

Tackle the Test: Multiple-Choice Questions

1. Which of the following is true? The simple circular-flow diagram
 - I. includes only the product markets.
 - II. includes only the factor markets.
 - III. is a simplified representation of the macroeconomy.
 - a. I only
 - b. II only
 - c. III only
 - d. I and III only
 - e. none of the above
2. GDP is equal to
 - a. the total value of all goods and services produced in an economy during a given period.
 - b. $C + I + G + IM$.
 - c. the total value of intermediate goods plus final goods.
 - d. the total income received by producers of final goods and services.
 - e. none of the above.
3. Which of the following is included in GDP?
 - a. changes to inventories
 - b. intermediate goods
 - c. used goods
 - d. financial assets (stocks and bonds)
 - e. foreign-produced goods
4. Which of the following is *not* included in GDP?
 - a. capital goods such as machinery
 - b. imports
 - c. the value of domestically produced services
 - d. government purchases of goods and services
 - e. the construction of structures
5. Which of the following components makes up the largest percentage of GDP measured by aggregate spending?
 - a. consumer spending
 - b. investment spending
 - c. government purchases of goods and services
 - d. exports
 - e. imports

Tackle the Test: Free-Response Questions

1. Will each of the following transactions be included in GDP for the United States? Explain why or why not.
 - a. Coca-Cola builds a new bottling plant in the United States.
 - b. Delta sells one of its existing airplanes to Korean Air.
 - c. Ms. Moneybags buys an existing share of Disney stock.
 - d. A California winery produces a bottle of Chardonnay and sells it to a customer in Montreal, Canada.
 - e. An American buys a bottle of French perfume in Tulsa.
 - f. A book publisher produces too many copies of a new book; the books don't sell this year, so the publisher adds the surplus books to inventories.
2. Draw a correctly labeled circular-flow diagram showing the flows of funds between the markets for goods and services and the factor markets. Add the government to your diagram, and show how money leaks out of the economy to the government and how money is injected back into the economy by the government.

Answer (6 points)

- 1 point: Yes. New structures built in the United States are included in U.S. GDP.
- 1 point: No. The airplane is used, and sales of used goods are not included in GDP.
- 1 point: No. This is a transfer of ownership—not new production.
- 1 point: Yes. This is an export.
- 1 point: No. This is an import—it was not produced in the United States.
- 1 point: Yes. Additions to inventories are considered investments.

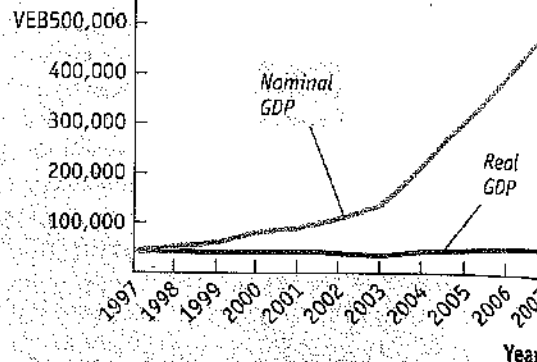
Miracle in Venezuela?

The South American nation of Venezuela has a distinction that may surprise you: in recent years, it has had one of the world's fastest-growing nominal GDPs. Between 1997 and 2007, Venezuelan nominal GDP grew by an average of 28% each year—much faster than nominal GDP in the United States or even in booming economies like China.

So is Venezuela experiencing an economic miracle? No, it's just suffering from unusually high inflation. The figure shows Venezuela's nominal and real GDP from 1997 to 2007, with real GDP measured in 1997 prices. Real GDP did grow over the period, but at an annual rate of only 2.9%. That's about the same as the U.S. growth rate over the same period and far short of China's 9% growth.

Source: Banco Central de Venezuela.

Nominal GDP
(billions of bolivars),
Real GDP (billions
of 1997 bolivars)



Module 11 AP Review

Solutions appear at the back of the book.

Check Your Understanding

- Assume there are only two goods in the economy, french fries and onion rings. In 2009, 1,000,000 servings of french fries were sold for \$0.40 each and 800,000 servings of onion rings were sold for \$0.60 each. From 2009 to 2010, the price of french fries rose to \$0.50 and the servings sold fell to 900,000; the price of onion rings fell to \$0.51 and the servings sold rose to 840,000.
 - Calculate nominal GDP in 2009 and 2010. Calculate real GDP in 2010 using 2009 prices.
 - Why would an assessment of growth using nominal GDP be misguided?
- From 1990 to 2000 the price of housing rose dramatically. What are the implications of this in deciding whether to use 1990 or 2000 as the base year in calculating 2010 real GDP?

Tackle the Test: Multiple-Choice Questions

- Which of the following is true of real GDP?
 - It is adjusted for changes in prices.
 - It is always equal to nominal GDP.
 - It increases whenever aggregate output increases.
 - I only
 - II only
 - III only
 - I and III
 - I, II, and III
- The best measure for comparing a country's aggregate output over time is
 - nominal GDP.
 - real GDP.
 - nominal GDP per capita.
 - real GDP per capita.
 - average GDP per capita.
- Use the information provided in the table below for an economy that produces only apples and oranges. Assume year 1 is the base year.

	Year 1	Year 2
Quantity of apples	3,000	4,000
Price of an apple	\$0.20	\$0.30
Quantity of oranges	2,000	3,000
Price of an orange	\$0.40	\$0.50

What was the value of real GDP in each year?

	Year 1	Year 2
a.	\$1,400	\$2,700
b.	1,900	2,700
c.	1,400	2,000
d.	1,900	2,000
e.	1,400	1,900

4. Real GDP per capita is an imperfect measure of the quality of life in part because it
- includes the value of leisure time.
 - excludes expenditures on education.
 - includes expenditures on natural disasters.
 - excludes expenditures on entertainment.
 - includes the value of housework.

5. Refer to the 2009 data in the table below.

Nominal GDP in billions of dollars	
United States	\$14,259
Japan	5,049
European Union	16,191

- Which of the following must be true?
- Residents of Japan were worse off than residents of the United States or the European Union.
 - The European Union had a higher nominal GDP per capita than the United States.
 - The European Union had a larger economy than the United States.
- I only
 - II only
 - III only
 - II and III
 - I, II, and III

Tackle the Test: Free-Response Questions

1. The economy of Britannica produces three goods: computers, DVDs, and pizza. The accompanying table shows the prices and output of the three goods for the years 2008, 2009, and 2010.

Year	Computers		DVDs		Pizza	
	Price	Quantity	Price	Quantity	Price	Quantity
2008	\$900	10	\$10	100	\$15	2
2009	1,000	10.5	12	105	16	2
2010	1,050	12	14	110	17	3

- What is the percent change in computer production from 2008 to 2009?
- What is the percent change in the price of pizza from 2009 to 2010?
- Calculate nominal GDP in Britannica for 2008.
- Calculate real GDP in Britannica for 2008 using 2008 as the base year.
- Calculate real GDP in Britannica for 2010 using 2008 as the base year.

Answer (5 points)

1 point: $0.5/10 \times 100 = 5\%$

1 point: $\$1/\$16 \times 100 = 6.25\%$

1 point: $(\$900 \times 10) + (\$10 \times 100) + (\$15 \times 2) = \$9,000 + \$1,000 + \$30 = \$10,030$

1 point: Real GDP equals nominal GDP in the base year, so this answer is the same as in part c.

1 point: $(\$900 \times 12) + (\$10 \times 110) + (\$15 \times 3) = \$10,800 + \$1,100 + \$45 = \$11,945$

2. Use the information in the table below to answer the following questions.

- Calculate the percent increase in nominal GDP between 2005 and 2010 for each country.
- What happened to the price level in each country between 2005 and 2010?
- Calculate real GDP in each country in 2010, using 2005 as the base year.
- Calculate the percent increase in real GDP between 2005 and 2010 for each country.
- Compare the two countries' real GDP per capita in 2010 using 2005 as the base year.

Year	Nominal GDP	Price Level	Population
Country A			
2005	\$2,000	\$100	10
2010	4,000	100	20
Country B			
2005	\$2,000	\$100	10
2010	6,000	200	15

- e. Natasha, a graduate student, went back to school because jobs were scarce.
3. Which of the following are consistent with the observed relationship between growth in real GDP and changes in the unemployment rate? Which are not?
- A rise in the unemployment rate accompanies a fall in real GDP.
 - An exceptionally strong business recovery is associated with a greater percentage of the labor force being employed.
 - Negative real GDP growth is associated with a fall in the unemployment rate.

Tackle the Test: Multiple-Choice Questions

- To be considered unemployed, a person must
 - not be working.
 - be actively seeking a job.
 - be available for work.
 - I only
 - II only
 - III only
 - II and III
 - I, II, and III
- How many people are unemployed?
 - 10,000
 - 20,000
 - 30,000
 - 100,000
 - 110,000
- What is the unemployment rate?
 - 70%
 - 50%
 - 20%
 - 10%
 - 5%

Use the information for a hypothetical economy presented in the following table to answer questions 2, 3, and 4.

Population age 16 and older = 200,000
Labor Force = 100,000
Number of people working part time = 20,000
Number of people working full time = 70,000

- What is the labor force participation rate?
 - 70%
 - 50%
 - 20%
- The unemployment problem in an economy may be understated by the unemployment rate due to
 - people lying about seeking a job.
 - discouraged workers.
 - job candidates with one offer but waiting for more.
 - overemployed workers.
 - none of the above.

Tackle the Test: Free-Response Questions

- Use the data provided below to calculate each of the following. Show how you calculate each.
 - the size of the labor force
 - the labor force participation rate
 - the unemployment rate

Population age 16 and older = 12 million
 Employment = 5 million
 Unemployment = 1 million
- What is the labor market classification of each of the following individuals? Be as specific as possible, and explain your answer.
 - Julie has a graduate degree in mechanical engineering. She works full-time mowing lawns.
 - Jeff was laid off from his previous job. He would very much like to work at any job, but, after looking for work for a year, has stopped looking for work.
 - Ian is working 25 hours per week at a bookstore, and has no desire to work full time.
 - Raj has decided to take a year off from work to stay home with his daughter.

Answer (6 points)

1 point: 6 million

1 point: employment + unemployment = 5 million + 1 million = 6 million

1 point: 50%

1 point: (labor force/population) \times 100 = ((5 million + 1 million)/12 million) \times 100 = (6 million/12 million) \times 100 = 50%

1 point: 17%

1 point: (unemployment/labor force) \times 100 = (1 million/(5 million + 1 million)) \times 100 = (1 million/6 million) \times 100 = 17%

Tackle the Test: Multiple-Choice Questions

1. A person who moved to a new state and took two months to find a new job experienced which type of unemployment?
 - a. frictional
 - b. structural
 - c. cyclical
 - d. natural
 - e. none of the above
2. What type of unemployment is created by a recession?
 - a. frictional
 - b. structural
 - c. cyclical
 - d. natural
 - e. none of the above
3. A person who is unemployed because of a mismatch between the quantity of labor supplied and the quantity of labor demanded is experiencing what type of unemployment?
 - a. frictional
 - b. structural
 - c. cyclical
 - d. natural
 - e. none of the above
4. Which of the following is true of the natural rate of unemployment?
 - I. It includes frictional unemployment.
 - II. It includes structural unemployment.
 - III. It is equal to 0%.
 - a. I only
 - b. II only
 - c. III only
 - d. I and II
 - e. I, II, and III
5. Which of the following can affect the natural rate of unemployment in an economy over time?
 - a. labor force characteristics such as age and work experience
 - b. the existence of labor unions
 - c. advances in technologies that help workers find jobs
 - d. government job training programs
 - e. all of the above

Tackle the Test: Free-Response Questions

1.
 - a. Define the natural rate of unemployment.
 - b. The natural rate of unemployment is made up of which of the types of unemployment?
 - c. Explain how cyclical unemployment relates to the natural rate of unemployment.
 - d. List three factors that can lead to a change in the natural rate of unemployment.
2. In each of the following situations, what type of unemployment is Melanie facing? Explain.
 - a. After completing a complex programming project, Melanie is laid off. Her prospects for a new job requiring similar skills are good, and she has signed up with a programmer placement service. She has passed up offers for low-paying jobs.
 - b. When Melanie and her co-workers refused to accept pay cuts, her employer outsourced their programming tasks to workers in another country. This phenomenon is occurring throughout the programming industry.
 - c. Due to the current slump in investment spending, Melanie has been laid off from her programming job. Her employer promises to rehire her when business picks up.

Answer (7 points)

1 point: The natural rate of unemployment is the normal unemployment rate around which the actual unemployment rate fluctuates.

1 point: The natural rate of unemployment is made up of frictional unemployment ...

1 point: ... plus structural unemployment.

1 point: Cyclical unemployment is the deviation of the actual rate of unemployment from the natural rate. Or, cyclical unemployment is the difference between the actual and natural rates of unemployment.

1 point: Changes in labor force characteristics

1 point: Changes in labor market institutions such as unions

1 point: Changes in government policies

Module 14 AP Review

Solutions appear at the back of the book.

Check Your Understanding

1. The widespread use of technology has revolutionized the banking industry, making it much easier for customers to access and manage their assets. Does this mean that the shoe-leather costs of inflation are higher or lower than they used to be? Explain.
2. Most people in the United States have grown accustomed to a modest inflation rate of around 2-3%. Who would gain and who would lose if inflation came to a complete stop for several years? Explain.

Tackle the Test: Multiple-Choice Questions

1. Which of the following is true regarding prices in an economy?
 - I. An increase in the price level is called inflation.
 - II. The level of prices doesn't matter.
 - III. The rate of change in prices matters.
 - a. I only
 - b. II only
 - c. III only
 - d. II and III only
 - e. I, II, and III
2. If your nominal wage doubles at the same time as prices double, your real wage will
 - a. increase.
 - b. decrease
 - c. not change.
 - d. double.
 - e. be impossible to determine.
3. If inflation causes people to frequently convert their dollars into other assets, the economy experiences what type of cost?
 - a. price level
 - b. shoe-leather
 - c. menu
 - d. unit-of-account
 - e. monetary
4. Because dollars are used as the basis for contracts, inflation leads to which type of cost?
 - a. price level
 - b. shoe-leather
 - c. menu
 - d. unit-of-account
 - e. monetary
5. Changing the listed price when inflation leads to a price increase is an example of which type of cost?
 - a. price level
 - b. shoe-leather
 - c. menu
 - d. unit-of-account
 - e. monetary

Tackle the Test: Free-Response Questions

1. In the following examples, is inflation creating winners and losers at no net cost to the economy or is it imposing a net cost on the economy? Explain. If inflation is imposing a net cost on the economy, which type of cost is involved?
 - a. When inflation is expected to be high, workers get paid more frequently and make more trips to the bank.
 - b. Lanwei is reimbursed by her company for her work-related travel expenses. Sometimes, however, the company takes a long time to reimburse her. So when inflation is high, she is less willing to travel for her job.
 - c. Hector Homeowner has a mortgage loan that he took out five years ago with a fixed 6% nominal interest rate. Over the years, the inflation rate has crept up unexpectedly to its present level of 7%.
 - d. In response to unexpectedly high inflation, the manager of Cozy Cottages of Cape Cod must reprint and resend expensive color brochures correcting the price of rentals this season.

Answer (11 points)

1 point: There is a net cost to the economy.

1 point: This is an increase in the cost of financial transactions cost imposed by inflation.

1 point: This type of cost is called a shoe-leather cost.

1 point: There is a net cost to the economy.

1 point: Lanwei's forgone output is a cost to the economy.

1 point: This type of cost is called a unit-of-account cost.

1 point: There is no net cost to the economy.

1 point: Hector gains and the bank loses because the money Hector pays back is worth less than expected.

1 point: There is a net cost to the economy.

1 point: Cozy Cottages must reprint and resend the expensive brochure when inflation causes rental prices to rise.

1 point: This type of cost is called a menu cost.

2. You borrow \$1,000 for one year at 5% interest to buy a couch. Although you did not anticipate any inflation, there is unexpected inflation of 5% over the life of your loan.
- What was the real interest rate on your loan?
 - Explain how you gained from the inflation.
 - Who lost as a result of the situation described? Explain.