**Chapter 6 GDP ANSWERS**

**1. Suppose a particular model of car contains $17,500 worth of raw materials and requires $15,000 worth of labor to produce. This car sells for $35,000. Which dollar amount would be used to calculate this transaction’s contribution to gross domestic product (GDP)?**

* 1. $2,500
  2. $17,500
  3. $20,000
  4. $32,500
  5. **$35,000**

***Consider the following data to answer the questions 2-5.***

|  |  |  |
| --- | --- | --- |
| **Country** | Real GDP | Population |
| A | $150,000 | 200 |
| B | $120,000 | 150 |
| C | $120,000 | 200 |
| D | $100,000 | 100 |
| E | $75,000 | 100 |
|  |  | |

**2. Which country has the lowest average living standard?**

* 1. A
  2. B
  3. **C**
  4. D
  5. E

**3. Real per capita gross domestic product (GDP) in country A is \_\_\_\_\_\_\_\_.**

* 1. $300
  2. $600
  3. **$750**
  4. $800
  5. $900

**4. Which two countries have the same average living standard?**

* 1. B and C
  2. C and D
  3. A and B
  4. C and E
  5. **A and E**

**5. If these are the only five countries in the world, then country B produces about \_\_\_\_\_\_\_\_ of the world’s real gross domestic product (GDP).**

* 1. **21%**
  2. 25%
  3. 33%
  4. 51%
  5. 67%

**6. Restaurant Supply, Inc. sells cheese to Windy City Pizza for $1,000. Windy City Pizza uses the cheese to make pizzas, selling them to consumers for a total of $10,000. These transactions contribute \_\_\_\_\_\_\_\_ to the gross domestic product (GDP).**

* 1. $100
  2. $1,000
  3. $9,000
  4. **$10,000**
  5. $11,000

**7. A bakery produces a cake. It pays $6 for the flour and outer case, $10 for the eggs, and $8 for the sugar. It sells the cake to a consumer for $50. These transactions contribute \_\_\_\_\_\_\_\_ to gross domestic product (GDP).**

* 1. $24
  2. **$50**
  3. $60
  4. $74
  5. $100

**8. A hair stylist receives $6,000 per month from her clients as payment for her services. Each month she buys $1,000 worth of supplies. These transactions contribute \_\_\_\_\_\_\_\_ to gross domestic product (GDP) each month.**

* 1. $1,000
  2. $4,000
  3. $5,000
  4. **$6,000**
  5. $7,000

**9. An example of an intermediate good would be**

* 1. lumber used by a consumer to build a fence in their yard.
  2. **oil purchased by a restaurant to be used for frying.**
  3. a new stove purchased by a consumer.
  4. an airplane purchased by the government.
  5. Social Security payments made by the government.

**10. When Ellen buys a new computer for her accounting business, it is included in gross domestic product (GDP) as \_\_\_\_\_\_\_\_, and when she buys a new computer for personal use at home, it counts as \_\_\_\_\_\_\_\_.**

* 1. consumption; consumption
  2. consumption; investment
  3. government purchases; consumption
  4. investment; investment
  5. **investment; consumption**

**11. The consumption category includes all purchases by \_\_\_\_\_\_\_\_ with the exception of \_\_\_\_\_\_\_\_.**

* 1. households; automobiles
  2. **households; new housing**
  3. households; services
  4. businesses; buildings
  5. buildings; inventory

**12. A company produces 100,000 trucks this year but sells only 95,000. The 5,000 trucks that are not sold are counted in the \_\_\_\_\_\_\_\_ category of gross domestic product (GDP).**

* 1. consumption
  2. **investment**
  3. government purchases
  4. imports
  5. exports

***Consider the following data, where gross domestic product (GDP) values are measured in millions of dollars, to answer questions 13-18.***

|  |  |  |  |
| --- | --- | --- | --- |
| **Year** | Nominal GDP | Real GDP | GDP Deflator |
| 2015 | \_\_\_\_\_\_\_\_ | $650 | 100.0 |
| 2016 | $700 | \_\_\_\_\_\_\_\_ | 103.7 |
| 2017 | $775 | $725 | \_\_\_\_\_\_\_\_ |
| 2018 | \_\_\_\_\_\_\_\_ | $750 | 110.0 |
|  |  | | |

**13. What is the value of real gross domestic product (GDP) in 2016?**

* 1. $598.4 million
  2. **$675.0 million**
  3. $725.9 million
  4. $803.7 million
  5. $915.3 million

**14. What is the value of the gross domestic product (GDP) deflator in 2017?**

* 1. 70.0
  2. 93.5
  3. 102.1
  4. **106.9**
  5. 110.7

**15. What is the value of nominal gross domestic product (GDP) in 2015?**

* 1. $6.5 million
  2. $65.0 million
  3. $100.0 million
  4. **$650 million**
  5. $1,000 million

**16. What is the value of nominal gross domestic product (GDP) in 2018?**

* 1. $6.8 million
  2. $55.7 million
  3. $146.7 million
  4. $504.2 million
  5. **$825.0 million**

**17. What was the inflation rate between 2017 and 2018?**

* 1. 1.6%
  2. **2.9%**
  3. 3.6%
  4. 4.7%
  5. 5.3%

**18. What was the growth rate of nominal gross domestic product (GDP) from 2016 to 2017?**

* 1. 1.7%
  2. 3.8%
  3. 5.6%
  4. 7.5%
  5. **10.7%**

***Consider the following data that gives the quantity produced and unit price for three different goods across two different years to answer questions 19-24. Assume that goods A, B and C are the economy’s entire output and that the base year is 2017.***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Good** | 2017 Price | 2017 Quantity | 2018 Price | 2018 Quantity |
| A | $2.00 | 500 | $2.00 | 600 |
| B | $1.00 | 750 | $1.50 | 800 |
| C | $2.00 | 300 | $3.00 | 300 |
|  |  | | | |

**19. What was the real gross domestic product (GDP) in 2018?**

* 1. $1,400
  2. **$2,600**
  3. $3,300
  4. $5,400
  5. $6,600

**20. What was the gross domestic product (GDP) deflator in 2017?**

* 1. **100.0**
  2. 103.8
  3. 106.9
  4. 109.5
  5. 116.7

**21. What was the gross domestic product (GDP) deflator in 2018?**

* 1. 100.0
  2. 103.8
  3. 107.9
  4. 119.4
  5. **126.9**

**22. What was the rate of inflation between 2017 and 2018?**

* 1. 2.8%
  2. 7.9%
  3. 16.7%
  4. **26.9%**
  5. 30.1%

**23. What was the nominal gross domestic product (GDP) in 2018?**

* 1. $1,400
  2. $2,600
  3. **$3,300**
  4. $5,400
  5. $6,600

**24. What was the growth rate of real gross domestic product (GDP) between 2017 and 2018?**

* 1. 2.4%
  2. 5.3%
  3. 7.6%
  4. **10.6%**
  5. 12.2%

***Consider the following data that give the quantity produced and unit price for three goods across two years to answer questions 25-29. Assume that goods A, B and C are the economy’s entire output and that the base year is 2018.***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Good** | 2018 Price | 2018 Quantity | 2019 Price | 2019 Quantity |
| A | $1 | 500 | $2 | 550 |
| B | $2 | 700 | $3 | 800 |
| C | $10 | 200 | $10 | 225 |
|  |  | | | |

**25. What was the real gross domestic product (GDP) in 2019?**

* 1. $3,000
  2. $3,900
  3. **$4,400**
  4. $4,950
  5. $5,500

**26. What was the gross domestic product (GDP) deflator in 2019?**

* 1. 103.1
  2. 110.2
  3. 116.5
  4. 125.4
  5. **130.7**

**27.What was the inflation rate between 2018 and 2019?**

* 1. 5.9%
  2. 8.1%
  3. 15.4%
  4. 26.2%
  5. **30.7%**

**28. What was the nominal gross domestic product (GDP) in 2018?**

* 1. **$3,900**
  2. $4,400
  3. $5,500
  4. $6,250
  5. $7,000

**29. What was the growth rate of real gross domestic product (GDP) between 2018 and 2019?**

* 1. 7.5%
  2. **12.8%**
  3. 17.5%
  4. 25.0%
  5. 31.8%

**30. Real gross domestic product (GDP) is equal to**

* 1. current prices × base year output.
  2. current prices × current output.
  3. base year prices × base year output.
  4. **base year prices × current output.**
  5. current output/base year prices.

**31. Real gross domestic product (GDP) increases if**

* 1. current prices increase.
  2. **current quantities increase.**
  3. current prices are constant.
  4. nominal GDP increases.
  5. nominal GDP decreases.

**32. Nominal gross domestic product (GDP) increases if**

* 1. current prices increase, while current quantities decrease.
  2. current quantities increase, while current prices decrease.
  3. **current prices and current quantities increase.**
  4. real GDP increases.
  5. real GDP decreases.

**33. Nominal gross domestic product (GDP) increased from $15.62 trillion to $16.09 trillion, and the price level increased from 120.0 to 122.4. Rounding to the nearest first decimal, the rate of inflation was \_\_\_\_\_\_\_\_.**

* 1. 3.0%
  2. 1.0%
  3. 2.4%
  4. 20.0%
  5. **2.0%**

**34. Apple, Inc. is an American company that produces some phones and computers in China. The value of Apple’s production in China is included in**

* 1. both U.S. gross domestic product (GDP) and China’s GDP.
  2. half U.S. GDP and half China’s GDP.
  3. U.S. GDP, but not China’s GDP.
  4. **China’s GDP, but not U.S. GDP.**
  5. neither U.S. GDP nor China’s GDP.

**35. Nominal gross domestic product (GDP) typically rises \_\_\_\_\_\_\_\_ than real GDP because nominal GDP reflects \_\_\_\_\_\_\_\_.**

* 1. slower; only growth in prices
  2. slower; only growth in production
  3. slower; growth in both prices and production
  4. faster; only growth in prices
  5. **faster; growth in both prices and production**

**36. Which of the following is included in the government purchases category of gross domestic product (GDP)?**

* 1. foreign aid payments
  2. fines paid out as the result of lawsuits
  3. interest paid on municipal bonds
  4. **salaries of diplomatic personnel**
  5. unemployment benefit checks

**37. Government spending on building maintenance is included in the \_\_\_\_\_\_\_\_ category of gross domestic product (GDP).**

* 1. consumption
  2. investment
  3. **government purchases**
  4. net exports
  5. durable goods

**38. Kyle is a part-time adjunct chemistry professor and also does tutoring on the weekends but does not report the tutoring income to the government. You pay Kyle $500 to help your high schooler prepare for an AP chemistry examination. Does the payment to Kyle count toward the value of gross domestic product (GDP)?**

* 1. Yes, because your high schooler’s passing the AP examination has economic value in the form of tuition savings.
  2. Yes, because Kyle is using his professional expertise to tutor.
  3. **No, because this income is not reported to the government.**
  4. No, because tutoring is a nonmarket activity.
  5. No, because the AP exam the tutoring helps with is not a commercial activity.

**39. If, over a period of time, real gross domestic product (GDP) increases while nominal GDP decreases, then this implies**

* 1. a significant rise in the price level.
  2. **a significant drop in the price level.**
  3. that real GDP is much less than nominal GDP.

**40. If nominal gross domestic product (GDP) is declining but production is rising, then it must be the case that**

* 1. fewer goods and services are being produced.
  2. prices must be lower on average.
  3. prices must be increasing more rapidly than production.
  4. **prices are falling more rapidly than production is rising.**
  5. production is rising more rapidly than prices are falling.

**41. Nominal gross domestic product (GDP) increased from $15.76 trillion to $16.39 trillion, and the price level increased from 112.6 to 114.8. Which of the following is true?**

* 1. **Nominal GDP grew faster than the price level.**
  2. Nominal GDP grew slower than the price level.
  3. Real GDP grew faster than nominal GDP.
  4. Nominal GDP grew at the same rate as the price level.
  5. Real GDP grew at the same rate as nominal GDP.

**42. A company sells 100 boxes of chocolate, yet it produced only 85 boxes of chocolate during the year. Which of the following is true?**

* 1. It is impossible to sell more than is produced.
  2. **Inventory investment must be negative.**
  3. The price of the chocolate must have gone up.
  4. The firm must have acquired the extra 15 boxes from another company.
  5. The firm sold the chocolate but must have given 15 people an IOU.

**43. Explain why national output and national income are essentially the same thing. Why do exports to other nations not create a problem for this identity?**

**Answer:** Every market transaction contributes to both output and income using the same number, namely price. A sale of a $4 cup of coffee, for example, is counted as the production of $4 worth of coffee and, at the same time, as $4 of income for the coffee vendor. Exported goods count as domestic production, and the same price used to quantify their contribution to production also counts as domestic income, and so again the identity is maintained.

**44. Explain why per capita gross domestic product (GDP) is a better measure of a nation’s standard of living than national GDP.**

**Answer**: Standard of living is about each individual’s quality of life and includes goods and services an individual can afford to buy with his income, which is roughly a function of that person’s individual real income level. The standard of living for a nation can therefore be considered in terms of average real income level, which is total real income divided by population, a definition of per capita real GDP because national income equals national product. National GDP, by contrast, could be the same for a large nation of poor workers as for a small nation of well-off ones, and so national GDP is a poor measure of standard of living.

**45. A student had the following expenditures last month: rent $500; food expense $200; cost of new shoes $100; and cost of gas for the car $100. Which of these items are included in gross domestic product (GDP)?**

**Answer**: The rent is included because the landlord is earning income by renting his property. The food, shoes, and gas count as purchases of new goods. If any of the food or shoes was imported, then this will count in the import category.

**46. Explain why intermediate goods and used goods do not count as elements of gross domestic product (GDP).**

**Answer**: Used goods do not count because they were already counted in the year they were produced. GDP is a measure of the market value of new production in a given time period. Intermediate goods do not count because they are figured as part of the value of the final good. For example, the price of the new car includes the value of the tires on the car. If we counted the tires separately, it would be considered double counting.

**47. Use the information in the table below to calculate the real 2015 gross domestic product (GDP) in 2009 dollars. Explain how the calculation is performed and the reasoning behind it.**

|  |
| --- |
| **U.S. Nominal GDP and Price Level, 2006–2015** |
|  |

**Year Nominal GDP (billions of dollars) Price Level (GDP deflator)**

|  |  |  |
| --- | --- | --- |
| 2006 | $13,855.9 | 95 |
| 2007 | $14,477.6 | 97 |
| 2008 | $14,718.6 | 99 |
| 2009 | $14,418.7 | 100 |
| 2010 | $14,964.4 | 101 |
| 2011 | $15,517.9 | 103 |
| 2012 | $16,155.3 | 105 |
| 2013 | $16,663.2 | 107 |
| 2014 | $17,348.1 | 109 |
| 2015 | $17,937.8 | 110 |
|  |  | |

**Answer**: Nominal 2015 GDP was $17,937.8 billion. The price level for that year was 110, which means that the same goods that cost $100 in 2009, the base year, cost $110 in 2015, just because of inflation. To adjust for inflation, divide by 110 to filter out the 2015 prices, and then multiply by 100, the price level for 2009. The result, $16,307.1 billion, represents what the 2015 production output would have cost if there had been no inflation from 2009 onward—in other words, the worth of the 2015 output in 2009 dollars.

**48. If gross domestic product (GDP) is increasing, is the country necessarily producing a larger quantity of goods and services? Explain.**

**Answer**: No, the country is not necessarily producing a larger quantity of goods and services. The country could be producing the same amount of goods and services, but the average price level could be rising. Thus, nominal GDP rises, while real GDP falls.

**49. Explain why a country with a lower level of real gross domestic product (GDP) per capita might have a higher level of well-being in comparison to a country with a higher level of real GDP per capita.**

**Answer**: The country with the lower level of real GDP per capita may have a higher level of well-being because real GDP per capita fails to account for environmental quality and leisure time. This country’s environment may be less polluted and/or the workers may work fewer hours per week. In addition, the income distribution in this country may be more equal, so there is perhaps less poverty. Students may also mention nonmarket goods and the underground economy.

**50. Use the information in the table below to calculate nominal gross domestic product (GDP) for 2018 and real GDP for 2018. Use 2017 as the base year.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Good** | 2017 Price | 2017 Quantity Produced | 2018 Price | 2018 Quantity Produced |
| Wheat | $1.00 | 200 | $1.50 | 250 |
| Corn | $2.00 | 300 | $2.00 | 325 |
| Milk | $4.00 | 100 | $5.00 | 150 |
|  |  | | | |

**Answer**:

2018 nominal GDP: ($1.50 × 250) + ($2 × 325) + ($5 × 150) = $1,775

2018 real GDP: ($1 × 250) + ($2 × 325) + ($4 × 150) = $1,500