

NAME \_\_\_\_\_

Peking University  
Principles of Economics  
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Homework 4  
Due: Wednesday, June 5

**Instructions:**

1. Print your name on the answer sheet.
2. This homework assignment consists of 20 multiple-choice questions with each one worth 3 points and 2 short-answer questions for 40 points, 100 points total. Make sure you have a complete question set.
3. Please write down all your answers on the answer sheet. Answers written on the question sheet will NOT be graded.
4. The space provided on the answer sheet should be sufficient for your answer. If you need additional space, attach a blank paper.
5. Please write neatly. If I cannot read an answer, you will receive no credit for it.
6. Show enough of your work so that I can tell how you arrived at the answer. You will receive credit for sound reasoning. Partial credit will be awarded wherever I deem there is sufficient justification.
7. When drawing graphs, make sure to label everything, including the axes. It is not particularly important to draw your graphs with perfect precision.
8. Turn in the answer sheet ONLY.

1. You receive money as payment for mowing your neighbor's lawn. Which function of money does this best illustrate?
  - A. Medium of exchange.
  - B. Unit of account.
  - C. Store of value.
  - D. Liquidity.
  
2. A newspaper article informs that most businesses increased production but also sold from their inventories. Based on this information, it is likely that GDP
  - A. increased.
  - B. decreased.
  - C. stayed the same.
  - D. may have increased, decreased, or stayed the same.
  
3. Total income and total expenditure are
  - A. never equal because total income always exceeds total expenditure.
  - B. seldom equal because of the ongoing changes in an economy's unemployment rate.
  - C. equal only when the government purchases no goods or services.
  - D. always equal because every transaction has a buyer and a seller.
  
4. If total spending rises from one year to the next, then
  - A. the economy must be producing a larger output of goods and services.
  - B. goods and services must be selling at higher prices.
  - C. either the economy must be producing a larger output of goods and services, or goods and services must be selling at higher prices, or both.
  - D. employment or productivity must be rising.
  
5. Joe and Bob purchase oranges at a grocery store, but Bob also grows oranges in his backyard. Regarding these two practices, which of the following statements is correct?
  - A. Only Joe's grocery store purchases are included in GDP.
  - B. Only Joe's and Bob's grocery store purchases are included in GDP.
  - C. Joe's and Bob's grocery store purchases are included in GDP. The oranges from Bob's backyard garden are included at their market value.
  - D. Joe's and Bob's grocery store purchases are included in GDP. The oranges from Bob's backyard garden are included at their market value, if Bob provides this information.

6. When calculating GDP, investment is the spending on
- A. stocks, bonds, and other financial assets.
  - B. real estate and financial assets such as stocks and bonds.
  - C. capital equipment, inventories, and structures, including household purchases of new housing.
  - D. capital equipment, inventories, and structures, excluding household purchases of new housing.
7. A transfer payment is a payment made by
- A. consumers, but not in exchange for a tangible product.
  - B. firms, but not in exchange for capital equipment.
  - C. foreigners, but not in exchange for a domestically produced good or service.
  - D. government, but not in exchange for a currently produced good or service.
8. If in some year nominal GDP was \$20 billion and the GDP deflator was 80, what was real GDP?
- A. \$25 billion.
  - B. \$60 billion.
  - C. \$100 billion.
  - D. \$400 billion.
9. Countries with low GDP per person tend to have
- A. lower rates of child malnutrition.
  - B. fewer infants with low birth weight.
  - C. higher rates of infant mortality.
  - D. more access to safe drinking water.
10. When the Japanese car maker Toyota expands one of its car factories in the United States, what is the likely impact of this event on the gross domestic product and gross national product of the United States?
- A. GDP rises and GNP falls.
  - B. GNP rises and GDP falls.
  - C. GDP and GNP both rise but GDP rises by more.
  - D. GDP and GNP both rise but GNP rises by more.

**11. Which of the following statements accurately describes catch-up growth?**

- A. In one generation, China will be one of the richest countries in the world, if China's GDP per person continues to grow 9% per year.**
- B. In one generation, even if China's GDP per person will decline 9% per year, China will remain one of richest countries in the world.**
- C. In one generation, Zimbabwe will be the world richest country, since Zimbabwe's per person GDP grew 9% in the last couple of decades.**
- D. In one generation, Zimbabwe will be one of middle-income countries, since Zimbabwe's per person GDP fell by 27% in the last couple of decades.**

**12. When the consumer price index falls, the typical family**

- A. can spend fewer dollars to maintain the same standard of living.**
- B. has to spend more dollars to maintain the same standard of living.**
- C. finds that its standard of living is not affected.**
- D. can offset the effects of rising prices by saving more.**

**13. Price index was 128 in Year 2, and the inflation rate was 19.6 percent between Year 1 and Year 2. The price index in Year 1 was**

- A. 108.4**
- B. 107**
- C. 64**
- D. 12.8**

**14. The consumer price index tries to gauge how much incomes must rise to maintain**

- A. an increasing standard of living.**
- B. a constant standard of living.**
- C. a decreasing standard of living.**
- D. the highest standard of living possible.**

**15. Which of the following item would be included in the market basket of goods and services used to compile the consumer price index for the U.S.?**

- A. A bushel of wheat sold to the Netherlands.**
- B. A Peterbilt truck purchased by United Transport and Shipping Company.**
- C. A new \$170 hammer purchased by the Chinese Air Force.**
- D. A bottle of vodka imported from Russia purchased by a local economics professor at NC State University.**
- E. A public supply of third-grade textbooks for a primary school run by the government.**

**16. In the United States, if the price of imported oil rises so that the prices of gasoline and heating oil rise, then the**

- A. consumer price index rises much more than does the GDP deflator.**
- B. GDP deflator rises much more than does the consumer price index.**
- C. GDP deflator and the consumer price index rise by about the same amount.**
- D. All of the above is possible.**

**17. Changes in the quality of a good**

- A. do not present a problem in the construction of the consumer price index.**
- B. present a problem in the construction of the consumer price index, and that problem is sometimes referred to as substitution bias.**
- C. are not accounted for, as a matter of policy, by the Bureau of Labor Statistics.**
- D. can lead to either an increase or a decrease in the value of a dollar.**

**18. The introduction of the video cassette recorder in the 1970s exemplified a problem in measuring the cost of living; that problem is**

- A. substitution bias.**
- B. product-improvement bias.**
- C. introduction of new goods.**
- D. unmeasured quality change.**

**19. Suppose the consumer price index was 184 in Year 1 and 198.17 in Year 2. The nominal interest rate during this period was steady at 5.8 percent. What was the real interest rate during this period?**

- A. 1.2 percent**
- B. 0.4 percent**
- C. -1.9 percent**
- D. -2.6 percent**

**20. Which of the following statements is correct?**

- A. The percentage change in the CPI is a measure of the inflation rate, but the percentage change in the GDP deflator is not a measure of the inflation rate.**
- B. The CPI can be used to compare dollar figures from different points in time.**
- C. Compared to the CPI, the GDP deflator is the more common gauge of inflation.**
- D. The GDP deflator better reflects the goods and services bought by consumers than does the CPI.**

**21. Suppose there are two countries, PKU with the currency PKD and THU with the currency THD. The exchange rate is 10 PKD per THD. Now PKU imports bricks that are worth 400,000 THD from THU and uses them to construct a teaching hall which is worth 6 million PKD.**

- 1) Calculate the GDP change of PKU and point out which section of GDP (C, I, G, NX) it belongs to.**
- 2) Suppose the exchange rate changes to 5 PKD per 1 THD. Recalculate the GDP impact for PKU. Provide some potential real-world scenarios that could lead to this exchange rate change and explain the logic.**
- 3) Following the assumption in the question above, will PKU benefit from this type of exchange rate shift for sure? Explain in detail.**

**22. A country Fiori produces only vegetables and fruits, and it imports brownies for consumption. Fiori's annual production and imports for 2022 and 2023 are given in the table below:**

Year	Vegetables Produced (Units)	Fruits Produced (Units)	Brownies Imported (Units)
2022	100	80	10
2023	150	90	15

Year	Price of Vegetables (\$)	Price of Fruits (\$)	Price of Brownies (\$)
2022	2	3	10
2023	2	4	20

Suppose Fiori does not export any goods and has consumed all the goods produced and imported during the year. Use the total consumption in 2022 as a basket of goods and set 2022 as the base year to answer the following questions.

- 1) Calculate the GDP deflator and the CPI for 2023, and use the CPI to calculate the inflation rate.
- 2) In general, when using the CPI to measure the inflation rate, will it overestimate or underestimate the inflation rate? Explain in detail and provide other disadvantages of using the CPI to measure the inflation rate.