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GROSS DOMESTIC PRODUCT

OVERVIEW

1. Microeconomics is the study of the individual parts of the economy. Macroeconomics is the study of the economy as a whole.
2. Income is earned by society through productive processes. The income in an economy and the output have the same value. That is because the value of the output is the amount that firms collect when selling the output. All the money firms collect is then paid to the owners of the resources used to produce the output and is the income of those factors.
3. Gross domestic product is the total dollar value of all final goods and services produced during a year. The income approach to GDP is found by adding all income received by the resource owners.
4. The expenditure approach to GDP is the sum of all spending by consumers, business, and government on the year's output plus an adjustment for the foreign sector.
5. Consumption is the purchase of goods and services by households. Investment is business spending for new plant and equipment (capital) plus inventories. The total expenditure for goods and services by government is government spending. The impact of the foreign sector is measured by the difference between what we export and what we import, net exports.
6. Problems arise with calculating and interpreting GDP. GDP is not a measure of our nation's economic well-being. GDP does not include all goods. The value of leisure time is not counted. The prices used to calculate GDP may not be good measures of the value of the good. Changes in the quality of goods are not accurately reflected in GDP, nor is the existence of new goods. When prices rise, GDP rises. But the output actually produced may not rise. To correctly compare GDP from country to country, we should compare per capita GDP. The distribution of income is not reflected in GDP. A larger GDP is not necessarily better.

MATCHING

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|-------|-----|------------------------|----|--|
| _____ | 1. | microeconomics | a. | counting both the intermediate and the final good in GDP |
| _____ | 2. | macroeconomics | b. | sum of expenditures by consumers, business, government, and net exports |
| _____ | 3. | aggregate | c. | the money society earns through production |
| _____ | 4. | fallacy of composition | d. | total expenditure by government |
| _____ | 5. | income | e. | GDP per person |
| _____ | 6. | gross domestic product | f. | is the study of the individual parts of the economy |
| _____ | 7. | double counting | g. | adding up the final values of total output in the economy |
| _____ | 8. | output approach | h. | business spending for capital goods plus inventories |
| _____ | 9. | income approach | i. | exports minus imports |
| _____ | 10. | expenditure approach | j. | is the total dollar value of all final goods and services produced during the year |
| _____ | 11. | consumption | k. | purchases of goods and services by households |
| _____ | 12. | investment | l. | is the study of the economy as a whole |
| _____ | 13. | government spending | m. | assuming the behavior of the whole is the same as the behavior of the parts |
| _____ | 14. | net exports | n. | adding up all of the income received by factors of production |
| _____ | 15. | per capita GDP | o. | total |

TRUE-FALSE

- _____ 1. A macroeconomist would study the music industry.
- _____ 2. There are many approaches to measure the output of the economy.
- _____ 3. Investment includes the purchase of U.S. Savings Bonds.
- _____ 4. Gross Domestic Product accounts for all output produced.
- _____ 5. The income approach equals the expenditure approach.

PROBLEMS

- 1.a. Use the following production information to find GDP. Assume steamshovels cost \$1 million and apples cost 25 cents.

Year	1	2	3	4	5
Steamshovels	50	55	50	50	55
Apples (millions)	4	8	8	6	12
GDP (millions)	\$ _____	_____	_____	_____	_____

- b. In what years is GDP larger than the previous year?
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2. Suppose that two countries, Abbott and Costello, have the GDP's listed below.

Abbott	\$10,000
Costello	\$40,000

- a. What conclusion can you draw about the average income of the citizens of these two countries? _____
- b. Suppose that Abbott has 10,000 people and Costello has 20,000. Does your answer to problem 2a change? Why or why not? _____
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IN THE NEWS

1. As a matter of historical fact, since the mid 1970s consumption has been about 63 percent of gross domestic product. Government expenditure is nearly 20 percent of GDP. Investment has varied from 14 to 16 percent and net exports have varied from 1 to 3 percent of GDP.
- a. What approach to GDP is discussed in this reading?
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b. What can you learn from this approach that you cannot learn from another approach?

2. When the Indians were the dominant civilization in North America, they were not concerned with the size of gross domestic product or even gross tribal product. Economic considerations like growth of GDP or full employment were not matters of concern to them.

a. Is it true that the Indians were unconcerned about gross national or tribal product?

b. What could the Indians do to improve their gross tribal product? _____

3. GDP is only one measure of economic activity. For comparing GDP from one country to another, we could use the number of hours of work needed to buy a good. For example, a loaf of bread requires 17 minutes of work in Moscow but only 6 minutes in Washington. A 2.2 pound cod costs 33 minutes in Moscow and 76 in Washington. Ten liters of gasoline costs 17 minutes of work in Washington and 167 minutes in Moscow. But bus fare is 7 minutes of work in Washington but only 3 in Moscow.¹

a. Is this measure different than GDP? How? _____

b. What conclusion about the comparative standard of living could we draw from this piece?

4. The average salaries of workers in the United States are the _____ highest in the world. The Union Bank of Switzerland's sixth annual survey put the wage earners of New York, Los Angeles, Chicago, and Houston on top. The survey found that the average worker in New York earns 42 percent more than a worker in Zurich or Tokyo and more than twice as much as the average worker in Paris.²

a. Can we conclude from this information that the citizens of the large cities in the U.S. are the wealthiest in the world? _____

b. The same study also indicated that the average cost of living in New York, Chicago, Houston, and Los Angeles were among the top ten cities. How would this information affect your answer to 4.a? _____

¹ Adapted from National Federation of Independent Business Research and Education Foundation Information, 1987.

² Adapted from "Americans' Salaries Highest in the World," as printed in the *Bowling Green Daily Sentinel-Tribune*, Bowling Green, Ohio, a United Press International Release, September 18, 1985.

5. There are other aspects of living in a country besides the income earned. For example, the amount of violent crime and the amount of pollution are two other factors that affect the quality of life.
- a. What information can we get from GDP? _____
- b. What if we started with GDP and then subtracted out the cost of crime and pollution? Would the resulting figure be one that reflects the quality of life in a country?

PRACTICE TEST

Circle the correct answer.

1. The difference between micro and macro is:
- a. micro focuses on the whole and macro focuses on the individual parts.
 - b. macro focuses on the whole and micro focuses on the individual parts.
 - c. micro focuses on business and macro focuses on the consumer.
 - d. macro focuses on business and micro focuses on the consumer.
2. All of the following show income in the economic sense except:
- a. Jill earns her allowance by taking out the garbage.
 - b. Bob sells his own crop at the mill.
 - c. The lawyer collects his fees.
 - d. A long-lost relative left Joan a fortune.
3. Which of the following approaches will not find GDP?
- a. Expenditure
 - b. Double counting
 - c. Income
 - d. Output
4. The expenditure approach to GDP includes:
- a. imports, investment, depreciation, and consumption.
 - b. government spending, exports, investment, and depreciation.
 - c. consumption, investment, net exports, and depreciation.
 - d. consumption, government spending, investment, and net exports.
5. Find the true statement.
- a. GDP measures the economic health of an economy.
 - b. GDP is a precise measure of productivity.
 - c. A larger GDP is always better.
 - d. GDP is a general measure of the level of income.

ANSWERS

Matching

1. f
2. l
3. o
4. m
5. c
6. j
7. a
8. g
9. n
10. b
11. k
12. h
13. d
14. i
15. e

True-False

1. F
2. T
3. F
4. F
5. T

Problems

1.a.

Year	1	2	3	4	5
Steamshovels	\$ 50	55	50	50	55
Apples (millions)	\$ <u>1</u>	\$ <u>2</u>	\$ <u>2</u>	\$ <u>1.5</u>	\$ <u>3</u>
GDP (millions)	\$ 51	\$ 57	\$ 52	\$ 51.5	\$ 58

- b. GDP is larger in year 2 than year 1, and in year 5 than year 4.
2. a. If the population of the two countries is the same, then the average income of the citizens of Costello is higher than that of the citizens of Abbott.
- b. Even though the population of Costello is twice the population of Abbott, those living in Costello have an average income per person, per capita GDP, twice that of those living in Abbott.

In the News

1. a. This is the expenditure approach.

- b. We can see who is actually doing the spending in the economy. We can see the spending share of consumers, business, government, and the foreign sector.
- 2.a. The Indians may not have calculated GDP as we know it, but they were concerned about the economic survival of the tribe. If the consumption per person fell to low levels, the tribe would attempt to improve its economic condition. The tribe might move to a new hunting area to try to become more productive and increase its total output. So the Indians were concerned about their gross tribal product.
 - b. Probably the biggest problem they faced was the variations of nature. When nature provided abundantly, the Indians did well. When nature became harsh, the issue was survival. Some Indians were excellent farmers, and planted several crops and irrigated. So the tribes tried to add to what nature provided for them.
 3. a. The measure is different than GDP because GDP is the value of all final goods produced in a year. The measure used here is the value of the consumer goods consumed in terms of the time needed to earn them.
 - b. It is hard to draw any conclusion. First observe that life involves more than bread, cod, gasoline, and bus rides. We would have to know the cost of all goods consumed before we could decide which city had an economic advantage. There are some problems with finding this cost. What combination of goods do we choose for comparison? The goods consumed in Moscow? The goods consumed in Washington? They are bound to be different. So it will not be easy to decide which set of citizens has the better economic life.
 4. a. Wealth involves more than income. Wealth includes the holding of valuables which can be sold to generate income. So, no, we cannot conclude about wealth.
 - b. The advantages of the citizens in cities with high salaries may be offset by the possibility that they have to pay high prices. If people in those cities can afford less even given their higher income, then the high salaries do not mean that the citizens have an economic advantage over the citizens of other cities.
 5. a. GDP tells us the total value of the final production in an economy in a year. We can learn how much was produced, and we can also learn how various sectors of the economy spent their income.
 - b. The resulting figure may be a more accurate measure of the quality of life. But one problem with this approach is to find the value of the pollution. Since there is no market determining its price, how can we know how much should be subtracted from GDP? Another problem is that to more accurately reflect the quality of life, we should subtract the costs of all possible disadvantages from GDP. This will be difficult to do because what may seem bad to one may seem a benefit to another. Alcohol is an example.

Practice Test

1.b., 2.d., 3.b., 4.d., 5.d.