



Student Performance Q&A: 2001 AP[®] Macroeconomics Free-Response Questions

The following comments are provided by the Chief Faculty Consultant regarding the 2001 free-response questions for AP Macroeconomics. *They are intended to assist AP workshop consultants as they develop training sessions to help teachers better prepare their students for the AP Exams.* They give an overview of each question and its performance, including typical student errors. General comments regarding the skills and content that students frequently have the most problems with are included. Some suggestions for improving student performance in these areas are also included. Consultants are encouraged to use their expertise to create strategies for teachers to improve student performance in specific areas.

Question 1

What was intended by the question?

This long question was aimed at testing the student's understanding of aggregate analysis and the use of discretionary fiscal and/or monetary policy. The question first asks for the impact from an increase in government spending when the economy is below full employment. The increase in government spending will shift out (increase) the aggregate demand curve. Since the economy is below full employment there will be an increase in real output and an increase in the price level (assuming an upward sloping aggregate supply curve). The increase in government spending will generate an increase in demand for loanable funds, and the increase in income will increase the demand for money. Thus, interest rates will increase; and interest-sensitive expenditures, such as investment, will fall.

A reduction in corporate profits-taxes will lead to more investment and an outward shift in the aggregate demand curve. Greater investment leads to a larger capital stock and an outward shift in the aggregate supply curve. As a result, real output increases. The impact on the price level is indeterminate since the shifts have counteracting effects. With a greater capital stock, the production possibilities frontier will shift out.

How well did the students perform? What were the common errors or omissions?

Two points relating to the question should be stressed. First, many students inappropriately assumed that an increase in government spending would lead automatically to an increase in the money supply. Pursuing this erroneous reasoning, these students concluded that with an increase in the money supply, interest rates would fall and investment would increase. In essence they argued incorrectly that an expansionary fiscal policy would lower interest rates, instead of increasing interest rates. Teachers should carefully try to avoid a confusion of this nature. Also, in part (c) students had difficulty recognizing that with an outward shift in aggregate demand and an outward shift in aggregate supply, the impact on the price level is indeterminate. The change in aggregate demand would tend to increase the price level, while the change in aggregate supply would reduce the price level. The final impact would be a function of the relative magnitudes of the shifts.

Question 2

What was intended by the question?

This international finance question was aimed at testing the student's understanding of the linkage between asset demand and the value of a currency, and then the value of a currency and trade flows. With the increase in real interest rates in the European Union, investors will increase their purchases of the higher-yielding European Union assets and reduce their purchases of U.S. financial assets. As a result there will be a reduced demand for the U.S. dollar, and the dollar will depreciate. [Alternatively, there is an increased supply of dollars to purchase EUROS, appreciating the EURO and depreciating the dollar.] With the depreciation of the dollar, U.S. exports will increase as they will now be less expensive in European markets. U.S. imports will decrease as they become more expensive.

How well did the students perform? What were the common errors or omissions?

Two observations merit discussion. First, students too frequently did not follow the logic of the question. In particular, they did not use the change in the value of the currency to explain the change in imports and exports. Rather, they tried to infer from the change in interest rates what the impact would be on imports and exports. Also, many students did not offer an appropriate price-related explanation for the change in imports and in exports.

Question 3

What was intended by the question?

This question tested the student's understanding of the money supply and the deposit-creation process. We began by asking the impact on the money supply from Janet Smith's depositing \$1,000 of her cash into her checking account. Since both cash and checking account balances (demand deposits) are part of the money supply (M1), there will be no change in the money supply from her switching dollars between cash and her checking account. With an additional \$1,000 of cash reserves, First Federal may increase its loans by \$800. With a 20 percent reserve requirement, \$200 of the \$1,000 must be kept as required reserves. The money supply could experience a net increase of \$4,000. With a 20 percent reserve requirement, the money supply multiplier is 5. A new cash deposit of \$1,000 could generate a \$5,000 increase in the money supply; taking into account the reduction of \$1,000 in cash, the money supply increases by \$4,000. Alternatively, the \$800 of new reserves available for loans could generate a \$4,000 increase in the money supply. [In the latter case, the \$1,000 of lost cash is replaced exactly by the \$1,000 of required reserves. So, the maximum change in the money supply is the \$4,000.] The full increase in the money supply will not occur if there funds are not fully redeposited (i.e., a leakage to cash or currency) or if banks hold excess reserves.

How well did the students perform? What were the common errors or omissions?

Many students did not realize that Janet Smith's switching a \$1,000 from cash to demand deposits would have no immediate impact on the money supply, since both cash and demand deposits are components of the money supply. Second, the question of the "net" increase in the money supply was difficult for students. As explained above, we permitted students to calculate the \$4,000 net increase in two ways.

The question also asked the student to identify one factor that would lead to less than the maximum amount of new money being created. Many students correctly mentioned the leakage to currency or the desire of the bank to hold excess reserves. We did not accept "change in the

reserve requirement” as a correct answer. Such a change would affect the money-supply multiplier and the actual “maximum” amount of new money that could be created. The change in the reserve requirement would not, however, lead to “less than the maximum being created.” Also, students often responded with the “leakage to savings.” We felt this showed confusion between the simple GDP-expenditure multiplier and the money-supply multiplier; we did not award credit for the answer.

How can teachers improve student performance on the exam?

As I have mentioned in the past, I would urge you to emphasize to students the importance of correctly and fully labeled graphs. Increasingly students are losing points when readers are not able to discern the student’s intent with graphs that are required for an answer. I hope this commentary is helpful to you as you prepare students for the free-response section of the 2002 AP Macroeconomics Exam.