

# MACROECONOMICS UNIT 2

## PRACTICE SHEET



**Part 1: GDP Practice-** Identify if each is an example of consumer spending (C), investment spending (I), government spending (G), net exports (XN), or not counted (NC) in the US GDP for the year 2023.

1. XN A Canadian company buys an airplane from the American company Boeing
2. C An American purchase an online video game from company from California
3. I Instagram buys new desks for its employees
4. XN An American buys shoes from Italy
5. I You buy a new home in Texas that is build in 2023
6. NC The government issues a \$500 Social Security check to your grandma living in Louisiana
7. C Your cousin spends \$3000 for rent for an apartment in New York
8. NC Your brother buys a 2018 Toyota truck at a local dealership

**Part 2: Unemployment Practice-** Answer the question. When possible, show your work.

The nation of Macrostan has a population of 400 million people that are above 16 years old. Currently, 250 million people have full time jobs and another 35 million people have part time jobs. Of the 30 million people that would like a job but are not currently employed, 15 million are actively engaged in searching for a job while 15 million have given up looking for a job.

9. How many people are currently in the labor force of Macrostan? **300 million people = 250 million full time jobs + 35 million part time + 15 million actively looking**
10. Calculate the labor force participation rate. Show your work. **75% = 300 million / 400 million x 100**
11. What is the total number of people counted as unemployed? **15 million**
12. Calculate the unemployment rate. Show your work. **5% = 15 million /300 million x 100**
13. Suppose that the 15 million people that gave up looking for a job suddenly decide to start looking. What would be the total number of people unemployed and the total number in the labor force? **30 million unemployed. Labor force will be 315 million. The new unemployment rate would be 9.5%**
14. If the economy of Macrostan experiences a recession, which type(s) of unemployment exist? **All three. Frictional, structural, and cyclical**
15. During a recession would the unemployment rate greater than, less than, or equal to the natural rate of unemployment? **The unemployment rate is greater than the NRU because there is cyclical unemployment**

**Part 3: Inflation Practice-** Fill out the blanks in the chart below. Calculate the inflation rate between each year and the CPI for each year using 2019 as the base year.

	Year	Basket Price	Inflation Rate	CPI
16.	2017	\$16	N/A	40
17.	2018	\$20	25%	50
18.	2019 (Base Year)	\$40	100%	100
19.	2020	\$50	25%	125
20.	2021	\$56	12%	140

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### Part 3: Nominal v. Real Practice- Answer the following. Show your work.

21. Assume the real GDP is \$50 billion and the nominal GDP is \$125 billion. What is the GDP deflator?

$$250 = \$125\text{billion} / \$50 \text{ billion} \times 100$$

22. Assume the real GDP is \$240 billion and the GDP deflator is 150. What is the nominal GDP?

$$\$360 \text{ billion} = \$240 \text{ billion} \times 150/100$$

23. Assume the nominal GDP is \$240 billion and the GDP deflator is 150. What was the real GDP?

$$\$160 \text{ billion} = \$240 \text{ billion} \times 100/150$$

24. Assume that you received a nominal raise of 2%. If the inflation rate was 8%, what is your real wage, adjusted for inflation? -6%

25. Assume that you received a nominal raise of 6%. If the inflation rate was 2%, what is your real wage, adjusted for inflation? 4%

### Part 4: FRQ Practice- Complete the following question from the 2008B AP exam (Question 3).

OUTPUTS AND PRICES IN GALA LAND

This Year's Output	This Year's Price
400 loaves of bread	\$6 per loaf
1,000 gallons of water	\$2 per gallon
800 pieces of fruit	\$2 per piece

3. Gala Land produces three final goods: bread, water, and fruit. The table above shows this year's output and price for each good.
- Calculate this year's nominal gross domestic product (GDP).
  - Assume that in Gala Land the GDP deflator (GDP price index) is 100 in the base year and 150 this year. Calculate each of the following.
    - The inflation rate, expressed as a percentage, between the base year and this year
    - This year's real GDP
  - Since the base year, workers have received a 20 percent increase in their nominal wages. If workers face the same inflation that you calculated in part (b)(i), what has happened to their real wages? Explain.
  - If the GDP deflator in Gala Land increases unexpectedly, would a borrower with a fixed-interest-rate loan be better off or worse off? Explain.

## AP<sup>®</sup> MACROECONOMICS

### 2008 SCORING GUIDELINES (Form B)

#### Question 3

**7 points** (1 + 2 + 2 + 2)

(a) 1 point:

- One point is earned for calculating today's GDP =  $(\$6 \times 400) + (\$2 \times 1,000) + (\$2 \times 800) = \$6,000$ .

(b) 2 points:

- One point is earned for stating that the inflation rate is 50 percent  $[(150-100)/100]$ .
- One point is earned for calculating this year's real GDP =  $\$6,000/1.5 = \$4,000$ .

(c) 2 points:

- One point is earned for stating that real wages would fall.
- One point is earned for the explanation that the wages rose by only 20 percent as compared to the inflation rate of 50 percent, causing a 30 percent fall in real wages.

(d) 2 points:

- One point is earned for concluding that a borrower would be better off.
- One point is earned for the explanation that, due to the higher inflation, the borrower is paying back the loan using fewer real dollars.