

1. Find nominal GDP if population is 200, the GDP deflator is 50, the CPI inflation rate is 2%, $M1 = 500$, and real GDP per capita is 4. [Population is the average population over the period with respect to which GDP is defined.]

2. Find $M0$ if $M1 = 1,500$, $D = 1,000$, and the reserve ratio is $\frac{1}{2}$.

3. Find net exports **NX** if investment **I** is equal to savings **S** and, in addition, **G** = 100, **TR** = 50, and **T** = 200.

4. One million T-bills are issued at t . Each one is sold at a price equal to €1,000 and promises to pay € V at $t + 1$. The interest rate from t to $t + 1$ is 50%. Find the value of V consistent with the absence of arbitrage opportunities.

5. Using the Fisher equation, find the value of the nominal interest rate if real GDP is 100 and the GDP deflator inflation rate is 10%.

6. Find all the equilibria interest rate if the demand for liquidity function is

$$L^d = \begin{cases} 8 - i & \text{if } 0 \leq i \leq 8 \\ 0 & \text{if } i > 8 \end{cases}$$

and the supply of liquidity is given by the expressions

$$i = 14 + 2 \cdot L^s \quad \text{if } L^s > 0$$

and

$$L^s = 0 \quad \text{if } 0 \leq i \leq 14.$$



The maximum score (5 points) is obtained by answering five questions correctly

If six questions are answered, evaluation will be with respect to a maximum score of 5 points

Write down the formulae (equations, identities...) used to find the answer

If you believe that there is no answer to some question, explain briefly why

Answer (numerical value)

Answer to question 1		
Answer to question 2		
Answer to question 3		
Answer to question 4		
Answer to question 5		
Answer to question 6		