



Complete each of the following. Show your work.

1. Suppose a change in consumer spending causes real GDP to increase by \$200 billion. Calculate the minimum change in consumer spending that could have caused this increase in real GDP if the marginal propensity to consume is 0.75.
2. Assume an economy has a negative output gap of \$400 billion and marginal propensity to save is 0.10. Calculate the minimum change in investment spending that could return the economy to full employment.
3. Assume an economy has a negative output gap of \$40 billion and marginal propensity to consume is 0.80. Calculate the minimum change in taxes that could return the economy to full employment.
4. Assume the required reserve ratio is 20% and the central bank sells \$20 billion of bonds. What is the maximum change in the money supply??
5. If Mr. Clifford deposits \$4,000 cash into a bank and the required reserve ratio is 10%. Calculate the maximum change in the money supply over time.
6. If the nominal interest rate is 10% and the actual inflation rate is 12%. Calculate the real interest rate.
7. If the real interest rate is 5% and the actual inflation rate is 3%. Calculate the nominal interest rate.
8. Assume that 46,000 people are employed full-time, 5,000 are employed part-time, 5,000 are frictional unemployment and 4,000 cyclically unemployed. Calculate the unemployment rate.
9. Assume that 40,000 people are employed, 5,000 are unemployed, 15,000 are not in the labor market, and 10,000 are not of working age. Calculate the labor force participation rate.

10. Use the table with the only two goods produced in the country to calculate the consumer price index for 2023 with 2022 as the base year.

Goods	Quantity	Price in 2022	Price in 2023
Burgers	20	\$5	\$6
Milk	5	\$15	\$18

11. Calculate the GDP deflator if the Nominal GDP in a country is \$50 billion and the real GDP is \$40.
12. If the GDP deflator is 120 and the Real GDP is \$500 billion, how much is the nominal GDP?
13. If the GDP deflator is 150 and the Nominal GDP is \$90 billion, how much is the real GDP?