDP deflator yields *real GDP*.

# The GDP Deflator

- The *GDP deflator* is a measure of the price level.
- It tells us the rise in nominal GDP that is attributable to a rise in prices rather than a rise in the quantities produced. It is calculated as

$$\text{GDP deflator} = \frac{\text{Nominal GDP}}{\text{Real GDP}} \times 100$$

- Note that given nominal GDP and the GDP deflator, one can calculate real GDP as

$$\text{Real GDP} = \frac{\text{Nominal GDP}}{\text{GDP deflator}} \times 100$$

## Example: Real and Nominal GDP

Suppose an economy where only two goods are produced:

year	Pizza		Latte	
	<i>P</i>	<i>Q</i>	<i>P</i>	<i>Q</i>
2008	\$10	400	\$2.00	1000
2009	\$11	500	\$2.50	1100
2010	\$12	600	\$3.00	1200

**Compute nominal GDP in each year:**

*Increase:*

2008:

2009:

2010:

## Example: Real and Nominal GDP (cont)

Suppose an economy where only two goods are produced:

year	Pizza		Latte	
	<i>P</i>	<i>Q</i>	<i>P</i>	<i>Q</i>
2008	\$10	400	\$2.00	1000
2009	\$11	500	\$2.50	1100
2010	\$12	600	\$3.00	1200

**Compute real GDP at 2008 prices :**

*Increase:*

2008:

2009:

2010:

# Real GDP

- The change in real GDP is the amount that GDP would change if prices were constant (*i.e.*, if zero inflation).

## Example: Real and Nominal GDP (cont)

GDP deflator =  $100 \times (\text{Nominal GDP} / \text{Real GDP})$

year	Nominal GDP	Real GDP	GDP Deflator	Change in GDP Deflator: Measure of Inflation
2008	\$6000	\$6000		
2009	\$8250	\$7200		
2010	\$10,800	\$8400		

**Compute the GDP deflator in each year:**

2008:

2009:

2010:

## Example: MKMR, p. 119, #6

6. Consider the following data on Canadian GDP:

Year	Nominal GDP (in billions)	GDP Deflator (base year 2002)
2009	1600	118
2008	1520	121

- What was the growth rate of nominal GDP between 2008 and 2009? (Note: The growth rate is the percentage change from one period to the next.)
- What was the growth rate of the GDP deflator between 2008 and 2009?
- What was real GDP in 2008 measured in 2002 prices?
- What was real GDP in 2009 measured in 2002 prices?
- What was the growth rate of real GDP between 2008 and 2009?
- Was the growth rate of nominal GDP higher or lower than the growth rate of real GDP? Explain.