



Student Performance Q&A: 2012 AP[®] Microeconomics Free-Response Questions

The following comments on the 2012 free-response questions for AP[®] Microeconomics were written by the Chief Reader, David A. Anderson of Centre College in Danville, Ky. 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 assessed students' ability to work with the standard monopoly model. It tested for an understanding of how monopolists establish price and quantity, how losses are identified, and how the allocatively efficient quantity is determined. The question also assessed whether students knew the effect of a per-unit subsidy on quantity and consumer surplus, and the effect of a lump-sum subsidy on deadweight loss and economic losses.

How well did students perform on this question?

The mean score was 4.66 out of a possible 10 points. Students performed well in drawing the standard monopoly model for part (a) and in indicating that a lump-sum subsidy would decrease losses for part (d).

What were common student errors or omissions?

Students had most difficulty with part (b), which asked them to explain what would happen to total revenue if the monopolist raised the price. Other common stumbling blocks were part (d)(i), which asked for an explanation of what would happen to deadweight loss as a result of a lump-sum subsidy, and part (c)(i), which asked for an explanation of what would happen to the monopolist's quantity as a result of a per-unit subsidy.

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?

Note that the three most problematic elements of this question were the three elements that required an explanation. Students struggle with explanations because these require more in-depth understanding than a simple assertion. To foster this level of understanding, it is helpful to follow up on "What will happen?" questions with "Why?" questions. Have students explain the process behind changes and the reasoning

that underlies answers. If they know that they will probably need to explain their answers in class, students will have a greater incentive to gain a solid grasp of the content before moving on.

Question 2

What was the intent of this question?

Part (a) tested students' ability to find total utility on the basis of marginal utility, and to identify the optimal consumption bundle. Part (b) assessed whether students understood that a change in the price of an input affects the supply curve and not the demand curve. Part (c) tested whether students knew how to interpret a negative value for income elasticity. Part (d) assessed whether students could calculate the value of cross-price elasticity.

How well did students perform on this question?

The mean score was 2.46 out of a possible 6 points. Students performed well on part (a)(i), which asked them to find the total utility on the basis of marginal utility. They also performed well on the final element of part (c), which had them interpret an income elasticity of -0.2.

What were common student errors or omissions?

Students had most difficulty with part (d), the calculation of cross-price elasticity. They also had difficulty with part (b), which required an explanation of why a change in the price of an input does not affect demand; and part (a)(ii), which required an explanation based on the optimal consumption rule.

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?

Measures of elasticity are important to decisions made by firms and policy makers, among others, which makes them important to learn. Although the formulas can be intimidating to students who are uncomfortable with mathematics, the various types of elasticity have quite similar formulas, so students really only need to learn one general formula. After that, the titles of the elasticities provide easy clues for what values to plug in on the bottom: prices for price elasticities and incomes for income elasticities.

Question 3

What was the intent of this question?

This question assessed proficiency with a supply-and-demand model involving trade. Students were asked to identify the quantity of imports without a tariff and domestic production with a tariff. They were also asked to calculate consumer surplus and tariff revenue, and to indicate that the sum of consumer and producer surplus is maximized when the tariff is zero.

How well did students perform on this question?

The mean score was 1.59 out of a possible 5 points. Students performed well on parts (a) and (b)(i), which asked them to identify the quantity of imports without a tariff and domestic production with a tariff.

What were common student errors or omissions?

Students had the most difficulty with part (c), which asked them what per-unit tariff maximizes the sum of consumer surplus and producer surplus. Many students also missed parts (b)(ii) and (b)(iii), which were the calculations of consumer surplus and tariff revenue.

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?

A classroom discussion of the pros and cons of market intervention is worthwhile. In the absence of externalities and perfectly inelastic supply or demand, tariffs and per-unit taxes generally have the consequence of inefficiency. They benefit some people and hurt others, but they cause a net loss in surplus. The net loss can be illustrated by shading the areas of consumer and producer surplus with and without a tariff or tax. It is also instructive to shade the area of tariff/tax revenue. The area that was surplus before the tariff/tax but is neither surplus nor revenue with the tariff/tax is the net loss. With this net loss in mind, the answer to part (c) will be easier to come up with.