

CHAPTER 2: Measuring the Macroeconomy

MULTIPLE CHOICE

1. Who led the team that created the original National Income and Product Accounts in the 1930s?
- a. John M. Keynes
 - b. Paul A. Samuelson
 - c. William D. Nordhaus
 - d. Simon Kuznets
 - e. Milton Friedman

ANS: D DIF: Easy REF: 2.1 TOP: I.
MSC: Remembering

2. Which measure of overall economic activity was not available in the 1930s?
- a. Stock prices
 - b. GDP
 - c. Industrial production
 - d. Steel production
 - e. Gold prices

ANS: B DIF: Easy REF: 2.1 TOP: I.
MSC: Understanding

3. The National Income and Product Accounts provides a system for:
- a. aggregating the production of all goods and services into a single measure of economic activity
 - b. aggregating the production of all goods into a single measure of economic activity
 - c. aggregating the production of all services into a single measure of economic activity
 - d. aggregating the production of most goods and services into a single measure of economic activity
 - e. aggregating the production of all goods and services into two measures of economic activity

ANS: A DIF: Easy REF: 2.1 TOP: I.
MSC: Understanding

4. In 2012, U.S. national output was equal to about:
- a. \$15.7 billion
 - b. \$15.7 trillion
 - c. \$50,000
 - d. \$10 trillion
 - e. \$13.1 million

ANS: B DIF: Easy REF: 2.2 TOP: II.
MSC: Remembering

5. In 2012, U.S. national output per person was equal to about:
- a. \$15.7 billion
 - b. \$43,000
 - c. \$50,000
 - d. \$12,000
 - e. \$80,000

ANS: C DIF: Easy REF: 2.2 TOP: II.
MSC: Remembering

6. The National Income and Product Accounts allows us to relate _____ to _____ to _____.
- a. household income; government income; firm income
 - b. total output; total spending; inflation
 - c. total output; inflation; total income
 - d. household income; household expenditure; total output

e. total output; total spending; total income

ANS: E DIF: Easy REF: 2.2 TOP: II.A.
MSC: Applying

7. The National Income and Product Accounts identity states:

- a. $\text{Expenditure} = \text{Production} + \text{Income}$
- b. $\text{Production} = \text{Expenditure} - \text{Income}$
- c. $\text{Production} = \text{Expenditure} + \text{Income}$
- d. $\text{Expenditure} = \text{Production} - \text{Income}$
- e. $\text{Production} = \text{Expenditure} = \text{Income}$

ANS: E DIF: Easy REF: 2.2 TOP: II.A.
MSC: Applying

8. The difference between *economic* profits and *normal* profits is that:

- a. normal profits are earnings based on the normal competitive return to one's own labor; economic profits are the above-normal returns associated with prices that exceed competitive prices
- b. economic profits are earnings based on the normal competitive return to one's own labor; normal profits are the above-normal returns associated with prices that exceed competitive prices
- c. normal profits are earnings based on the normal competitive return to one's own labor; economic profits are the above-normal returns associated with prices that exceed monopolistic prices
- d. economic profits are earnings based on the noncompetitive return to one's own labor; normal profits are the above-normal returns associated with prices that exceed competitive prices
- e. None of these answers are correct.

ANS: A DIF: Medium REF: 2.2 TOP: II.A.
MSC: Understanding

9. Goods that are produced in a different year than they are sold are called:

- a. inventory
- b. output adjustment
- c. capital depreciation
- d. a loss
- e. net national product

ANS: A DIF: Medium REF: 2.2 TOP: II.A.
MSC: Remembering

10. The statistic used by economists to measure the value of economic output is:

- a. the unemployment rate
- b. GDP
- c. the CPI
- d. the GDP deflator
- e. the federal funds rate

ANS: B DIF: Easy REF: 2.2 TOP: II.
MSC: Understanding

11. An economy's _____ is equal to its _____.

- a. consumption; income
- b. expenditure on goods and services; output
- c. expenditure on goods; expenditure on services
- d. investment; government expenditures
- e. taxes; net exports

ANS: B DIF: Easy REF: 2.2 TOP: II.A.
MSC: Understanding

12. According to the expenditure approach, if Y is GDP, C is consumption, I is investment, G is government purchases, and NX is net exports, the national income identity can be written as:
- $Y = C + I + G$
 - $Y = C + I + G - NX$
 - $Y + C = I + G + NX$
 - $Y = (C + I + G) / NX$
 - $Y = C + I + G + NX$

ANS: E DIF: Easy REF: 2.2 TOP: II.B.
MSC: Remembering

13. According to the expenditure approach, if Y is GDP, C is consumption, I is investment, G is government purchases, and NX is net exports, the national income identity can be written as:
- $Y + C - G = I + NX$
 - $Y - C = I + G - NX$
 - $Y - C - G - I = NX$
 - $Y = (C + I + G) / NX$
 - $Y = C + I + G$

ANS: C DIF: Easy REF: 2.2 TOP: II.B.
MSC: Remembering

14. According to the expenditure approach, if Y is GDP, C is consumption, I is investment, G is government purchases, and NX is net exports, which of the following is the national income identity?
- $Y = C + I + G - NX$
 - $Y = C + I + G + NX$
 - $Y + C = I + G + NX$
 - $Y = (C + I + G) / NX$
 - $Y = C + I + G$

ANS: B DIF: Easy REF: 2.2 TOP: II.B.
MSC: Remembering

Refer to the following table when answering the next four questions.

Table 2.1: U.S. 2011–2012 Expenditures (\$ billions)

	2011	2012
Personal consumption expenditures	10,729	11,120
Goods	3,625	3,783
Services	7,104	7,337
Gross private domestic investment	1,855	2,062
Fixed investment	1,818	2,004
Change in private inventories	37	58
Net exports of goods and services	-568	-560
Exports	2,094	2,184
Imports	2,662	2,744
Government expenditures	3,060	3,063
Federal	1,222	1,214
State and local	1,838	1,849

15. Consider Table 2.1, which tabulates GDP for 2011–2012. Total GDP in 2011 is:
- \$35,476 billion
 - \$15,076 billion
 - \$15,644 billion
 - \$10,092 billion
 - \$6,382 billion

ANS: B DIF: Medium REF: 2.2 TOP: II.B.
MSC: Applying

16. Consider Table 2.1, which tabulates GDP for 2011–2012. Total GDP in 2012 is:

- a. \$36,858 billion
- b. \$13,991 billion
- c. \$16,245 billion
- d. \$15,685 billion
- e. \$6,554 billion

ANS: D DIF: Medium REF: 2.2 TOP: II.B.
MSC: Applying

17. Consider Table 2.1, which tabulates GDP for 2011–2012. The federal government’s share of total GDP in 2011 was about:

- a. 19.5 percent
- b. 7.7 percent
- c. 12.2 percent
- d. 20.3 percent
- e. 8.1 percent

ANS: D DIF: Medium REF: 2.2 TOP: II.B.
MSC: Applying

18. Consider Table 2.1, which tabulates GDP for 2011–2012. Household consumption as a share of GDP _____ and investment’s share _____ over 2011–2012.

- a. decreased; increased
- b. increased; increased
- c. decreased; stayed the same
- d. increased; decreased
- e. stayed the same; stayed the same

ANS: A DIF: Difficult REF: 2.2 TOP: II.B.
MSC: Applying

19. In 2012, household expenditures accounted for about _____ of total GDP.

- a. 50 percent
- b. 71 percent
- c. 45 percent
- d. 76 percent
- e. 13 percent

ANS: B DIF: Easy REF: 2.2 TOP: II.B.
MSC: Remembering

20. In 2012, investment expenditures accounted for about _____ of total GDP.

- a. 71 percent
- b. –3.5 percent
- c. 13 percent
- d. 10 percent
- e. 16 percent

ANS: C DIF: Easy REF: 2.2 TOP: II.B.
MSC: Remembering

21. In 2012, government expenditures accounted for about _____ of total GDP.

- a. 5 percent
- b. –4 percent
- c. 66 percent
- d. 13 percent
- e. 20 percent

ANS: E DIF: Easy REF: 2.2 TOP: II.B.
MSC: Remembering

22. In 2012, net exports accounted for about _____ of total GDP.

- a. –4 percent
- b. 13 percent
- c. 20 percent
- d. 100 percent
- e. –14 percent

ANS: A DIF: Easy REF: 2.2 TOP: II.B.
MSC: Remembering

23. Net exports are also called:

- a. capital outflows
- b. the trade balance
- c. the current account
- d. foreign aid
- e. government transfers

ANS: A DIF: Easy REF: 2.2 TOP: II.B.
MSC: Remembering

24. Using the expenditure approach, government expenditures include:

- a. defense and nondefense federal, state, and local government expenditures
- b. only nondefense federal government expenditures
- c. federal government expenditures and transfer payments
- d. only state and local government expenditures
- e. residential investment and state and local government expenditures

ANS: A DIF: Medium REF: 2.2 TOP: II.B.
MSC: Understanding

25. In 2012, government transfer payments accounted for about _____ of government spending.

- a. one-third
- b. half
- c. 74 percent
- d. three-fifths
- e. 100 percent

ANS: A DIF: Medium REF: 2.2 TOP: II.B.
MSC: Applying

26. Using the expenditure approach, consumption expenditures include household purchases of:

- a. durable and nondurable goods and services
- b. durable and nondurable goods
- c. durable and nondurable goods and taxes
- d. durable and nondurable goods and residences
- e. nondurable goods

ANS: A DIF: Medium REF: 2.2 TOP: II.B.
MSC: Understanding

27. Using the expenditure approach, investment includes:

- a. household residential expenditures
- b. firm structures, equipment, and inventories
- c. fixed firm and household structures, equipment, and inventories
- d. government and firm equipment expenditures
- e. government defense and firm equipment expenditures

ANS: C DIF: Medium REF: 2.2 TOP: II.B.
MSC: Understanding

28. Which of the following is/are NOT included in the expenditure approach to national income accounting?

- a. transfer payments
- b. taxes
- c. Social Security
- d. changes in stock prices
- e. None of these answers are correct.

ANS: E DIF: Medium REF: 2.2 TOP: II.B.
MSC: Applying

29. Which of the following are NOT included in the expenditure approach to national income accounting?
- a. defense expenditures
 - b. firm expenditures on equipment
 - c. residential expenditures
 - d. household service expenditures
 - e. All of these answers are correct.

ANS: E DIF: Medium REF: 2.2 TOP: II.B.
MSC: Applying

30. In 2012, the U.S. GDP was about _____, and _____ was the largest share.
- a. \$5 trillion; net exports
 - b. \$22.5 billion; government expenditures
 - c. \$10.5 trillion; investment
 - d. \$13.6 billion; consumption
 - e. \$15.7 trillion; consumption

ANS: E DIF: Easy REF: 2.2 TOP: II.B.
MSC: Remembering

31. Which of the following is/are NOT included in the expenditure approach to national income accounting?
- a. software
 - b. taxes
 - c. defense expenditures
 - d. All of these answers are correct.
 - e. None of these answers are correct.

ANS: B DIF: Medium REF: 2.2 TOP: II.B.
MSC: Applying

32. U.S. expenditure shares by households, firms, and the government have been relatively _____ except during _____.
- a. constant; the 1970s
 - b. variable; the Great Depression
 - c. constant; World War II
 - d. constant; the Vietnam War
 - e. variable; the 1990s

ANS: C DIF: Medium REF: 2.2 TOP: II.C.
MSC: Understanding

33. Since about _____, U.S. expenditure shares by households, firms, and the government have been relatively _____.
- a. 1939; constant
 - b. the Great Depression era; constant
 - c. 1950; variable
 - d. 1950; constant
 - e. 1929 until 1945; constant

ANS: D DIF: Medium REF: 2.2 TOP: II.C.
MSC: Understanding

34. According to the text, the gains in GDP's consumption share has:
- a. caused a rapid decline in inventories
 - b. driven investment below 10 percent
 - c. no impact on net exports
 - d. been at a cost to net exports and government spending
 - e. also pushed up the government expenditure share

ANS: D DIF: Medium REF: 2.2 TOP: II.C.
MSC: Understanding

35. Prior to the late 1970s, the United States _____ about as much as it _____.

- a. exported; consumed
- b. exported; imported
- c. imported; consumed
- d. invested; exported
- e. imported; invested

ANS: B DIF: Medium REF: 2.2 TOP: I.I.C.
 MSC: Understanding

36. According to the *income* approach to GDP, the largest percentage of GDP comes from:
- a. indirect business taxes
 - b. firm profits
 - c. compensation to employees
 - d. depreciation of fixed capital
 - e. None of these answers are correct.

ANS: C DIF: Easy REF: 2.2 TOP: I.I.C.
 MSC: Understanding

Refer to the following table when answering the next three questions.

Table 2.2: U.S. 2011–2012 Domestic Income (\$ billions)

	2011	2012
Compensation of employees, paid	8,303	8,600
Wage and salary accruals	6,669	6,914
Supplements to wages and salaries	1,634	1,687
Taxes on production and imports	1,098	1,130
Subsidies	62	61
Net operating surplus	3,768	3,963
Private enterprises	3,794	3,997
Current surplus of government enterprises	-27	-34
Depreciation of fixed capital	1,937	2,012
Private	1,587	1,648
Government	349	364

37. Consider Table 2.2, National Income Accounts for 2011 and 2012. From this data, total GDP in 2011 was about _____ billion.
- a. \$16,606
 - b. \$14,008
 - c. \$32,969
 - d. \$15,044
 - e. \$15,645

ANS: D DIF: Medium REF: 2.2 TOP: I.I.C.
 MSC: Applying

38. Consider Table 2.2, National Income Accounts for 2011 and 2012. From this data, total GDP in 2012 was about _____ billion.
- a. \$15,644
 - b. \$15,044
 - c. \$34,339
 - d. \$14,576
 - e. \$17,201

ANS: A DIF: Medium REF: 2.2 TOP: I.I.C.
 MSC: Applying

39. Consider Table 2.2, National Income Accounts for 2011 and 2012. From this data, total net domestic product in 2012 was about _____ billion.
- a. \$13,632
 - b. \$13,708
 - c. \$15,645
 - d. \$14,576
 - e. \$11,743

ANS: A DIF: Difficult REF: 2.2 TOP: II.C.
MSC: Applying

40. Since about 1970, _____ income share of GDP has been _____.
- a. labor's; rising
 - b. labor's; the same
 - c. profits'; falling
 - d. indirect business taxes'; rising
 - e. the health sector's; falling

ANS: B DIF: Easy REF: 2.2 TOP: II.C.
MSC: Remembering

41. In the past 60 years or so, labor's share of GDP in the United States _____.
- a. is roughly two-thirds
 - b. is exactly 50 percent
 - c. is roughly one-third
 - d. is equal to capital's income share
 - e. has risen sharply

ANS: A DIF: Easy REF: 2.2 TOP: II.C.
MSC: Remembering

42. When the city of Los Angeles hires more police officers, _____ may rise, but it may be due to the _____ associated with crime.
- a. GDP; costs
 - b. revenues; costs
 - c. taxes; benefits
 - d. interest rates; costs
 - e. prices; costs

ANS: A DIF: Medium REF: 2.2 TOP: II.E.
MSC: Analyzing

43. When a state builds a new penitentiary, _____ rise(s), but that does not imply that _____ improve(s).
- a. income; welfare
 - b. GDP; taxes
 - c. GDP; transfers
 - d. GDP; welfare
 - e. taxes; costs

ANS: D DIF: Medium REF: 2.2 TOP: II.E.
MSC: Analyzing

44. Which of the following counts toward changes in the current GDP?
- a. You find \$10 on the sidewalk.
 - b. You purchase a used stereo from a friend.
 - c. The government builds a new highway.
 - d. You fix your own sink.
 - e. None of these answers are correct.

ANS: C DIF: Medium REF: 2.2 TOP: II.E.
MSC: Analyzing

45. Which of the following does NOT count toward changes in the current GDP?
- a. A student buys another year of tuition.
 - b. You buy a used car from your parents.
 - c. The local police station buys new squad cars.
 - d. The Pentagon buys gasoline.
 - e. None of these answers are correct.

ANS: B DIF: Medium REF: 2.2 TOP: II.E.

MSC: Analyzing

46. By how much does the current GDP rise in the following scenario? A real estate agent sells a house for \$250,000 that the previous owners had purchased 10 years earlier for \$90,000. The real estate agent earns a commission of \$10,000.
- a. \$160,000
 - b. \$250,000
 - c. \$10,000
 - d. \$90,000
 - e. \$260,000

ANS: C DIF: Medium REF: 2.2 TOP: I.I.E.
MSC: Analyzing

47. By how much does GDP change between 2010 and 2011 in the following scenario? In 2010, a rich woman has a chef and pays him \$50,000 to cook for her. In 2011, she marries the chef and he continues to cook.
- a. GDP rises by \$50,000.
 - b. GDP is unchanged.
 - c. GDP falls by \$50,000.
 - d. GDP rises by \$25,000.
 - e. Not enough information is given.

ANS: C DIF: Medium REF: 2.2 TOP: I.I.E.
MSC: Analyzing

48. Nominal GDP is the _____ of all goods and services produced in a period of time using _____ prices.
- a. value; 1945
 - b. summation; current
 - c. value; a previous year's
 - d. value; current
 - e. summation; base year

ANS: D DIF: Medium REF: 2.3 TOP: I.I.E.
MSC: Understanding

49. If you own your own home, National Accounts uses _____ to measure the value of your home.
- a. the geometric mean of the highest and lowest priced house in your neighborhood
 - b. the original purchase price
 - c. an estimate price of your house based on current market conditions
 - d. "rental equivalents"
 - e. the value of your home to your insurance carrier

ANS: D DIF: Medium REF: 2.2 TOP: I.I.E.
MSC: Remembering

50. Real GDP is the _____ of all goods and services produced in a period of time using _____ prices.
- a. summation; current
 - b. value; base year
 - c. value; 1970
 - d. value; 1945
 - e. summation; base year

ANS: B DIF: Medium REF: 2.3 TOP: III.
MSC: Understanding

51. Which of the following is NOT discussed in Jones and Klenow's alternative measure of economic welfare?
- a. inequality
 - b. leisure
 - c. life expectancy
 - d. child mortality rates
 - e. consumption share of GDP

ANS: D DIF: Easy REF: 2.3 TOP: III.A.
MSC: Remembering

52. Nominal GDP is given by _____, where the price level is the _____.
- Nominal GDP = Price level \times Real GDP; GDP deflator
 - Nominal GDP = Price level \div Real GDP; GDP deflator
 - Nominal GDP = Price level + Real GDP; CPI
 - Nominal GDP = Price level – Real GDP; GDP deflator
 - Nominal GDP = Price level \times Real GDP; CPI

ANS: A DIF: Easy REF: 2.3 TOP: III.
MSC: Remembering

53. Real GDP is given by _____, where the price level is the _____.
- Real GDP = Nominal GDP \times Price level; CPI
 - Real GDP = Nominal GDP \div Price level; GDP deflator
 - Real GDP = Nominal GDP + Price level; GDP deflator
 - Real GDP = Nominal GDP – Price level; GDP deflator
 - Real GDP = Nominal GDP \div Price level; CPI

ANS: B DIF: Medium REF: 2.3 TOP: III.
MSC: Applying

54. The price level can be derived as _____ and is called the _____.
- Price level = Nominal GDP \div Real GDP; CPI
 - Price level = Nominal GDP \times Real GDP; CPI
 - Price level = Real GDP \times Nominal GDP; GDP deflator
 - Price level = Real GDP \div Nominal GDP; Paasche deflator
 - Price level = Nominal GDP \div Real GDP; GDP deflator

ANS: E DIF: Medium REF: 2.3 TOP: III.
MSC: Applying

55. The percent change in the nominal GDP is given as:
- percent change in the price level + percent change in real GDP
 - percent change in the price level – percent change in real GDP
 - percent change in the price level \times percent change in real GDP
 - percent change in the price level \div percent change in real GDP
 - price level \times percent change in real GDP

ANS: A DIF: Easy REF: 2.3 TOP: III.
MSC: Remembering

56. If the percent change in the price level is _____ than the percent change in _____, _____.
- smaller; nominal GDP; real GDP shrinks
 - greater; nominal GDP; real GDP shrinks
 - greater; real GDP; nominal GDP shrinks
 - greater; real GDP; nominal GDP always stays the same
 - Not enough information is given.

ANS: B DIF: Medium REF: 2.3 TOP: III.
MSC: Applying

57. Nominal gross domestic product is defined as:
- the value of all goods and services produced by an economy, within its borders, over a

- period of time, at base-year prices
- b. the value of all goods produced by an economy, within its borders, over a period of time, at current prices
- c. the value of all goods and services produced by an economy, within its borders, over a period of time, at current prices
- d. the value of all goods and services produced by an economy's citizens, regardless of where they live, over a period of time, at current prices
- e. the value of all goods and services produced by an economy's citizens, regardless of where they live, over a period of time, at base-year prices

ANS: C DIF: Medium REF: 2.3 TOP: III.
 MSC: Understanding

58. Real gross domestic product is defined as:
- a. the value of all goods and services produced by an economy, within its borders, over a period of time, at base-year prices
 - b. the value of all goods and services produced by an economy, within its borders, over a period of time, at current prices
 - c. the value of all goods produced by an economy, within its borders, over a period of time, at current prices
 - d. the value of all goods and services produced by an economy's citizens, regardless of where they live, over a period of time, at current prices
 - e. the value of all goods and services produced by an economy's citizens, regardless of where they live, over a period of time, at base-year prices

ANS: A DIF: Medium REF: 2.3 TOP: III.
 MSC: Understanding

Refer to the following table when answering the next seven questions. In this economy, only two goods are produced: video games and pistachios.

Table 2.3: National Income Accounting

	2017	2018
Quantity of pistachios	1,000	1,100
Quantity of video games	500	500
Price of pistachios	\$1.00	\$1.50
Price of video games	\$15.00	\$14.75

59. Consider Table 2.3. Using the Laspeyres index, the real GDP in 2017 is:
- a. \$8,900
 - b. \$8,500
 - c. \$1,500
 - d. \$15,500
 - e. \$9,150

ANS: B DIF: Medium REF: 2.3 TOP: III.C.1.
 MSC: Applying

60. Consider Table 2.3. Using the Laspeyres index, the real GDP in 2018 is:
- a. \$9,025
 - b. \$8,500
 - c. \$8,600
 - d. \$9,150
 - e. \$8,475

ANS: C DIF: Medium REF: 2.3 TOP: III.C.1.
 MSC: Applying

61. Consider Table 2.3. Using the Paasche index, the real GDP in 2018 is:

- a. \$9,150
- b. \$8,500
- c. \$8,600
- d. \$9,025
- e. \$8,475

ANS: D DIF: Medium REF: 2.3 TOP: III.C.1.
MSC: Applying

62. Consider Table 2.3. Using the Paasche index, real GDP in 2017 is:

- a. \$8,475
- b. \$8,500
- c. \$8,600
- d. \$9,150
- e. \$8,875

ANS: E DIF: Medium REF: 2.3 TOP: III.C.1.
MSC: Applying

63. Consider Table 2.3. Using the Laspeyres index, inflation between 2017 and 2018 was about:

- a. 0 percent
- b. 5 percent
- c. 1 percent
- d. 6 percent
- e. Not enough information is given.

ANS: B DIF: Difficult REF: 2.3 TOP: III.C.1.
MSC: Applying

64. Consider Table 2.3. Using the Laspeyres index, the percent change in real GDP was about:

- a. 6 percent
- b. 5 percent
- c. 0 percent
- d. 1 percent
- e. Not enough information is given.

ANS: D DIF: Difficult REF: 2.3 TOP: III.C.1.
MSC: Applying

65. Consider Table 2.3. Using the Laspeyres index, the percent change in nominal GDP was about:

- a. 5 percent
- b. 1 percent
- c. 6 percent
- d. 0 percent
- e. Not enough information is given.

ANS: C DIF: Difficult REF: 2.3 TOP: III.C.1.
MSC: Applying

66. If we calculate the real GDP using the _____ index, we use the _____ period's prices.

- a. Laspeyres; final
- b. Paasche; final
- c. Paasche; initial
- d. chain-weighted; current
- e. chain-weighted; final

ANS: B DIF: Easy REF: 2.3 TOP: III.C.1.
MSC: Remembering

67. If we calculate the real GDP using the initial period's prices, we are using a _____ index. If, instead, we use the final period's prices, we are using a _____ index.

- a. Paasche; chain-weighted
- b. Laspeyres; chain-weighted
- c. Laspeyres; Paasche
- d. Paasche; Laspeyres
- e. chain-weighted; Fisher

ANS: C DIF: Easy REF: 2.3 TOP: III.C.1.
MSC: Remembering

68. The chain-weighted measure of real GDP uses prices from:
- a constant base year
 - a constantly changing base year
 - a base year that changes every five years
 - a base year that changes every ten years
 - None of these answers are correct.

ANS: B DIF: Easy REF: 2.3 TOP: III.C.3.
MSC: Remembering

69. Suppose we calculate the percent change in real GDP from year 1 to year 2 using both the Laspeyres and the Paasche indices. With the Laspeyres index we get 12 percent and with the Paasche index we get 9 percent. The chain-weighted growth of real GDP is:
- 1.5 percent
 - 9.75 percent
 - 1.33 percent
 - 9.5 percent
 - 10.5 percent

ANS: E DIF: Medium REF: 2.3 TOP: III.C.3.
MSC: Applying

70. Nominal GDP means that the value of all goods and services is measured in _____ prices.
- average
 - last year's
 - the base year's
 - current
 - constant

ANS: D DIF: Easy REF: 2.3 TOP: III.C.2.
MSC: Remembering

71. If NGDP is nominal GDP and RGDP is real GDP, which of the following can be used to calculate inflation?
- percent change in NGDP + percent change in RGDP
 - percent change in NGDP – percent change in RGDP
 - percent change in NGDP × percent change in RGDP
 - percent change in RGDP + percent change in NGDP
 - percent change in RGDP – percent change in NGDP

ANS: B DIF: Medium REF: 2.3 TOP: III.C.2.
MSC: Applying

72. If NGDP is nominal GDP and P is the price level, which of the following can be used to calculate the growth of the real GDP?
- percent change in NGDP – percent change in P
 - percent change in NGDP + percent change in P
 - percent change in NGDP × percent change in P
 - percent change in P + percent change in NGDP
 - percent change in P – percent change in NGDP

ANS: A DIF: Medium REF: 2.3 TOP: III.C.2.
MSC: Applying

73. If the nominal GDP rises by 3 percent and the price level rises by 5 percent, then the real GDP _____ by _____.
- rises; 8 percent
 - falls; 8 percent
 - rises; 2 percent
 - falls; 2 percent
 - None of these answers are correct.

c. rises; 2 percent

ANS: D DIF: Medium REF: 2.3 TOP: III.C.2.
MSC: Applying

74. If the nominal GDP rises by 6 percent and the price level rises by 3 percent, then the real GDP _____ by _____.

- a. falls; 3 percent
- b. rises; 9 percent
- c. rises; 3 percent
- d. falls; 9 percent
- e. None of these answers are correct.

ANS: C DIF: Medium REF: 2.3 TOP: III.C.2.
MSC: Applying

75. If the nominal GDP rises by 6 percent and the real GDP rises by 3 percent, then the price level _____ by _____.

- a. rises; 3 percent
- b. rises; 9 percent
- c. falls; 3 percent
- d. falls; 9 percent
- e. There is no change in inflation.

ANS: A DIF: Medium REF: 2.3 TOP: III.C.2.
MSC: Applying

76. To get a more accurate view of the size of countries' economies, we first need to convert each country's GDP to the dollar using _____ and then adjust for _____.

- a. the interest rate; the exchange rate
- b. the exchange rate; price level differences
- c. price level differences; the interest rate
- d. the exchange rate; fiscal policy
- e. fiscal policy; the exchange rate

ANS: B DIF: Medium REF: 2.4 TOP: IV.
MSC: Analyzing

77. If we want to calculate the Mexican real GDP in U.S. dollars but adjusted for prices, we use the following:

- a. $\text{Real GDP}_{\text{MEX}}^{\text{U.S. prices}} = \frac{\text{Price level}_{\text{U.S.}}}{\text{Price level}_{\text{MEX}}} \times \text{Nominal GDP}_{\text{MEX}}$
- b. $\text{Real GDP}_{\text{MEX}}^{\text{U.S. prices}} = \frac{\text{Price level}_{\text{MEX}}}{\text{Price level}_{\text{U.S.}}} \times \text{Nominal GDP}_{\text{MEX}}$
- c. $\text{Real GDP}_{\text{MEX}}^{\text{U.S. prices}} = \frac{\text{Price level}_{\text{U.S.}}}{\text{Price level}_{\text{MEX}}} \times \text{Nominal GDP}_{\text{U.S.}}$
- d. $\text{Real GDP}_{\text{MEX}}^{\text{U.S. prices}} = \frac{\text{Price level}_{\text{U.S.}}}{\text{Price level}_{\text{MEX}}} \div \text{Nominal GDP}_{\text{U.S.}}$
- e. None of these answers are correct.

ANS: A DIF: Medium REF: 2.4 TOP: IV.
MSC: Applying

78. If we want to calculate the U.S. real GDP in Mexican pesos, we would use the following:

- a. $\text{Real GDP}_{\text{MEX}}^{\text{U.S. prices}} = \frac{\text{Price level}_{\text{MEX}}}{\text{Price level}_{\text{U.S.}}} \times \text{Nominal GDP}_{\text{U.S.}}$

- b. $\text{Real GDP}_{\text{MEX}}^{\text{U.S. prices}} = \frac{\text{Price level}_{\text{U.S.}}}{\text{Price level}_{\text{MEX}}} \times \text{Nominal GDP}_{\text{U.S.}}$
- c. $\text{Real GDP}_{\text{MEX}}^{\text{U.S. prices}} = \frac{\text{Price level}_{\text{U.S.}}}{\text{Price level}_{\text{MEX}}} \div \text{Nominal GDP}_{\text{U.S.}}$
- d. $\text{Real GDP}_{\text{MEX}}^{\text{U.S. prices}} = \frac{\text{Price level}_{\text{MEX}}}{\text{Price level}_{\text{U.S.}}} \div \text{Nominal GDP}_{\text{U.S.}}$

e. None of these answers are correct.

ANS: B DIF: Medium REF: 2.4 TOP: IV.
MSC: Applying

79. Define $E = \$/\pounds$ as the dollar/pound exchange rate and NGDP_{UK} as the United Kingdom's nominal GDP; then $\text{NGDP}_{\text{UK}}^{\text{U.S.}}$, the United Kingdom's nominal GDP in dollars, is given by:

- a. $E = \text{NGDP}_{\text{UK}} \times \text{NGDP}_{\text{UK}}^{\text{U.S.}}$ d. $\text{NGDP}_{\text{UK}}^{\text{U.S.}} = E \times \text{NGDP}_{\text{UK}}$
- b. $\text{NGDP}_{\text{UK}}^{\text{U.S.}} = E \div \text{NGDP}_{\text{UK}}$ e. None of these answer are correct.
- c. $\text{NGDP}_{\text{UK}} = E \times \text{NGDP}_{\text{UK}}^{\text{U.S.}}$

ANS: D DIF: Medium REF: 2.4 TOP: IV.
MSC: Applying

Refer to the following table when answering the next four questions.

Table 2.4: U.S. and Eurozone Nominal GDP in 2011

	2011
Eurozone nominal GDP (€ billions)	€13,144
U.S. nominal GDP (\$ billions)	\$15,100
Dollar/euro exchange rate	\$1.28/€1
$P_{\text{EZ}}/P_{\text{US}}$	0.96

80. Consider the data in Table 2.4. The value of Eurozone nominal GDP in U.S. dollars is:

- a. \$15,729 billion d. \$10,269 billion
- b. \$11,797 billion e. \$17,525 billion
- c. \$16,824 billion

ANS: C DIF: Medium REF: 2.4 TOP: IV.
MSC: Applying

81. Consider the data in Table 2.4. The value of the Eurozone nominal GDP in U.S. dollars adjusted for price differences is:

- a. \$18,555 billion d. \$17,525 billion
- b. \$9,858 billion e. \$16,151 billion
- c. \$10,697 billion

ANS: E DIF: Medium REF: 2.4 TOP: IV.
MSC: Applying

82. Consider the data in Table 2.4. When we convert the Eurozone's nominal GDP into dollars and adjust for price differences, the U.S. economy is about _____ times _____ than the Eurozone economy.

- a. 0.93; smaller d. 0.61; smaller
- b. 1.07; smaller e. 1.09; bigger

c. 1.47; bigger

ANS: B DIF: Difficult REF: 2.4 TOP: IV.
MSC: Analyzing

83. Consider the data in Table 2.4. When we convert the Eurozone's nominal GDP into dollars but do NOT adjust for price differences, the U.S. economy is about _____ times _____ than the Eurozone economy.

- a. 1.15; smaller
- b. 1.64; smaller
- c. 1.15; bigger
- d. 1.11; smaller
- e. 1.09; bigger

ANS: D DIF: Difficult REF: 2.4 TOP: IV.
MSC: Applying

TRUE/FALSE

1. The largest GDP expenditure share historically has been government expenditure.

ANS: F DIF: Easy REF: 2.2 TOP: I.
MSC: Understanding NOT: It is consumption expenditure.

2. In 2012, consumption expenditures accounted for over 70 percent of the total GDP.

ANS: T DIF: Easy REF: 2.2 TOP: I.
MSC: Remembering

3. The value added for a good produced is equal to the value of the firm's output *plus* the value of the intermediate goods used to produce that output.

ANS: F DIF: Medium REF: 2.2 TOP: II.
MSC: Understanding
NOT: It is equal to the value of the firm's output minus the value of the intermediate goods used to produce that output.

4. According to the expenditure approach to GDP, household expenditures include purchases of residential housing.

ANS: F DIF: Medium REF: 2.2 TOP: II.B.
MSC: Remembering
NOT: Residential housing is included in investment expenditures.

5. The largest share of household consumption expenditures is durable goods.

ANS: F DIF: Medium REF: 2.2 TOP: II.B.
MSC: Remembering NOT: It is services.

6. According to the expenditure approach to GDP, investment expenditures include purchases of residential housing.

ANS: T DIF: Medium REF: 2.2 TOP: II.B.
MSC: Remembering

7. According to the income approach to GDP, the largest portion of GDP is compensation to employees.

ANS: T DIF: Easy REF: 2.2 TOP: II.C.
MSC: Remembering

8. According to the income approach to GDP, the largest portion of GDP is net operating surplus.

ANS: F DIF: Easy REF: 2.2 TOP: II.C.
MSC: Remembering NOT: It is compensation to employees.

9. In the income approach to GDP, fixed capital depreciation is defined as the after-tax profits of a firm.

ANS: F DIF: Easy REF: 2.2 TOP: II.C.
MSC: Remembering
NOT: It is the decline in the value of capital due to wear and tear.

10. GDP measures *all* economic activity.

ANS: F DIF: Medium REF: 2.2 TOP: II.D.
MSC: Understanding NOT: It measures only market activity.

11. When you cook yourself dinner, you are contributing to economic activity, but it is not measured in GDP.

ANS: T DIF: Medium REF: 2.2 TOP: II.D.
MSC: Analyzing

12. When you buy a car from your brother, which he bought new in 2000, the purchase adds to current GDP.

ANS: F DIF: Medium REF: 2.2 TOP: II.E.
MSC: Analyzing NOT: It added to 2000's GDP.

13. GDP often is used as a “measure” of economic welfare; it includes all factors that contribute to economic wellbeing.

ANS: F DIF: Medium REF: 2.2 TOP: III.A.
MSC: Analyzing
NOT: It does not include costs like pollution, crime, depletion of resources, and environmental degradation.

14. If the percent change in prices is greater than the percent change in the nominal GDP, the real GDP shrinks.

ANS: T DIF: Medium REF: 2.3 TOP: III.C.2.
MSC: Applying

15. If the percent change in prices is greater than the percent change in the nominal GDP, the real GDP rises.

ANS: F DIF: Medium REF: 2.2 TOP: III.C.2.
MSC: Applying

16. When calculating the real GDP using the Laspeyres index, we use the final period's prices.

ANS: F DIF: Easy REF: 2.3 TOP: III.C.1.
MSC: Remembering NOT: We use the initial period's prices.

17. When calculating the real GDP using the Paasche index, we use the final period's prices.

ANS: T DIF: Easy REF: 2.3 TOP: III.C.1.
MSC: Remembering

18. If the nominal GDP rises by 5 percent and the price level falls by 2 percent, the real GDP falls by 7 percent.

ANS: F DIF: Medium REF: 2.3 TOP: III.C.3.
MSC: Applying NOT: The real GDP rises by 7 percent.

19. If Croatia's price level is higher than the U.S. price level, Croatia's dollar-denominated GDP, calculated using price adjustments, will appear smaller than if simply calculated with the exchange rate.

ANS: T DIF: Medium REF: 2.4 TOP: IV.
MSC: Analyzing

20. To get an accurate view of how GDPs differ across countries, we simply need to convert all countries' GDPs into dollars using the prevailing exchange rate.

ANS: F DIF: Medium REF: 2.4 TOP: IV.
MSC: Understanding
NOT: We also need to account for price level differences.

21. If the percent change in real GDP is found to be 4 percent using the Laspeyres index and 3 percent using the Paasche index, the chain-weighted price index will give us a growth rate of 3.5 percent.

ANS: T DIF: Medium REF: 2.3 TOP: IV.
MSC: Applying NOT: $3.5 = (1/2)(4\% + 3\%)$.

SHORT ANSWER

1. What is real GDP? Why do we calculate real GDP? What are the shortcomings of real GDP?

ANS:

Real GDP is the value of all goods and services produced within an economy's borders over a period of time, at constant prices. It is calculated to measure overall economic activity and aggregate income. This is used as a measure of welfare, as higher income connotes higher consumption, health, leisure, etc. However, there are shortcomings. First, it misses unreported output (i.e., "under the table" output of goods and services), output that is done in day-to-day life (e.g., making yourself a sandwich), and it assumes more output leads to more welfare. However, "defensive" output (e.g., walls built to buffer noise pollution) increases GDP but may not improve welfare. Also it does not account for other costs of production (e.g., pollution, crime, resource depletion, etc.).

DIF: Medium REF: 2.2 TOP: II. MSC: Analyzing

2. Using the expenditure approach to national income accounting, when discussing government expenditures, do we include transfer payments? Why or why not?

ANS:

No. The expenditure approach concentrates on *purchases of goods and services* only. Transfer payments are income transfers and are not directly used to buy things. They are a form of negative tax and would therefore be a form of income for recipients of the transfer, enhancing disposable income: Disposable income = Income – (taxes – transfers).

DIF: Medium REF: 2.2 TOP: II.B. MSC: Analyzing

3. What are the components that make up the *income approach* to calculating GDP? What are the components that make up the *expenditure approach* to calculating GDP?

ANS:

- (a) Income approach: compensation to employees; indirect business taxes; net operating surplus of business (profits); and depreciation of fixed capital
(b) Expenditure approach: household consumption; fixed private investment; net exports; and government expenditures

DIF: Easy REF: 2.2 TOP: II.B./II.C. MSC: Remembering

4. Identify which of the following goods are part of the current year's U.S. GDP and which are considered current year's U.S. GNP; explain. (Note: Ford is a company owned by U.S. citizens and Toyota is a company owned by Japanese citizens.)
(a) a Ford produced in Mexico
(b) a Toyota produced in California
(c) a meal you make for a dinner party
(d) an American-made vintage T-shirt from Led Zeppelin's 1971 North American tour you bought online last week

ANS:

- (a) It is part of U.S. GNP but not GDP as it is not produced within U.S. borders; it is part of Mexico's GDP.
(b) It is part of U.S. GDP but not GNP as it is not produced by a U.S. firm; it is part of Japan's GNP.
(c) Neither; it is "under the table" production and is not included in the national accounts.
(d) Neither, as it is not current production. The T-shirt is not counted in current GDP; it was, however, part of 1971's GDP.

DIF: Medium REF: 2.2 TOP: II.E. MSC: Analyzing

5. Consider the data in the following table, which represents the total production of the country Tucommodatia. They produce only consumer goods.

	2017	2018	2019
Quantity of Y	100	105	103
Quantity of X	5	3	4
Price of Y	\$5	\$5	\$5
Price of X	\$100	\$105	\$110

- (a) Calculate real GDP for all three years, using 2017 as the base year.
(b) Calculate the Consumer Price Index (CPI), using 2017 as the base year. Identify whether there was inflation from the previous year.

ANS:

Real GDP is a form of the Paasche index, so for each year we use the current year's prices and that year's quantities:

*2017: $RGDP = 100 \times \$5 + 5 \times \$100 = \$1,000$

*2018: $RGDP = 105 \times \$5 + 3 \times \$100 = \$825$

*2019: $RGDP = 103 \times \$5 + 4 \times \$100 = \$915$

The equation for the CPI is:

$$CPI = \frac{P_x^C \times Q_x^B + P_y^C \times Q_y^B}{P_x^B \times Q_x^B + P_y^B \times Q_y^B} \times 100$$

where the C/B superscript denotes the current/base year.

To make it easier, the denominator is equal to \$1,000.

*2017: Since the base and current year are the same: $CPI_{2017} = 100$;

*2018: $825/1000 \times 100 = 82.5$, prices fell 17.5 percent from 2017 to 2018;

*2019: $915/1000 \times 100 = 91.5$, prices are 8.5 percent lower in 2019 than in 2017 but are about 11 percent higher than in 2018.

DIF: Difficult

REF: 2.3

TOP: III.

MSC: Analyzing

6. You are a staff economist for your local bank and the bank manager claims that in 2012 the Chinese economy was bigger than in the United States. To prove him wrong you decide to put your economics training to work for you and decide to show him China's GDP in U.S. dollars, and to show him how smart you are, you also decide to calculate PPP GDP in China and compare that to the United States as well. You have the following data: In 2012, China's nominal GDP was CY 51.932 trillion (CY = Chinese yuan); the yuan-dollar exchange rate was CY 6.31/\$1; nominal GDP in the United States was \$15.685 trillion; the price level in the United States was 1.00 and the price level in China was 0.60. How big is China's economy?

ANS:

The first part of the question is straightforward. Just convert Chinese nominal GDP to dollars by dividing it by the yuan-dollar exchange rate (conversely, this is the same as multiplying it by the dollar-yuan exchange rate):

$$\$NGDP_{CH} = \frac{51.932}{\frac{6.31}{\$1}} = \$8.230$$

Thus the Chinese economy is about 65 percent the size of the U.S. economy. But to get a more accurate view we need to look at GDP adjusted for price differences, PPP adjusted Chinese GDP. So we use the equation:

$$PPPGDP_{CH} = P_{U.S.}/P_{CH} \times \$NGDP_{CH} = 1.667 \times \$8.23 \text{ tril} = \$13.72 \text{ tril}.$$

Thus, once we take price differences into consideration, the Chinese economy is only about \$2 trillion smaller than the U.S. economy.

DIF: Difficult

REF: 2.4

TOP: IV.

MSC: Analyzing

7. You are a staff economist for your local bank and the bank manager asks you to calculate whether Qatar (QAT), Luxembourg (LUX), or the United States (USA) is biggest in per capita terms when adjusted for price differences. She gives you the following data table and asks you to fill in the missing values.

Population (column A) and GDP (D) are in millions. GDP in column D is in domestic currency, the euro for Luxembourg, the Qatari rial for Qatar, and the U.S. dollar for the United States. The exchange rate (B) is units of foreign currency per U.S. \$1, and P_{US}/P_i is the relative price level for the United States and the other countries.

Table GDP, Population, and Exchange Rate Data in 2010

	Pop	Exchange Rate	P_{US}/P_i	GDP (millions)	Per Capita GDP National Currency	Per Capita GDP (\$)	PPP Per Capita GDP (\$)
	(A)	(B)	(C)	(D)	(E)	(F)	(G)
LUX	0.498	0.76	0.87	36,561	–	–	–
QAT	0.841	3.64	1.01	470,422	–	–	–
USA	310.23	1.00	1.00	14,584,731	–	–	–

ANS:

The calculation will be done using columns rather than numbers.

- First you need to calculate per capita GDP in national currency, which is simply D/A ;
- To get per capita GDP in dollars: E/C ;
- To get PPP PC GDP: $F \times C$;
- This gives you the following table.
- You can conclude total GDP in the United States is the largest, but all levels of per capita GDP are largest in Qatar and smallest in the United States.

Table

	Pop	Exchange Rate	P_{US}/P_i	GDP (millions)	Per Capita GDP National Currency	PCGDP (\$)	PPPPC GDP (\$)
	A	B	C	D	E	F	G
LUX	0.498	0.76	0.87	36,561	73,484	97,324	84,892
QAT	0.841	3.64	1.01	470,422	559,410	153,684	155,119
USA	310.23	1.00	1.00	14,584,731	47,012	47,012	47,012

DIF: Difficult

REF: 2.4

TOP: IV.

MSC: Applying