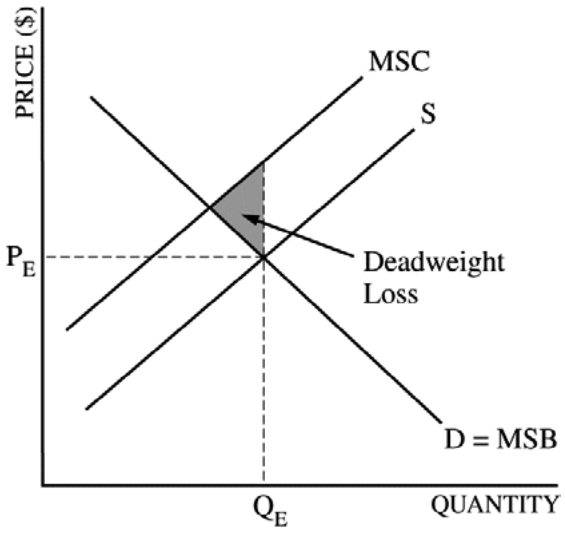
AP® MICROECONOMICS
2013 SCORING GUIDELINES

Question 3

6 points (1 + 3 + 2)



(a) 1 point:

- One point is earned for drawing a correctly labeled supply and demand graph with P_E and Q_E labeled.

(b) 3 points

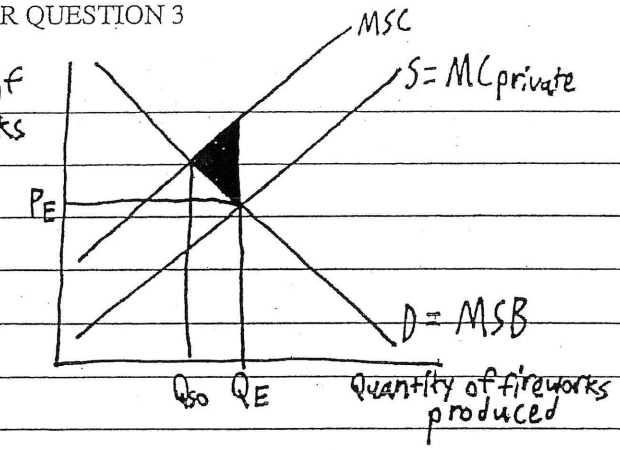
- One point is earned for drawing the MSC curve above the supply curve.
- One point is earned for labeling the demand curve MSB.
- One point is earned for shading the correct area of the deadweight loss.

(c) 2 points:

- One point is earned for stating that the market equilibrium quantity is less than the socially optimal quantity because the fireworks generate a positive externality or provide an external benefit to third parties.
- One point is earned for stating that the deadweight loss will increase.

ANSWER PAGE FOR QUESTION 3

a)



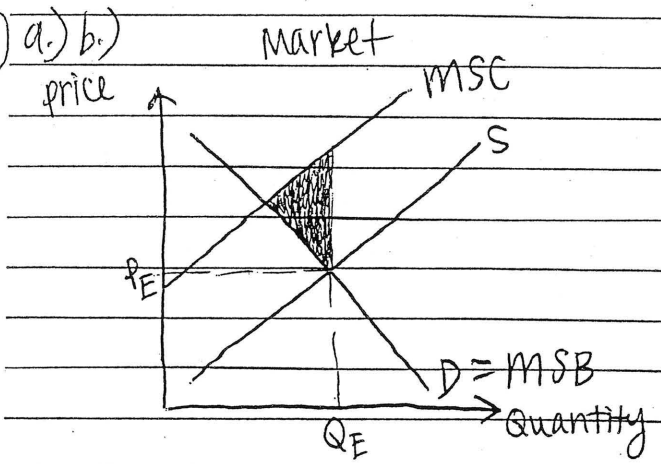
b) see graph

c) i. In this case, market equilibrium quantity of fireworks is less than socially optimal quantity because it is an external benefit, as the neighbors enjoy them. Therefore MSB > MSC, so equilibrium is less than socially optimal.

ii. If the government bans fireworks, no fireworks are sold, so market equilibrium quantity is further from socially optimal quantity, so dead weight loss increases.

ANSWER PAGE FOR QUESTION 3

3. a.) b.)



c.) I. The market equilibrium quantity of fireworks is greater than the socially optimal quantity because the neighbors are free-riders.

II. Deadweight loss will decrease

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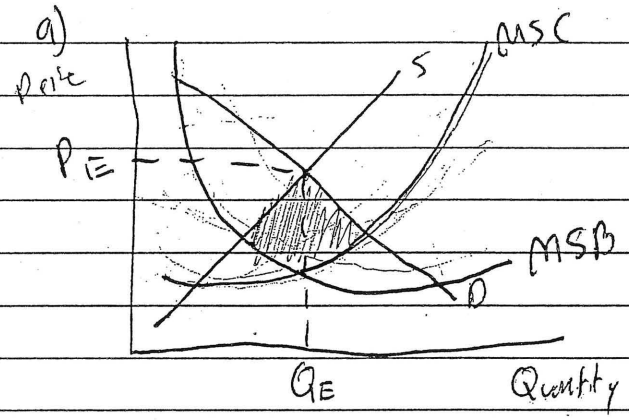
3 C

1 of 1

ANSWER PAGE FOR QUESTION 3

3. a)



c) (i) Greater than

(ii) increase

GO ON TO THE NEXT PAGE.

AP® MICROECONOMICS
2013 SCORING COMMENTARY

Question 3

Overview

This question tested students' ability to work with a model of perfect competition in the presence of negative and positive externalities. Successful students showed that negative externalities raise the marginal social costs curve above the supply curve and that positive externalities raise the marginal social benefit curve above the demand curve. The question also tested for students' understanding that deadweight loss exists when markets fail to produce the allocatively efficient quantity of a good.

Sample: 3A
Score: 6

The student earned all 6 points for correctly answering all parts of the question.

Sample: 3B
Score: 4

The student earned 1 point in part (a) for drawing a correctly labeled supply and demand graph and for showing P_E and Q_E at the intersection of supply and demand. The student earned 1 point in part (b)(i) for showing the marginal social cost (MSC) curve above the supply curve at every quantity. The student earned 1 point in part (b)(ii) for labeling the demand curve as marginal social benefit (MSB). The student earned 1 point in part (b)(iii) for shading the correct deadweight loss area.

Sample: 3C
Score: 2

The student earned 1 point in part (a) for drawing a correctly labeled supply and demand graph and for showing P_E and Q_E at the intersection of supply and demand curves. The student earned 1 point in part (c)(ii) for stating that deadweight loss will increase.