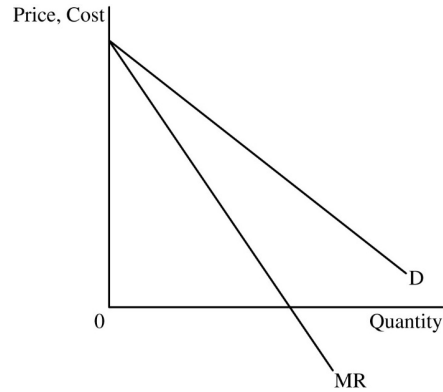
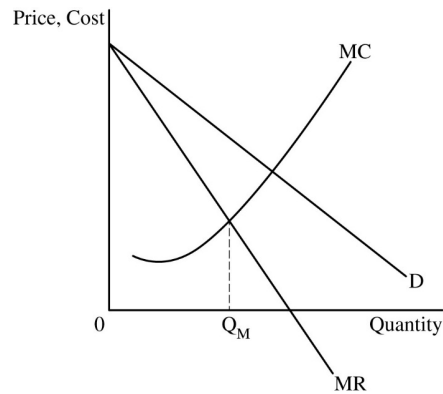


Question 1: Long**10 points**

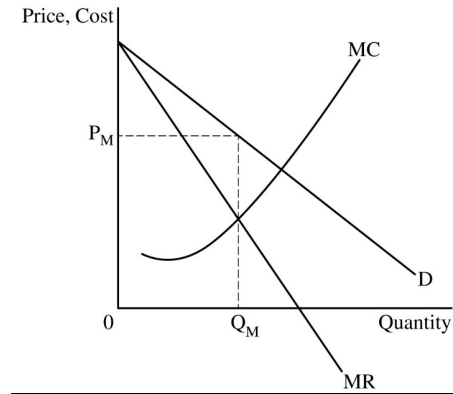
- A** Draw a correctly labeled graph for Voda Reservoir with a downward-sloping demand (D) curve and a downward-sloping marginal revenue (MR) curve with the MR curve below the D curve. **1 point**
- Point 1



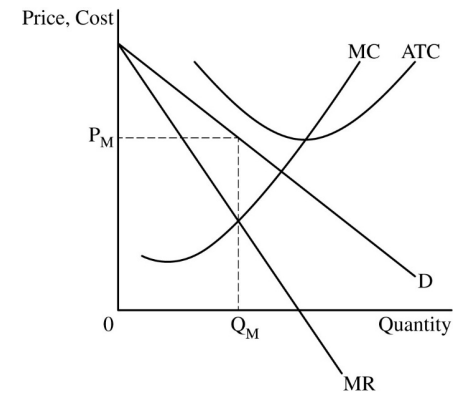
- Point 2 The graph must show a rising marginal cost (MC) curve and the profit-maximizing quantity, labeled Q_M , where $MR = MC$. **1 point**



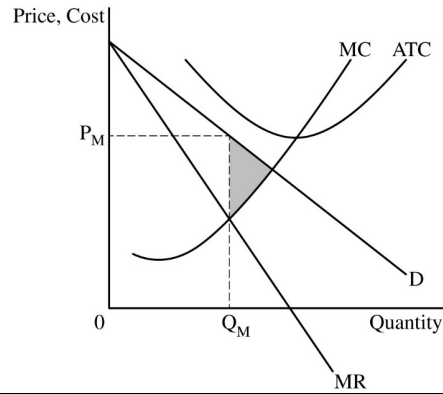
- Point 3 The graph must show the profit-maximizing price, labeled P_M , from the D curve at Q_M . **1 point**



- Point 4 The graph must show the average total cost (ATC) curve above the D curve and show the MC curve passing through the minimum point of the ATC curve. **1 point**

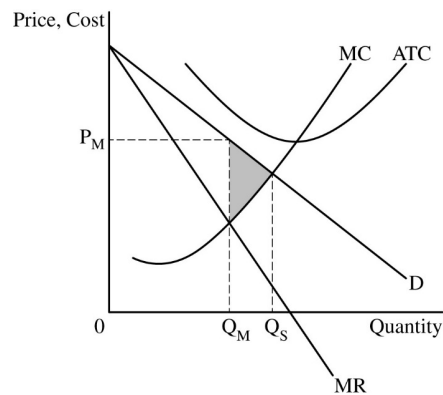


Point 5 The graph must show the area of deadweight loss, shaded completely. **1 point**



B The graph from part A must show the socially optimal quantity of bottled water, labeled Q_S , from the intersection of the D and MC curves. **1 point**

Point 6



C State that Voda Reservoir's profit-maximizing quantity of bottled water will increase and explain with **ONE** of the following: **1 point**

Point 7

- The per-unit subsidy decreases the firm's marginal cost, which shifts the MC curve to the right (down), intersecting the MR curve at a greater quantity.
- The per-unit subsidy increases the firm's marginal revenue, which shifts the MR curve to the right, intersecting the MC curve at a greater quantity.

D State that the demand for Voda Reservoir's bottled water will become more elastic. **1 point**

Point 8

E (i) State that Voda Reservoir's demand for labor will increase and explain that the **1 point**

Point 9

increase in demand for bottled water will increase the price and marginal revenue of bottled water, increasing the marginal revenue product of labor.

(ii) State that the market wage will increase in the short run and explain that the new **1 point**

Point 10

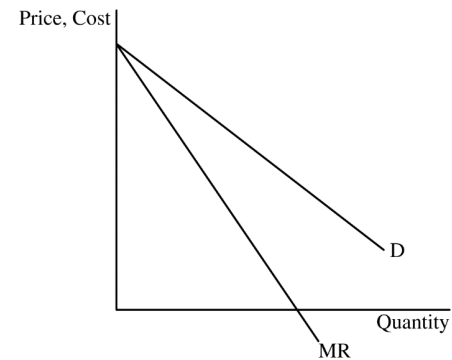
regulation will decrease the supply of workers.

Question 1: Long

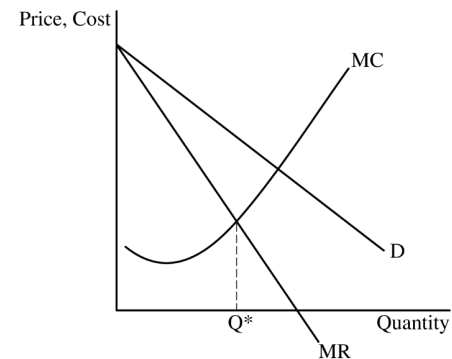
10 points

(a) Draw a correctly labeled graph of Arzeeye Pharma with a downward-sloping demand (D) **1 point**

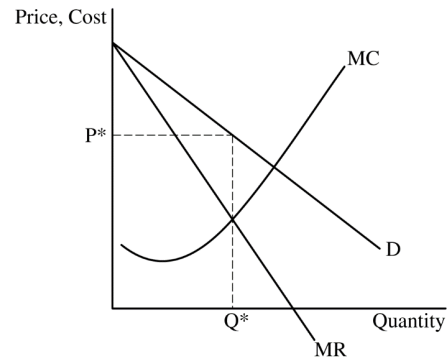
curve and a downward-sloping marginal revenue (MR) curve with the MR curve below the D curve.



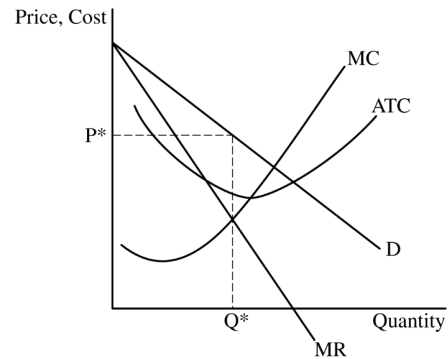
For the second point, the graph must show a rising marginal cost (MC) curve and the profit-maximizing quantity, labeled Q^* , where $MR = MC$. **1 point**



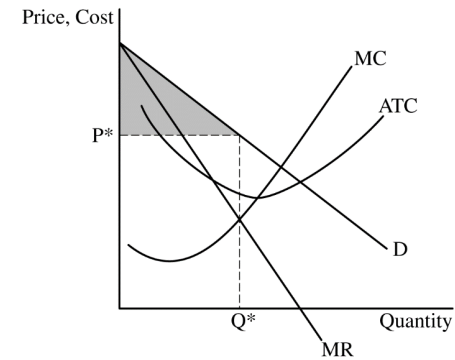
For the third point, the graph must show the profit-maximizing price, labeled P^* , from the downward-sloping demand curve at Q^* . **1 point**



For the fourth point, the graph must show the average total cost (ATC) curve below P^* at Q^* and the marginal cost curve passing through the minimum point of the ATC curve. **1 point**

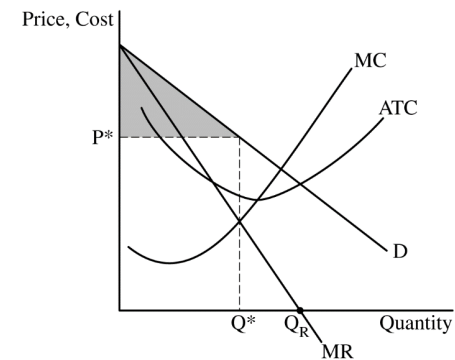


For the fifth point, the graph must show the area of consumer surplus, shaded completely. **1 point**



Total for part (a) 5 points

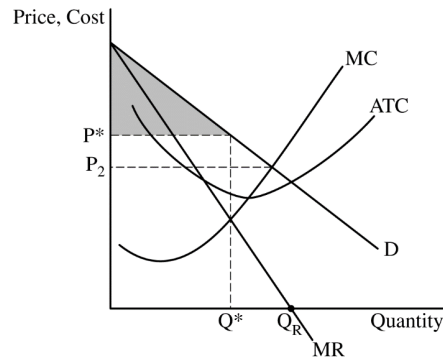
(b) (i) The graph from part (a) must show the quantity that maximizes total revenue, labeled Q_R , where marginal revenue equals 0. **1 point**



(ii) State that demand is unit elastic. **1 point**

Total for part (b) 2 points

- (c) (i) The graph from part (a) must show the lowest price that Arzeye Pharma would charge if it engaged in perfect price discrimination, labeled P_2 , from the intersection of the demand and marginal cost curves. **1 point**



- (ii) State that consumer surplus would decrease to \$0 and explain that Arzeye is able to charge the maximum price each consumer is willing to pay. **1 point**

Total for part (c) 2 points

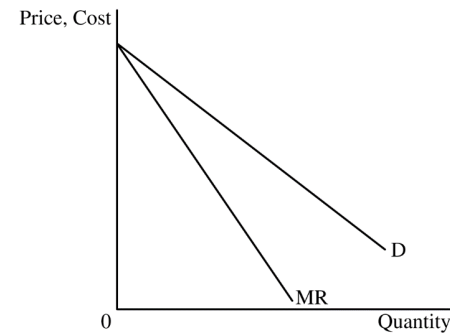
- (d) State that Arzeye Pharma's demand will become more elastic and explain that as the patent expires more firms will enter the market which increases the number and availability of substitutes, causing consumers to be more responsive to changes in the price of eye treatments. **1 point**

Total for question 1 10 points

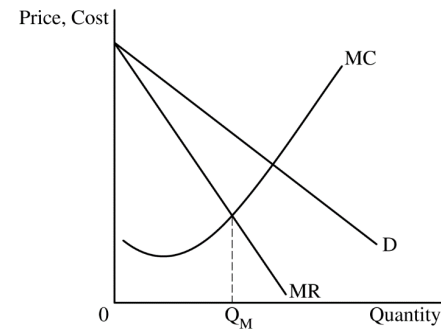
Question 1: Long

10 points

- (a) Draw a correctly labeled graph of a monopoly with a downward-sloping demand (D) curve and a downward-sloping marginal revenue (MR) curve with the MR curve below the D curve. **1 point**

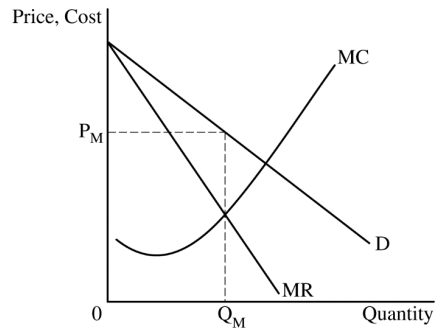


For the second point, the graph must show a marginal cost (MC) curve and the profit-maximizing quantity, labeled Q_M , where $MR = MC$. **1 point**



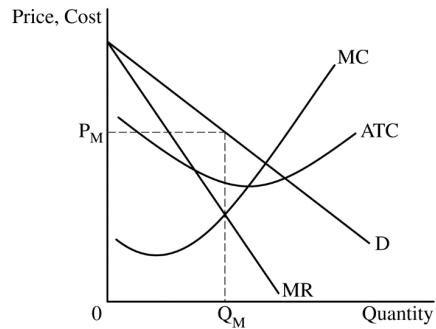
For the third point, the graph must show the profit-maximizing price, labeled P_M , from the demand curve at Q_M .

1 point



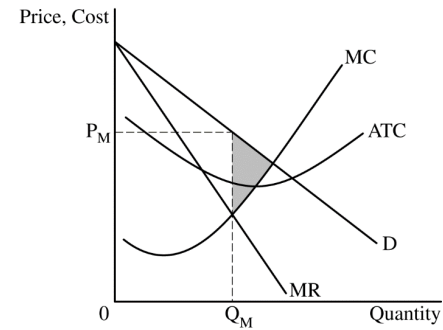
For the fourth point, the graph must show the average total cost (ATC) curve below P_M at Q_M and the MC curve passing through the minimum point of the ATC curve.

1 point



For the fifth point, the graph must show the area of the deadweight loss, shaded completely.

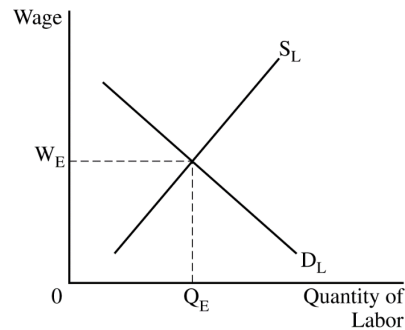
1 point



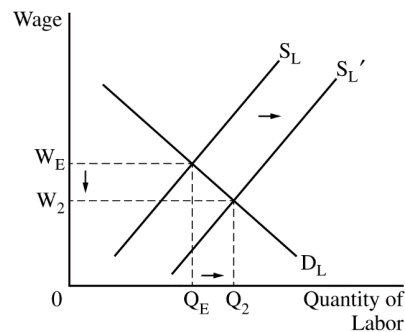
Total for part (a) 5 points

- | | | |
|-----|---|---------|
| (b) | State that the government would impose a binding price ceiling. | 1 point |
| (c) | State that the profit-maximizing quantity will decrease and explain that the demand for the device will decrease, causing the MR curve to shift to the left, intersecting the MC curve at a lower quantity. | 1 point |

- (d)(i) Draw a correctly labeled graph of a perfectly competitive labor market with a downward-sloping demand (D) curve and an upward-sloping supply (S) curve and show the equilibrium wage and quantity of labor, labeled W_E and Q_E , respectively. 1 point



- (d)(ii) The graph from part (d)(i) must show a rightward shift in the labor supply curve, resulting in a lower equilibrium wage rate, labeled W_2 , and a higher equilibrium quantity of labor, labeled Q_2 . 1 point



- (d)(iii) Calculate the wage rate as \$200 and show your work. 1 point

$$\frac{\text{Marginal Product of Capital}}{\text{Rental Price}} = \frac{\text{Marginal Product of Labor}}{\text{Wage Rate}}$$

$$\frac{2,500}{\$500} = \frac{1,000}{\text{Wage Rate}}$$

$$\text{Wage Rate} = \$200$$

Total for part (d) 3 points

Total for question 1 10 points

Question 3: Short **5 points**

- (a) State yes and explain that this firm is a natural monopoly because it experiences decreasing average total costs over the entire effective demand for its product. 1 point
- (b) State the area of deadweight loss is equal to **ONE** of the following areas: 1 point
- bfg
 - $\frac{1}{2} \times (P_5 - P_1) \times (Q_4 - Q_2)$
- (c)(i) State the regulated price is P_3 and the regulated quantity is Q_3 . 1 point
- (ii) State no and explain with **ONE** of the following. 1 point
- Area cjc is the remaining deadweight loss.
 - The deadweight loss is reduced by area bfjc but is not eliminated completely.
 - P_3 is greater than (or not equal to) marginal cost at Q_3 .
 - Q_3 is less than (or not equal to) the socially optimal quantity Q_4 .

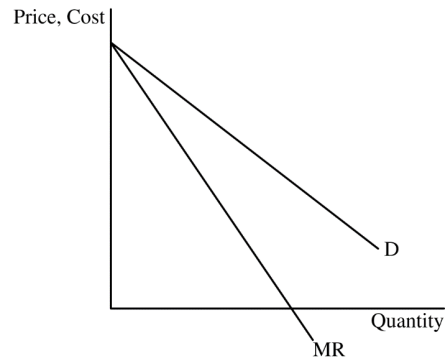
Total for part (c) 2 points

- (d) State the firm will earn negative economic profit and explain with **ONE** of the following: 1 point
- At the socially optimal quantity, Q_4 , average total cost (P_2) is greater than price (P_1).
 - At the socially optimal quantity, Q_4 , the area of negative economic profit is P_1P_2dg .
 - At the socially optimal quantity, Q_4 , the area of negative economic profit is $(P_2 - P_1) \times Q_4$.

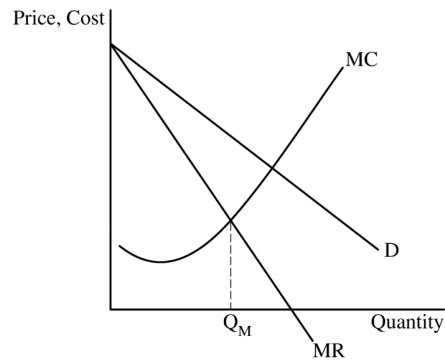
Total for question 3 5 points

Question 1: Long**10 points**

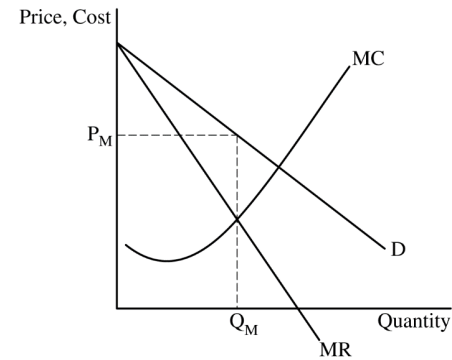
- (a) Draw a correctly labeled graph for a monopoly showing downward-sloping demand (D) and marginal revenue (MR) curves with the MR curve below the demand curve. **1 point**



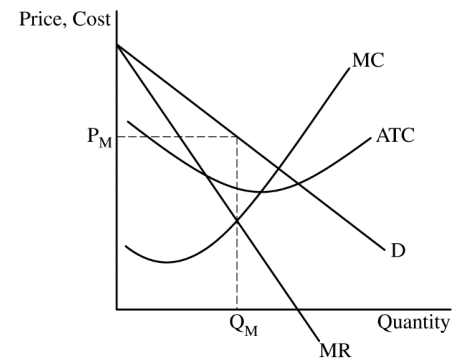
For the second point, the graph must show the marginal cost (MC) curve and the profit-maximizing quantity, labeled Q_M , where $MR=MC$. **1 point**



For the third point, the graph must show the profit-maximizing price, labeled P_M , from the demand curve at Q_M . **1 point**

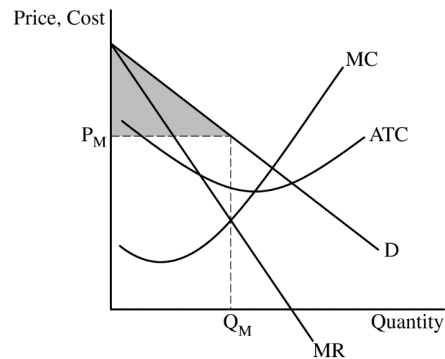


For the fourth point, the graph must show the average total cost (ATC) curve below the demand curve at Q_M and show the MC curve passing through the minimum point of the ATC curve. **1 point**



For the fifth point, the graph must show a completely shaded area of the consumer surplus.

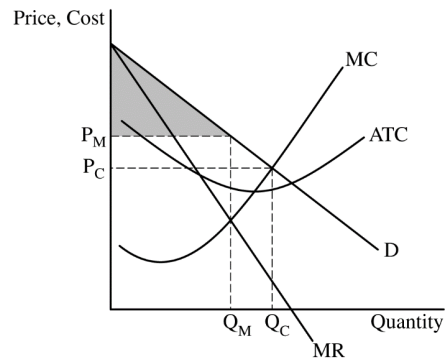
1 point



Total for part (a) 5 points

- (b)(i) State no and explain that a per-unit tax would shift the MC curve upward and intersect the MR curve at a lower quantity, which decreases the firm's profit-maximizing quantity, not increases it to the socially optimal quantity where $MC=D$. 1 point

- (ii) On your graph from part (a), show the socially optimal quantity labeled as Q_C and the price ceiling labeled as P_C at $MC=D$. 1 point



- (iii) State that the firm is earning positive economic profit and explain that ATC is less than P_C at Q_C , as shown. 1 point

Scoring Note: The answer should be consistent with the position of the ATC curve with respect to the demand curve at Q_C on the graph drawn in part (b)(ii). The firm will not earn positive economic profit if the ATC curve is drawn such that $ATC > P_C$ or $ATC = P_C$ at Q_C .

Total for part (b) 3 points

- (c)(i) State that marginal revenue will be negative and explain that after total revenue is maximized, TR decreases since the firm moves onto the inelastic portion of the demand curve. 1 point

- (ii) State that the percentage increase in quantity demanded will be less than 10%. 1 point

Total for part (c) 2 points

Total for question 1 10 points

Question 3: Short 5 points

- (a) State that the firm is experiencing economies of scale and explain that the long-run average total cost (LRATC) curve is downward sloping over the range of 0 to 60 units. 1 point

- (b) State that the price is \$15 and the quantity is 50 units. 1 point

- (c)(i) Calculate the total revenue at the socially optimal quantity as \$600 and show your work. 1 point

$$\text{Total Revenue} = \text{Price} \times \text{Quantity} = \$10 \times 60 = \$600$$

- (ii) Explain that at the socially optimal quantity, the firm is earning negative economic profit in the short run because price is less than average total cost. 1 point

- (iii) Calculate the lump-sum subsidy as \$180 and show your work. 1 point

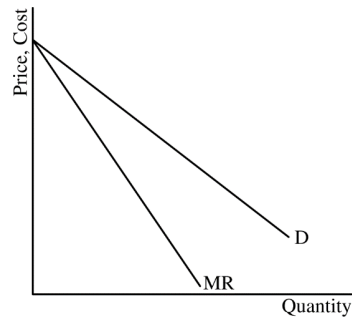
$$\text{Lump-sum Subsidy} = (\text{LRATC} - \text{Price}) \times \text{Quantity} = (\$13 - \$10) \times 60 = \$180$$

Total for part (c) 3 points

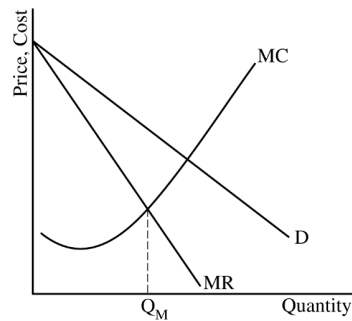
Total for question 3 5 points

Question 1: Long**10 points**

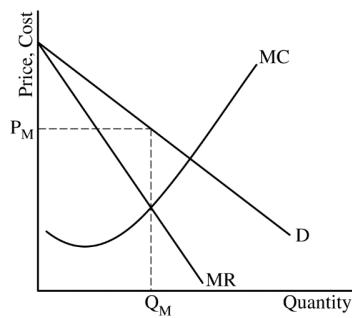
- (a) Draw a correctly labeled graph for SkyRunner Airlines showing downward sloping demand (D) and marginal revenue (MR) curves with the MR curve below the demand curve. **1 point**



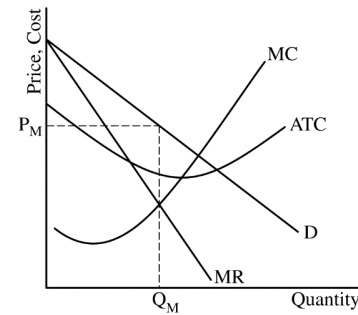
For the second point, the graph must show the marginal cost (MC) curve and the profit-maximizing quantity, labeled Q_M , where $MR=MC$. **1 point**



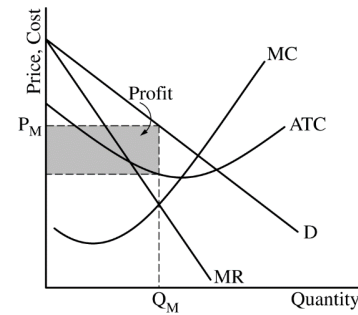
For the third point, the graph must show the profit-maximizing price, labeled P_M , from the demand curve at Q_M . **1 point**



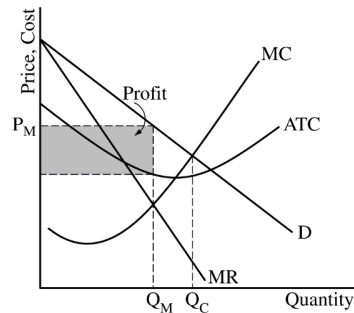
For the fourth point, the graph must show the ATC curve below the demand curve at Q_M with the MC curve rising and intersecting the ATC at its minimum point. **1 point**



For the fifth point, the graph must show a completely shaded area of profit representing $(P_M - ATC \text{ at } Q_M) \times Q_M$. **1 point**

**Total for part (a) 5 points**

- (b) On your graph from part (a), show the quantity that is consistent with the goal of eliminating all deadweight loss as Q_C . **1 point**



- (c) (i) State that the number of tickets SkyRunner sells will decrease and explain that the entry of new firms will reduce the demand for SkyRunner's service. **1 point**
- (ii) State that the price elasticity of demand for SkyRunner Airlines' service will increase and explain that the entry of new firms will increase the number of substitutes available to consumers. **1 point**
- (iii) State that SkyRunner Airlines' profit will be zero or decrease toward zero. **1 point**
- (iv) State that the deadweight loss will decrease and explain that the entry of new firms increases the total market output (services provided) and moves the output closer to the socially optimal output. **1 point**

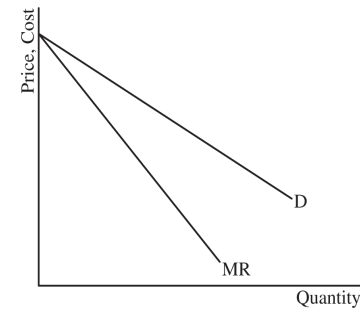
Total for part (c) 4 points

Total for question 1 10 points

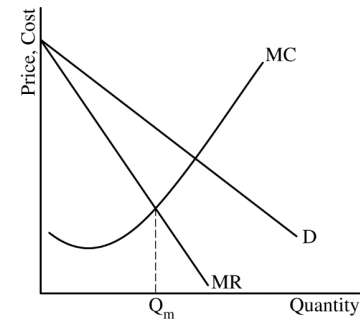
Question 1: Long

10 points

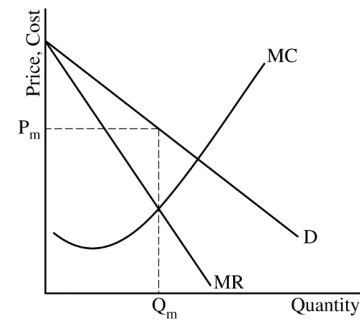
- (a) Draw a correctly labeled graph for NCHart showing downward-sloping demand (D) and marginal revenue (MR) curves with the marginal revenue curve below the demand curve. **1 point**



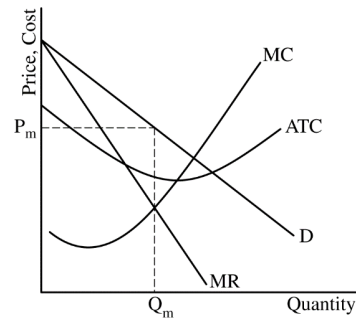
For the second point, the graph must show the marginal cost (MC) curve and the profit-maximizing quantity, labeled Q_m , where $MR=MC$. **1 point**



For the third point, the graph must show the profit-maximizing price, labeled P_m , above Q_m from the demand curve. **1 point**

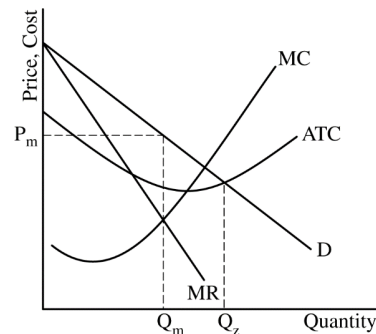


For the fourth point, the graph must show the ATC below the demand curve at Q_m with the MC curve rising and intersecting the ATC curve at its minimum.

1 point**Total for part (a) 4 points**

(b) State that demand is elastic and explain that MR is positive at Q_m or that Q_m is less than the quantity at which marginal revenue equals zero. **1 point**

(c) (i) On your graph from part (a), show the quantity that is consistent with the goal of NCHart generating enough revenue to cover its total costs labeled as Q_z . **1 point**



(ii) State there is a deadweight loss at Q_z and explain that P (or D) $<$ MC , as shown. **1 point**

Note: Deadweight loss will exist at Q_z if the demand is drawn such that the quantity at which $D=ATC$ is less than the quantity at which $D=MC$, because P (or D) $>$ MC .

Note: Deadweight loss will NOT exist at Q_z if the demand is drawn such that the quantity at which $D=ATC$ is equal to the quantity at which $D=MC$, because P (or D) $= MC$.

Total for part (c) 2 points

(d) (i) State that no, TXDrug does not have a dominant strategy, and explain that if NCHart chooses Q_m , then TXDrug's best response is to Enter because $\$1 > \0 , but if NCHart chooses Q_z , then TXDrug's best response is to Stay Out because $\$0 > -\1 . **1 point**

(ii) State that the best response for NCHart is to produce Q_m . **1 point**

(iii) Identify the Nash equilibrium as NCHart produces Q_m and TXDrug chooses to Enter. **1 point**

Total for part (d) 3 points**Total for question 1 10 points****2019****AP** CollegeBoard

AP[®] Microeconomics

Scoring Guidelines

Set 1

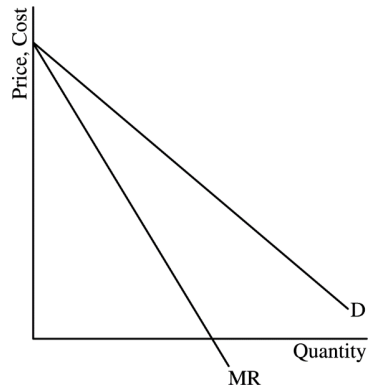
2019 SCORING GUIDELINES

Question 1

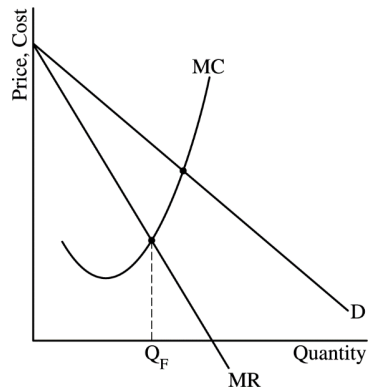
9 points (5 + 2 + 2)

(a) 5 points

- One point is earned for drawing a correctly labeled graph of the monopoly showing downward-sloping demand (D) and marginal revenue (MR) curves with the MR curve below the demand curve.



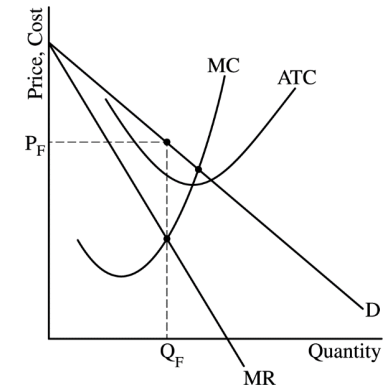
- One point is earned for showing the profit-maximizing quantity, labeled Q_F , where $MR = MC$.



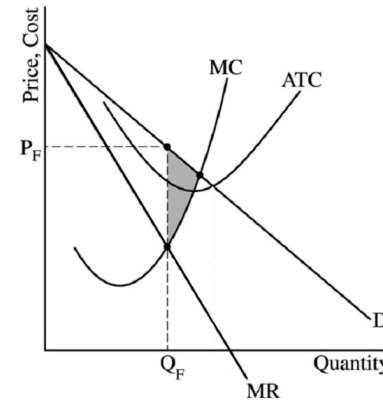
2019 SCORING GUIDELINES

Question 1 (continued)

- One point is earned for showing the profit-maximizing price, labeled P_F , from the demand curve at Q_F , and above the average total cost curve (ATC).



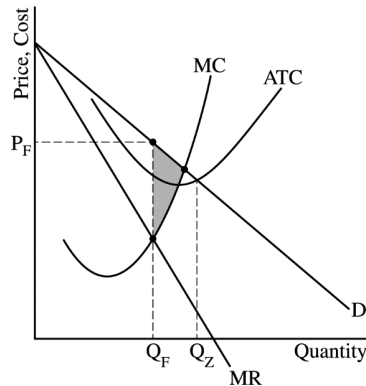
- One point is earned for completely shading the area representing the deadweight loss.



2019 SCORING GUIDELINES

Question 1 (continued)

- One point is earned for showing the quantity where economic profits are zero, labeled Q_Z , where ATC intersects the demand curve.



(b) 2 points

- One point is earned for stating the deadweight loss will remain unchanged, and for explaining that changes in fixed costs do not affect MC or do not change the profit-maximizing quantity of the firm.
- One point is earned for stating that FillUp's economic profit will decrease.

(c) 2 points

- One point is earned for stating that the price must be greater than AVC at the profit-maximizing level of output.
- One point is earned for stating that the profit-maximizing quantity and price will both decrease.

2019 SCORING GUIDELINES

Question 2

5 points (1 + 1 + 3)

(a) 1 point:

- One point is earned for calculating Dana's total benefit from purchasing 2 bottles of water and 1 unit of good X as \$66 and for showing the work.

$$\$24 + \$18 + \$24 = \$66 \text{ OR } \$42 + \$24 = \$66$$

(b) 1 point:

- One point is earned for calculating Dana's total consumer surplus from purchasing 3 units of good X as \$39 and for showing the work.

$$(\$24 - \$5) + (\$18 - \$5) + (\$12 - \$5) = \$39 \text{ OR } \$54 - \$15 = \$39$$

(c) 3 points:

- One point is earned for explaining that Dana does not maximize her benefit because the marginal benefit per dollar spent on bottles of water is greater than the marginal benefit per dollar spent on good X.

$$(18/\$3 > 6/\$6; \text{ OR } 6 > 1; \text{ OR } 6 \neq 1; \text{ OR } MB_w/P_w > MB_x/P_x)$$

- One point is earned for stating that the optimal quantities of good X and bottles of water are 3 units and 4 bottles respectively.

- One point is earned for correctly determining the optimal quantity of water, calculating the cross-price elasticity of demand for bottles of water with respect to the price of good X, showing the work, and for stating that the goods are complements. Answer must be consistent with (c)(ii).

$$(\% \text{ change in the quantity of bottles of water})/(\% \text{ change in the price of good X}) \\ = (25\%/-50\%) = -0.5$$

(Using the midpoint formula is also acceptable: $(1/4.5)/(-3/4.5) = -0.33$)

2019 SCORING GUIDELINES

Question 3

6 points (1 + 1 + 1 + 1 + 2)

(a) 1 point

- One point is earned for stating the actions that maximize the combined profits are for Patrick's Pie to "Advertise" and for Dee's Pizzeria to "Stay Out."

(b) 1 point

- One point is earned for stating that neither firm has an incentive to cheat and for explaining that Dee's Pizzeria profits would decrease from \$0 to -\$2 if Dee cheated and that Patrick's Pie's profits would decrease from \$175 to \$100 if Patrick cheated.

(c) 1 point

- One point is earned for stating that Patrick's Pie does not have a dominant strategy.

(d) 1 point

- One point is earned for stating two Nash equilibria as:
 - Patrick's Pie "Do Not Advertise" and Dee's Pizzeria "Enter"
 - Patrick's Pie "Advertise" and Dee's Pizzeria "Stay Out"

(e) 2 points

- One point is earned for correctly redrawing the payoff matrix and showing the effect of the side payment.

		Dee's Pizzeria	
		Enter	Stay Out
Patrick's Pie	Advertise	\$50, -\$2	\$155, \$20
	Do Not Advertise	\$150, \$15	\$80, \$20

- One point is earned for stating that the Nash equilibrium is for Patrick's Pie to "Advertise" and for Dee's Pizzeria to "Stay Out."

2019

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Scoring Guidelines

Set 2

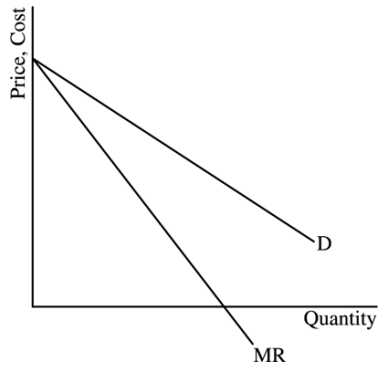
2019 SCORING GUIDELINES

Question 1

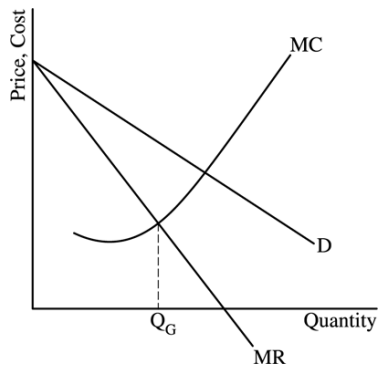
9 points (5 + 2 + 2)

(a) 5 points

- One point is earned for drawing a correctly labeled graph of the monopoly showing downward-sloping demand (D) and marginal revenue (MR) curves with the MR curve below the demand curve.



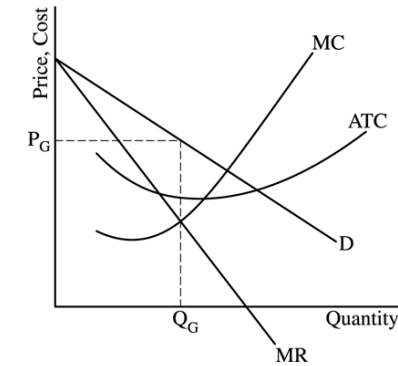
- One point is earned for showing the profit-maximizing quantity, labeled Q_G , where $MR=MC$.



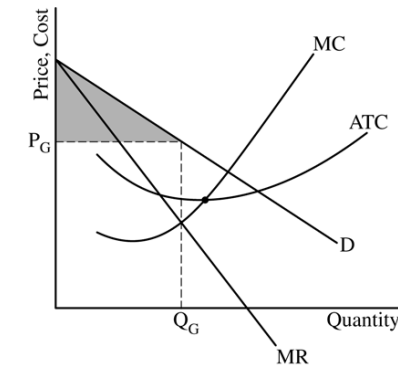
2019 SCORING GUIDELINES

Question 1 (continued)

- One point is earned for both showing the profit-maximizing price, labeled P_G , from the demand curve at Q_G , and above the average total cost (ATC) curve.
- One point is earned for showing the marginal cost (MC) curve rising and passing through the minimum point of the ATC curve.



- One point is earned for completely shading the area of the consumer surplus.



2019 SCORING GUIDELINES**Question 1 (continued)**

(b) 2 points

- One point is earned for stating that Gigantic Pharmaceutical Corporation's demand for warehouse workers will increase and for explaining that the marginal revenue product of labor increases because of the increase in the product price.
- One point is earned for stating that the wage rate Gigantic pays to its warehouse workers will not change and the number of workers hired will increase.

(c) 2 points

- One point is earned for stating that Gigantic's producer surplus will decrease.
- One point is earned for stating that the consumer surplus will increase and for explaining that because of the increased competition the price will decrease and the quantity will increase.

2019 SCORING GUIDELINES**Question 2****5 points (2 + 2 + 1)**

(a) 2 points

- One point is earned for identifying the after-tax price paid by consumers as P_3 and the after-tax quantity as Q_2 .
- One point is earned for identifying the area representing the total tax revenue as:
 P_1P_3SZ , or
 $(P_3 \times Q_2) - (P_1 \times Q_2)$, or
 $(P_3 - P_1) \times Q_2$

(b) 2 points

- One point is earned for stating that the price paid by consumers will be higher.
- One point is earned for stating that the tax revenue received by the government will be higher because the tax does not reduce the quantity purchased when the demand is perfectly inelastic, while the quantity does fall when demand is downward sloping (i.e., $Q_3 > Q_2$).

(c) 1 point

- One point is earned for stating that the producer surplus will stay the same, and for explaining that this is because both the price received by sellers (P_2) and the quantity sold (Q_3) do not change. It is also acceptable to explain that producer surplus stays the same because the consumer bears the full burden of the tax.

2019 SCORING GUIDELINES**Question 3****6 points (1 + 1 + 1 + 1 + 2)**

(a) 1 point

- One point earned for stating that Jackpot Florist's dominant strategy is to close at 6 p.m.

(b) 1 point

- One point is earned for stating that this is not the profit-maximizing action by Boulevard Gardens and for explaining that Boulevard will earn \$30 by choosing Delivery instead of \$20 choosing No Delivery.

(c) 1 point

- One point is earned for identifying the profit for Boulevard Gardens in the Nash equilibrium as \$30.

(d) 1 point

- One point is earned for stating that they would choose to close at 9 p.m. and offer No Delivery.

(e) 2 points

- One point is earned for redrawing the payoff matrix showing the effect of the agreement.

		Boulevard	
		Delivery	No Delivery
Jackpot	6 p.m.	\$35,\$30	\$43,\$32
	9 p.m.	\$37,\$38	\$45,\$40

- One point is earned for stating that Boulevard will agree to Jackpot's proposal and for explaining that Boulevard will be better off because this will increase the payoff from \$30 to \$40.

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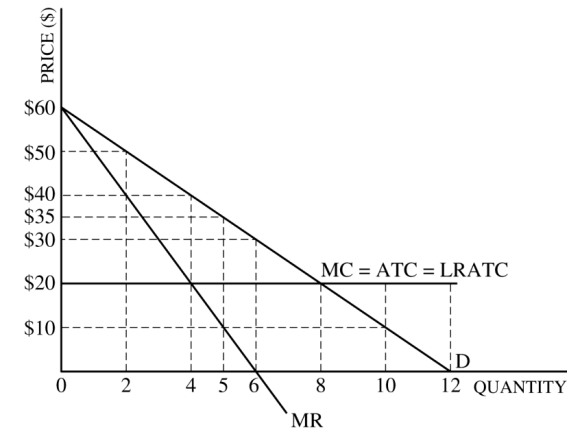
2014 Scoring Guidelines

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2014 SCORING GUIDELINES

Question 1

10 points (3 + 1 + 3 + 1 + 2)



3 points:

- One point is earned for identifying the profit-maximizing quantity, $Q = 4$.
- One point is earned for identifying the profit-maximizing price, $P = \$40$.
- One point is earned for identifying the allocatively efficient output, $Q = 8$.

1 point:

- One point is earned for stating that the firm is not experiencing economies of scale and for explaining that the LRATC is not downward sloping as output increases or LRATC remains constant as output increases.

3 points:

- One point is earned for correctly showing the calculation for the monopolist's economic profit.

$$\pi = (P - ATC) \times Q = (\$10 - \$20) \times 10 = -\$100$$

Or loss of \$100

Other correct calculations are acceptable.

- One point is earned for correctly showing the calculation of consumer surplus.
 $CS = 1/2 (\$60 - \$10) \times 10 = \$250$
 Other correct calculations are acceptable.

- One point is earned for correctly showing the calculation of the deadweight loss.
 $DWL = 1/2 (\$20 - \$10) \times (10 - 8) = \$10$
 Other correct calculations are acceptable.

2014 SCORING GUIDELINES

Question 1 continued

1 point:

- One point is earned for identifying the quantity at which demand is unit elastic, 6.

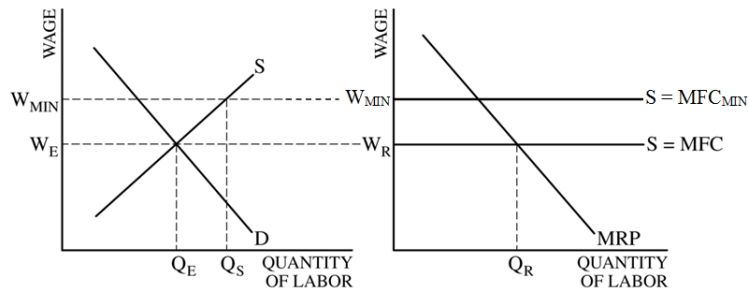
2 points:

- One point is earned for correctly determining the monopolist's profit.
 $1/2[(\$60 - \$20) \times 8] = \$160$
- One point is earned for correctly determining the consumer surplus as zero.

2014 SCORING GUIDELINES

Question 2

6 points (2 + 1 + 3)



2 points:

- One point is earned for drawing a correctly labeled graph of the labor market with an upward-sloping labor supply curve and a downward-sloping labor demand curve and for correctly identifying the equilibrium wage, W_E , and quantity, Q_E .
- One point is earned for drawing a correctly labeled graph showing Ray's Stable demand curve for labor and a horizontal labor supply curve and showing the equilibrium wage, W and quantity, Q_R .

1 point:

- One point is earned for stating that Ray's Stable's marginal factor cost is equal to W and for explaining that the firm is a wage taker in the labor market and/or the market sets the wage.

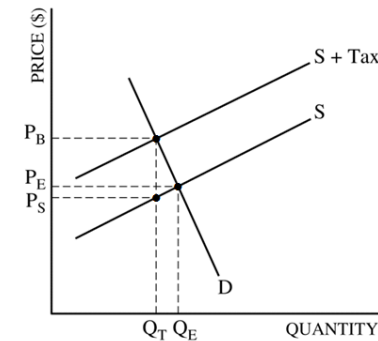
3 points:

- One point is earned for showing the minimum wage, W_{MIN} , on the graph in part (a) above the equilibrium wage W_E .
- One point is earned for showing the quantity supplied of unskilled labor, Q_S , derived from the supply curve at W_{MIN} .
- One point is earned for stating that the marginal revenue product of the last worker hired will increase.

2014 SCORING GUIDELINES

Question 3

6 points (1 + 3 + 1 + 1)



1 point:

- One point is earned for drawing a correctly labeled graph of the gasoline market showing the equilibrium price, P_E , and quantity, Q_E .

3 points:

- One point is earned for showing P_B above P_E , derived from the D curve at Q_T .
- One point is earned for showing P_S below P_E , derived from the S curve at Q_T .
- One point is earned for showing Q_T less than Q_E .

Note: It is not necessary to draw the S + Tax curve; a "tax wedge" approach is acceptable.

1 point:

- One point is earned for correctly calculating the total tax revenue based on the labeling of the graph.

All of the following are acceptable when P_E and P_S are correct:

- $(P_B \times Q_T) - (P_S \times Q_T)$
- $(P_B - P_S) \times Q_T$
- $2 \times Q_T$
- $\text{Tax} \times Q_T$

1 point:

- One point is earned for explaining that the tax burden will fall more on buyers and less on sellers because the demand curve is more inelastic than the supply curve.