

2. Assume that you are given GDP and depreciation data for 1998. Explain why this is not enough information to calculate Net National Product.

3. Assume that GDP is \$9 Trillion, receipts of factor income from the rest of the world are \$2 Trillion, and payments of factor income to the rest of the world are \$1 Trillion. Calculate GNP from this information.

4. Explain why real GDP may fall even when the prices of large number of goods in the economy have increased enormously.

5. If NNP is \$7 trillion, net investment is \$500 billion and gross investment is \$1 trillion determine the level of GNP.

6. You are given the following data for a hypothetical economy:

Category	Number (in millions)
Individuals 16 or older	242.6
Employed	124.8
Unemployed	18.2

- a. What is the size of the labor force?

- b. Calculate the labor force participation rate.

- c. Calculate the unemployment rate.

7. List and explain the three major types of unemployment.
8. Which of the following people would be unemployed according to the official statistics? Why?
- a. A person who is writing a book at home while seeking a permanent position on a newspaper
 - b. A full-time student who would like a job but has turned down several job offers because they didn't fit her schedule
 - c. A recent college graduate who is looking for a job
 - d. A person who just wants to sit in front of the television all day
 - e. A worker who quits his job because he thinks the pay is too low
 - f. A teenager who gets discouraged and quits looking for work
9. Suppose that in 2003 the U.S. economy is in "normal" times and the unemployment rate is 6 percent.
- a. If the working age population is 205 million and the total labor force participation is 135 million, how many people are considered unemployed?
 - b. What is the labor force participation rate in 2003?

10. For each of the following events, explain what is likely to happen to the labor force participation rate:
- The federal minimum wage is raised to \$12.50 per hour.
 - The minimum legal working age is raised from 16 to 18.
 - The economy is in the midst of a prolonged recession.
 - The federal government imposes a legal maximum retirement age of 65.
 - The federal government increases the minimum age requirement for collecting social security.
11. Answer each of the following:
- Jake retired from the police force. He started working an hour or two a day at a paid job in city's courthouse. Is Jake considered employed and therefore part of the labor force? Explain.
 - The number of people classified as employed is 260,000 and the number of people classified as unemployed is 30,000. Calculate the unemployment rate.
 - If the number of people employed is 150,000 and the labor force is 170,000, what is the unemployment rate?
 - If the unemployment rate is 6.2% and the number of people employed is 200,000, what is the approximate number of people who are unemployed?

- e. If the number of unemployed equals 30,000, the number of employed equals 60,000, and the number not in the labor force is 10,000, what is the labor-force participation rate?
- f. What would be the effect on the unemployment rate of classifying discouraged workers as unemployed?
- g. What is the natural rate of unemployment?

12. Compute real wages (that is money wages deflated by the price index) in each year from the following data:

Year	Average Money Wage (dollars per hour)	Price Index (1982 = 100)	Real Wage
1966	2.56	33.6	$2.56/33.6 \times 100 = \$7.62$
1976	4.86	59.0	\$8.24
1986	8.76	112.2	\$7.81
1996	11.81	159.0	\$7.43

What do you conclude?

- 13. a. For each of the following situations calculate the actual (*ex post*) real interest rate and state whether you would rather be a lender or a borrower in the given situation:
 - i. The nominal interest rate is 14 percent, the inflation rate is 17 percent and the expected (*ex ante*) real interest rate is 3 percent.
 - ii. The nominal interest rate is 7 percent, the inflation rate is 3 percent and the expected (*ex ante*) real interest rate is 5 percent.
 - iii. The nominal interest rate is 4 percent, the inflation rate is -2 percent and the expected (*ex ante*) real interest rate is 3%

- iv. The nominal interest rate is 6 percent, the inflation rate is 2 percent and the expected (*ex ante*) real interest rate is 3%
- b. i. If you are a lender, of the four above scenarios which would you prefer? Why?
- ii. If you are a borrower, of the four above scenarios which would you prefer? Why?

14. There are three goods consumed in Adrenaland: fast cars, parachute jumps and hang gliders. The prices and quantities for each in 2009 and 2010 are given below. The market basket comprises the 2009 quantities.

Goods	2009		2010
	Prices	Quantities	Prices
Fast Cars	\$20,000	1	\$30,000
Parachute Jumps	\$100	365	\$80
Hang Gliders	\$500	3	\$800

- a. Calculate the Adrenaland consumer price index for 2009 and 2010 using 2009 as the base year.
- b. Calculate the inflation rate

15. You are given the following data:

		Price per Unit in			
	Units Purchased	2009	2010	2011	2012
Blueberries	8	\$2.00	\$2.00	\$2.10	\$2.40
Pineapples	5	\$2.00	\$2.50	\$2.50	\$3.00
Cheese	3	\$2.50	\$3.00	\$3.50	\$4.00

a. If 2010 is the base year, what is the value of the price index in 2009?

b. What is the inflation rate from 2009 to 2010?

c. If 2010 is the base year, what is the value of the price index in 2012?

d. What is the inflation rate from 2011 to 2012?

16. If the CPI in 2011 was 114.7 and the CPI in 2012 was 124.5, what was the rate of inflation between 2011 and 2012?

17. If 2011 is the base year and the inflation rate between 2011 and 2012 is -4.5, what is the value of the price index in 2012?

18. Dean borrows \$400 from Tim. Tim wants to make a 10% real return on his money, so they both agree on a 10% interest rate paid next year. Dean and Tim did not anticipate any inflation, yet the actual inflation turned out to be 4% next year. Is Tim happy? What about Dean? Explain.