



Student Performance Q&A: 2009 AP[®] Macroeconomics Free-Response Questions

The following comments on the 2009 free-response questions for AP[®] Macroeconomics were written by the Chief Reader, David A. Anderson of Centre College in Danville, Kentucky. They give an overview of each free-response question and of how students performed on the question, 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 provided. Teachers are encouraged to attend a College Board workshop to learn strategies for improving student performance in specific areas.

Question 1

What was the intent of this question?

This question determined students' ability to work with Phillips curves and graphs of the money market. Part (a) asked students to draw a long-run equilibrium on the Phillips curve diagram. Part (b) determined whether students knew the relationship between nominal and real interest rates. Part (c) tested students' understanding of how the Federal Reserve uses open-market operations to influence the inflation rate. Part (d) tested students' ability to draw and manipulate the money-market graph. Part (e) asked students to identify the short-run relationship between interest rates and aggregate demand. Part (f) determined whether students knew how the Phillips curve adjusts in the long run and if they understood that the natural rate of unemployment remains the same during these adjustments.

How well did students perform on this question?

The mean score was 4.91, almost 45 percent of the maximum possible score of 11 points. Students performed relatively well on the initial parts. They had the most difficulty with the shift in the short-run Phillips curve and the explanation that the shift occurs due to a change in the expected inflation rate.

What were common student errors or omissions?

Common errors included confusion between short-run and long-run changes in the Phillips curve diagram and incorrect changes in the natural rate of unemployment. Proper labels were often omitted from axes and lines.

Based on your experience of student responses at the AP Reading, what message would you like to send to teachers that might help them to improve the performance of their students on the exam?

Emphasize the reasons for shifts in each type of graph, including money supply and demand, aggregate supply and demand, and the long-run and short-run Phillips curves. Almost half of the students failed to earn points for part (c), on the Federal Reserve's open market policy response to inflation (selling bonds). It may be helpful to have students visualize the Fed exchanging bonds for money, which the Fed will take out of circulation. If they picture bonds going away from the Fed and money coming in, they may be less likely to mix up expansionary and contractionary monetary policy. Many students also need to practice labeling graphs.

Question 2

What was the intent of this question?

This question tested students' understanding of the foreign exchange market, the loanable funds market, and the real interest rate as a determinant of economic growth. Part (a) asked how the loss of investment funds would affect the foreign exchange market. Part (b) asked how the loss of investment funds would affect the loanable funds market and tested whether students could draw the relevant graph and shift. Part (c) tested students' understanding of the relationship between the real interest rate and economic growth.

How well did students perform on this question?

The mean score was 2.63, about 44 percent of the maximum possible score of 6 points. Students did very well in explaining that the decision by investors would cause the domestic currency to depreciate and the growth rate to fall. They did not do as well with showing the shift in the supply for loanable funds or explaining why the growth rate fell.

What were common student errors or omissions?

Many students omitted mention of capital formation as a step in the process by which an increase in the interest rate causes a decrease in investment in capital and therefore a decrease in economic growth.

Based on your experience of student responses at the AP Reading, what message would you like to send to teachers that might help them to improve the performance of their students on the exam?

As recommended in my comments for Question 1, I would emphasize what shifts curves and how to label everything on each graph. Stress that when asked to explain a chain of events, students should be careful to include each step along the way, and they should explain each step in enough detail to clarify the reason for the subsequent change. For example, when explaining how interest rates affect growth, it is clearer to say that "high interest rates decrease investment in capital, and with less capital there is less growth," than to simply say "high interest rates decrease investment and therefore growth."

Question 3

What was the intent of this question?

This question tested students' abilities to calculate and apply the money multiplier and to determine the effect of an increase in the money supply on real wages in the short run.

How well did students perform on this question?

The mean score on this question was 1.92, about 32 percent of the maximum possible score of 6 points. Students did very well with calculating the maximum dollar amount that a bank could lend, given a reserve requirement and an initial deposit, but they did not do well with using the money multiplier to determine the maximum change in demand deposits and in the money supply. They also had difficulty explaining how an increase in the money supply affects real wages in the short run.

What were common student errors or omissions?

Many students omitted the initial \$100 deposit when calculating the maximum total change in demand deposits. Another common error was to include the initial deposit when calculating the maximum change in the money supply, even though that amount was already in the money supply to begin with because it came from Kim's pocket.

Based on your experience of student responses at the AP Reading, what message would you like to send to teachers that might help them to improve the performance of their students on the exam?

Applications of the money multiplier can be less confusing if students focus on whether there is an injection of new money or simply a deposit of money that is already part of the money supply. If the money comes from the Fed, it is not part of the money supply, and the maximum increase in the money supply is the multiplier times the amount of new money. If it comes from someone's cash holdings, it is already part of the money supply, and the amount of that initial deposit is subtracted from the product of the multiplier and the deposit to find the increase in the money supply.

The poor scores on part (c) suggest that more coverage of the meaning and determinants of real wages would be beneficial.