2025

AP® Microeconomics

Sample Student Responses and Scoring Commentary Set 2

Inside:

Free-Response Question 1

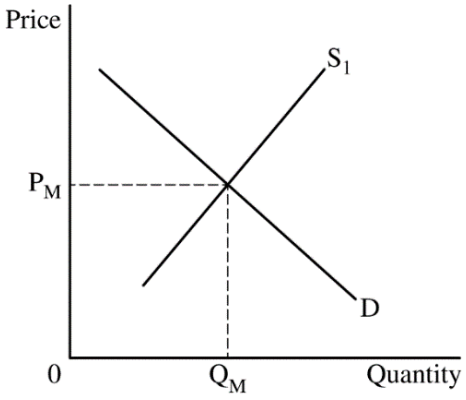
- ☑ **Scoring Guidelines**
- ☑ **Student Samples**
- ☑ **Scoring Commentary**

Question 1: Long — 10 points

A

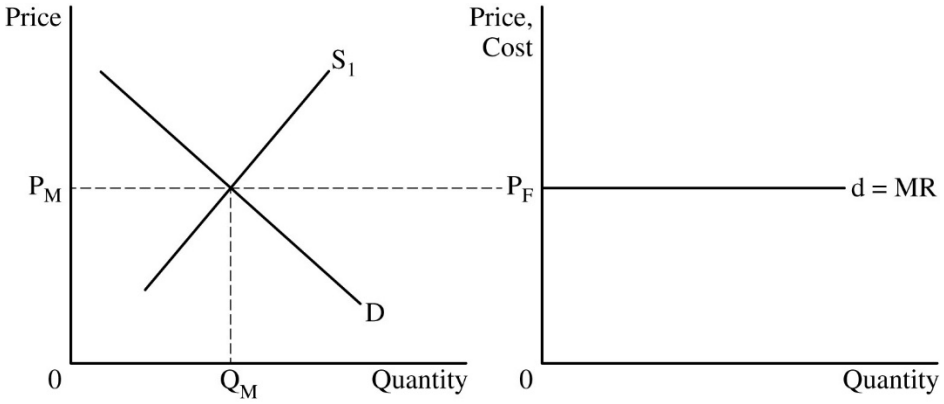
Point 1

Draw a correctly labeled graph of the market for wooden desks with a downward-sloping demand (D) curve and an upward-sloping supply (S_1) curve and label the market equilibrium price as P_M and the market equilibrium quantity as Q_M. **1 point**



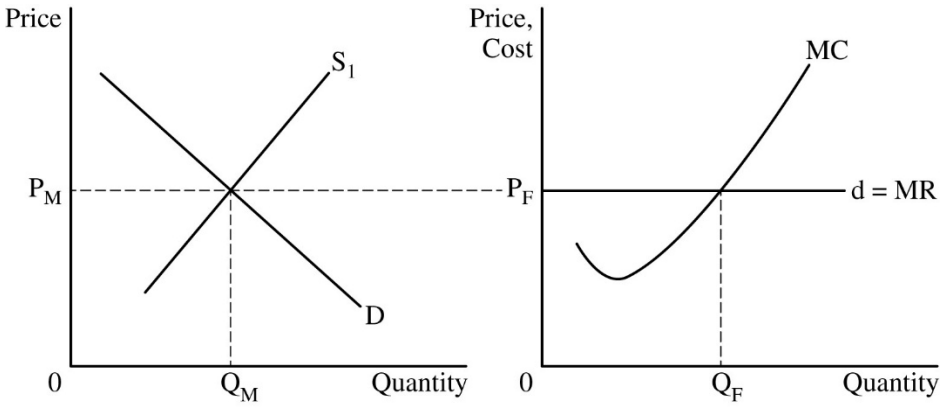
Point 2

Draw a correctly labeled graph for Deskward that shows the firm's horizontal demand and marginal revenue (d = MR) curve extended from the market equilibrium price (P_M) and label the firm's price as P_F. **1 point**

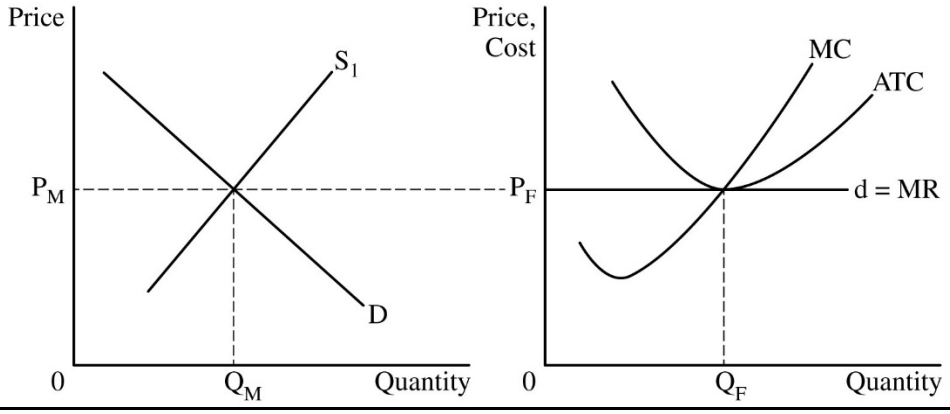


Point 3

The firm's graph must show a rising marginal cost (MC) curve, and show the firm's profit-maximizing quantity, labeled Q_F, where MR = MC. **1 point**

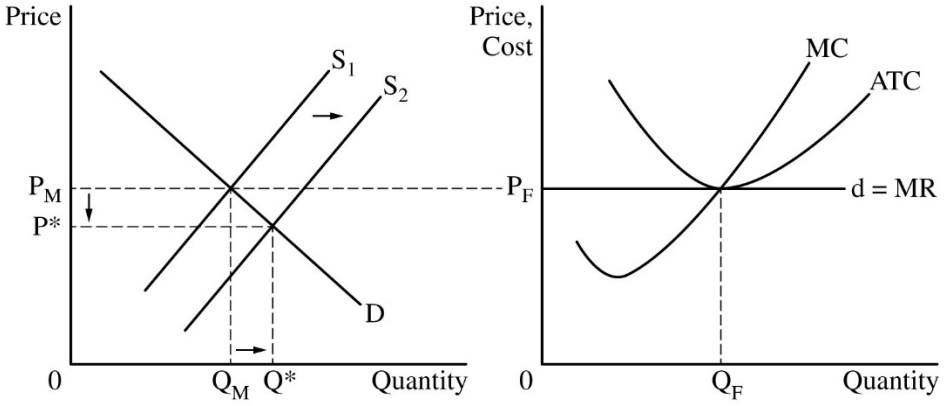


Point 4	The firm's graph must show the average total cost (ATC) curve tangent to the firm's d = MR curve at Q_F and show the MC curve passing through the minimum point of the ATC curve.	**1 point**

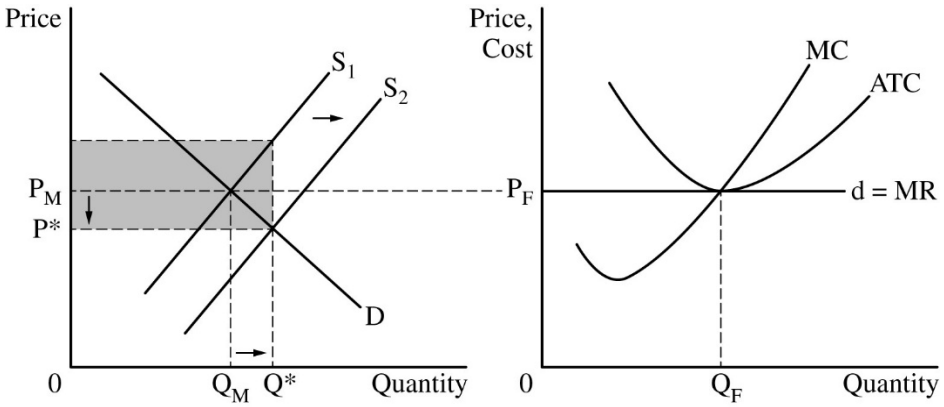


B Point 5	State that Deskward's profit-maximizing quantity will not change in the short run and explain that a change in a fixed cost does not affect the firm's marginal cost or marginal revenue.	**1 point**

C (i) Point 6	The market graph from part A must show a rightward shift of the market supply curve and show the new market equilibrium price of wooden desks, labeled P*, and the new market equilibrium quantity of wooden desks, labeled Q*.	**1 point**



(ii) Point 7	The market graph from part A must show the area representing the total cost of the subsidy to the government, shaded completely.	



D Point 8	State that the price floor will result in a surplus of wooden desks and explain that the binding price floor is set above the market equilibrium price, which causes the quantity supplied of wooden desks to be greater than the quantity demanded of wooden desks.	**1 point**
E **(i)** Point 9	Calculate the long-run average total cost (LRATC) as \$160 per chair and show your work. $\text{LRATC at } 500 \text{ chairs} = \frac{\$80{,}000}{500} = \$160$	**1 point**
(ii) Point 10	State that Deskward is experiencing diseconomies of scale and explain that as output increases from 500 to 600 chairs, its LRATC increases from \$160 to \$180 (=\$108,000/600) per chair.	**1 point**

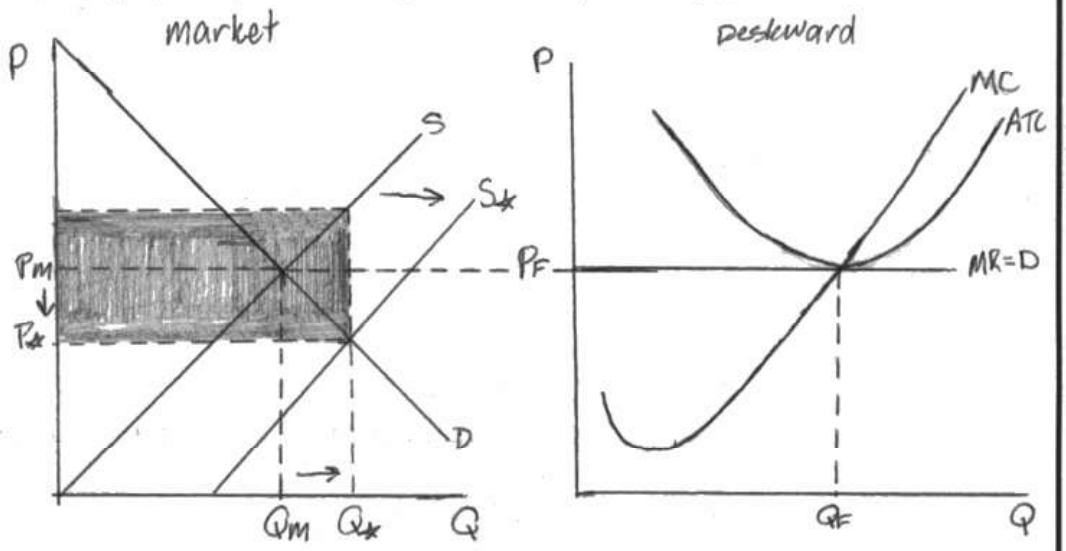
Important: Completely fill in the circle that corresponds to the question you are answering on this page.

Question 1 ● Question 2 ○ Question 3 ○

Begin your response to each question at the top of a new page.

a)

i) on graph
ii) on graph
iii) on graph



b) the profit maximizing quantity will not change because a change in fixed costs does not affect MC or MR, and the profit maximizing quantity is where MC=MR

c) i) on graph
ii) on graph

d) the binding price floor would result in a surplus because at the higher price the quantity supplied is greater than the quantity demanded

e) i) $80,000/500 = $160

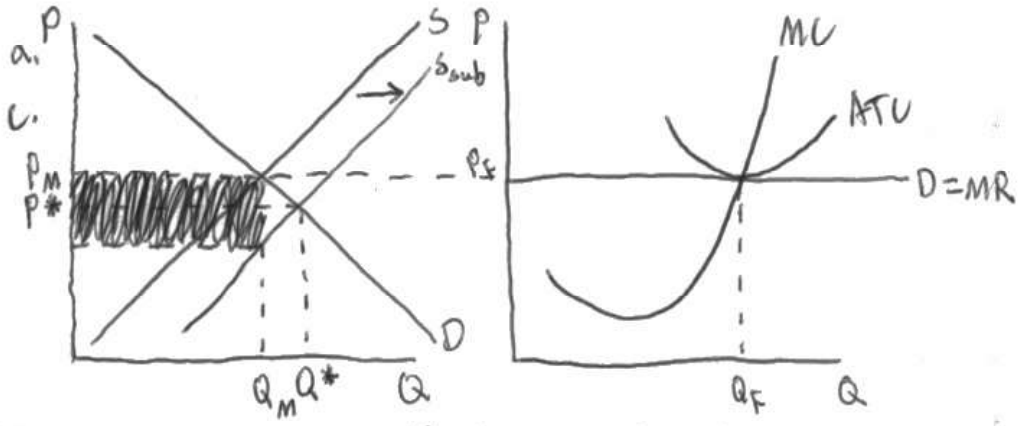
ii) diseconomies of scale because at 500 chairs, the long-run average total cost is equal to $160, but at 600 chairs, the long-run average total cost increases to $180, showing that LRATC increases, which is diseconomies of scale.

Important: Completely fill in the circle that corresponds to the question you are answering on this page.

Question 1 ● Question 2 ○ Question 3 ○

Begin your response to each question at the top of a new page.

a. c.



b. It will increase so the firm will make enough revenue to cover the increased costs

d. A surplus because the Q demanded at the increased price will be less than the Q supplied at that price

e. i $\frac{\$108,000}{600}$ = \$180 x 500 = \$90,000

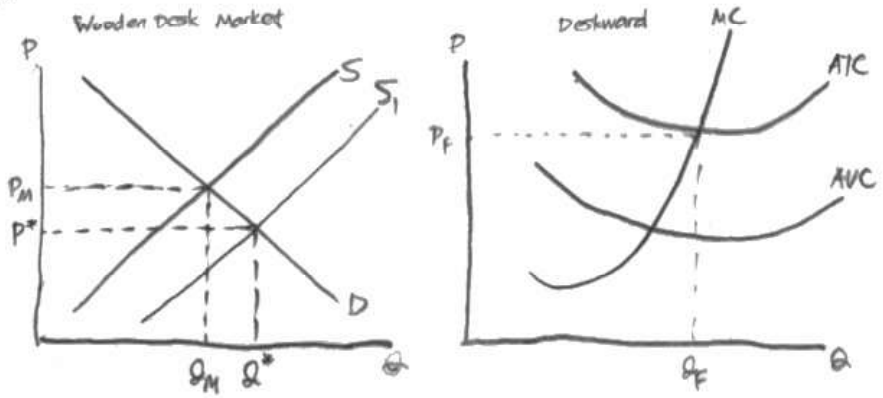
ii. economies of scale because the total cost increases from \$80,000 for 500 to \$90,000 for 500.

Important: Completely fill in the circle that corresponds to the question you are answering on this page.

Question 1 ● **Question 2** ○ **Question 3** ○

Begin your response to each question at the top of a new page.

A.



B. The firm's profit-maximizing quantity in the short run would decrease, since it is more expensive when paying increased fixed costs.

D. The binding price floor would result in a shortage of wooden desks. Since the price floor is above market equilibrium, the difference between where that price floor touches the supply curve and the demand curve is the quantity of that surplus.

E. i. $\frac{\$80,000}{500} = \$160$

ii. Destward is experiencing diseconomies of scale, since the long-run total cost is still increasing from \$80,000 to \$105,000, regardless of how many more chairs Destward is producing.

Use a pencil or pen with black or dark blue ink. Do NOT write your name. Do NOT write outside the box.

Question 1

Note: Student samples are quoted verbatim and may contain spelling and grammatical errors.

Overview

NEW for 2025: The question overviews can be found in the *Chief Reader Report on Student Responses* on AP Central.

Sample: 1A
Score: 10

Part A

The response earned point 1 for showing a correctly labeled graph of the market with the equilibrium price and quantity labeled as P_M and Q_M respectively. The response earned point 2 for showing the firm's horizontal demand and marginal revenue (d = MR) curve extended from the market equilibrium price (P_M) and labeling the firm's price as P_F. The response earned point 3 for showing a rising marginal cost (MC) curve and the firm's profit-maximizing quantity labeled as Q_F, where MR = MC. The response earned point 4 for showing the average total cost (ATC) curve tangent to the firm's d = MR curve at Q_F with the MC curve intersecting the ATC curve at its minimum point.

Part B

The response earned point 5 for stating that the profit-maximizing quantity will not change in the short run and explaining that a change in a fixed cost does not affect the firm's marginal cost nor marginal revenue.

Part C

The response earned point 6 for showing a rightward shift of the market supply curve resulting in a new equilibrium with a lower price, labeled P*, and a higher quantity, labeled Q*. The response earned point 7 for correctly shading the area representing the total cost of the subsidy to the government.

Part D

The response earned point 8 for stating that "the price floor would result in a surplus" and explaining that the quantity supplied will be greater than the quantity demanded.

Part E

The response earned point 9 for calculating the long-run average total cost as $160 per chair and showing the work. The response earned point 10 for stating that the firm is experiencing diseconomies of scale and explaining that as output increases from 500 to 600 chairs, the long-run average total cost increases from $160 to $180 per chair.

Question 1 (continued)

Sample: 1B
Score: 6

Part A

The response earned point 1 for showing a correctly labeled graph of the market with the equilibrium price and quantity labeled as P_M and Q_M respectively. The response earned point 2 for showing the firm's horizontal demand and marginal revenue (d = MR) curve extended from the market equilibrium price (P_M) and labeling the firm's price as P_F. The response earned point 3 for showing a rising marginal cost (MC) curve and the firm's profit-maximizing quantity labeled as Q_F, where MR = MC. The response earned point 4 for showing the average total cost (ATC) curve tangent to the firm's d = MR curve at Q_F with the MC curve intersecting the ATC curve at its minimum point.

Part B

The response did not earn point 5 because the response does not state that the firm's profit-maximizing quantity will not change in the short run.

Part C

The response earned point 6 for showing a rightward shift of the market supply curve resulting in a new equilibrium with a lower price, labeled P*, and a higher quantity, labeled Q*. The response did not earn point 7 because the response does not show the correct shaded area representing the total cost of the subsidy to the government.

Part D

The response earned point 8 for stating that the price floor results in a surplus and explaining that the quantity demanded will be less than the quantity supplied.

Part E

The response did not earn point 9 because the response does not calculate the long-run average total cost as $160 per chair. The response did not earn point 10 because the response does not state that the firm is experiencing diseconomies of scale.

Question 1 (continued)

Sample: 1C
Score: 3

Part A

The response earned point 1 for showing a correctly labeled graph of the market with the equilibrium price and quantity labeled as P_M and Q_M respectively. The response did not earn point 2 because the response does not show a horizontal demand curve for the firm labeled as d = MR extending from the market equilibrium price P_M. The response did not earn point 3 because the response does not show the firm's profit-maximizing quantity labeled as Q_F where MR = MC. The response did not earn point 4 because the response does not show the average total cost (ATC) curve tangent to the firm's d = MR curve at Q_F with the MC curve intersecting ATC curve at its minimum point.

Part B

The response did not earn point 5 because the response does not state that the firm's profit-maximizing quantity will not change.

Part C

The response earned point 6 for showing a rightward shift of the market supply curve resulting in a new equilibrium with a lower price, labeled P*, and a higher quantity, labeled Q*. The response did not earn point 7 because the response does not show the shaded area representing the total cost of the subsidy to the government.

Part D

The response did not earn point 8 because the response states that the binding price floor will result in a shortage.

Part E

The response earned point 9 for calculating the long-run average total cost as $160 per chair and showing the work. The response did not earn point 10 because the response does not explain that as output increases from 500 to 600 chairs, the long-run average total cost increases from $160 to $180 per chair.