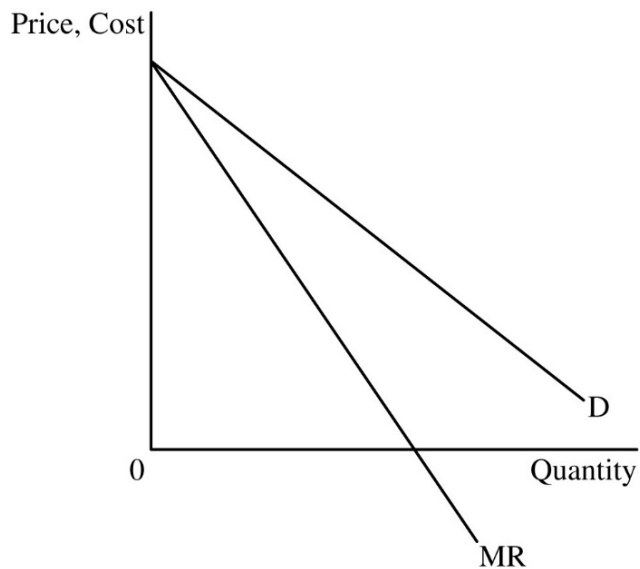
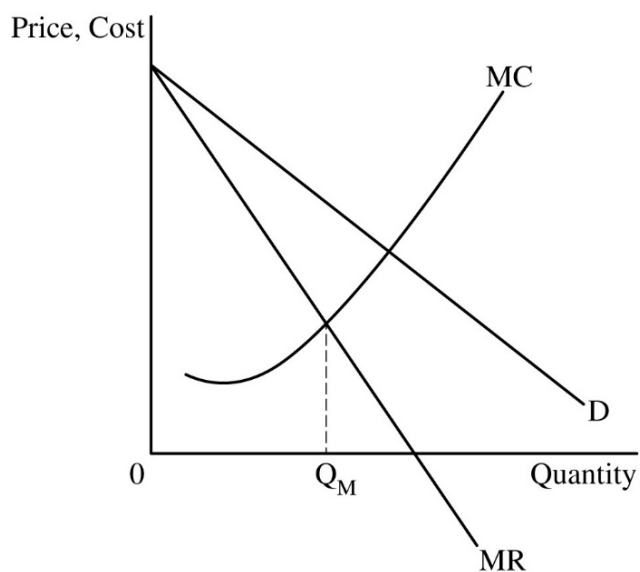


Question 1: Long**10 points**

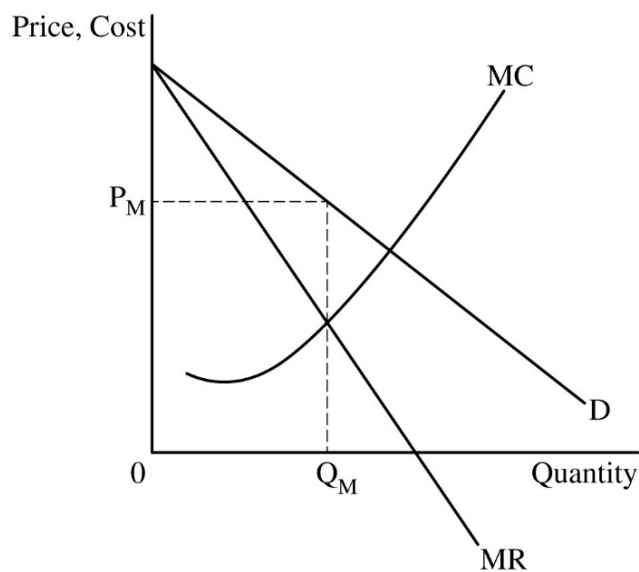
- A** Draw a correctly labeled graph for Voda Reservoir with a downward-sloping demand (D) curve and a downward-sloping marginal revenue (MR) curve with the MR curve below the D curve. **1 point**
- Point 1



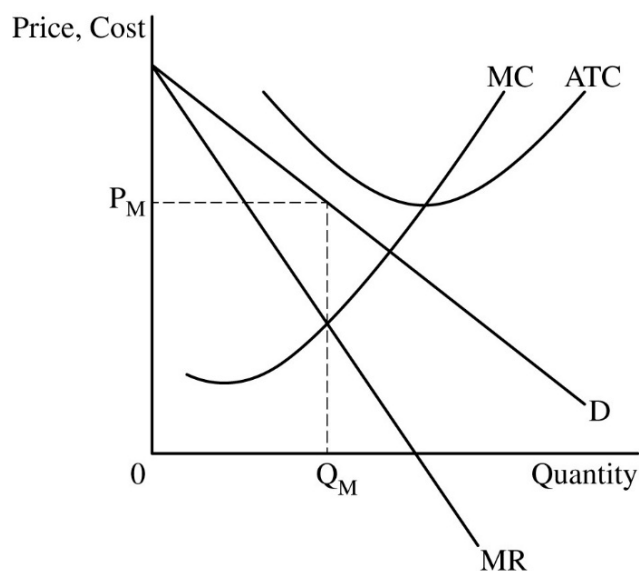
- Point 2 The graph must show a rising marginal cost (MC) curve and the profit-maximizing quantity, labeled Q_M , where $MR = MC$. **1 point**



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

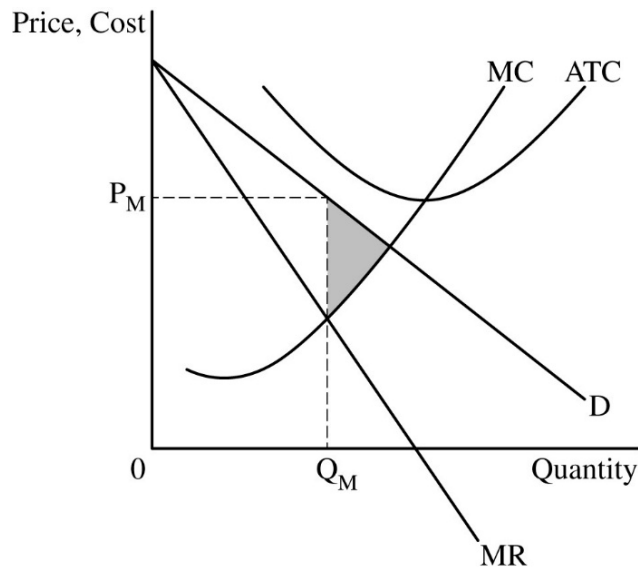


- Point 4 The graph must show the average total cost (ATC) curve above the D curve and show the MC curve passing through the minimum point of the ATC curve. **1 point**



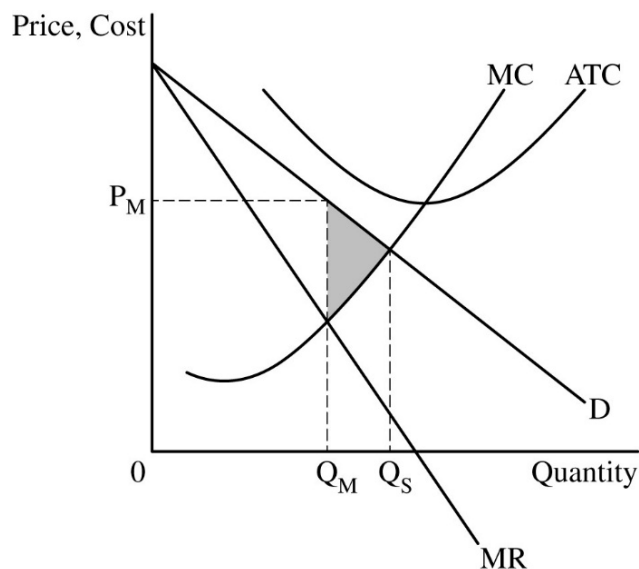
Point 5 The graph must show the area of deadweight loss, shaded completely.

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



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.

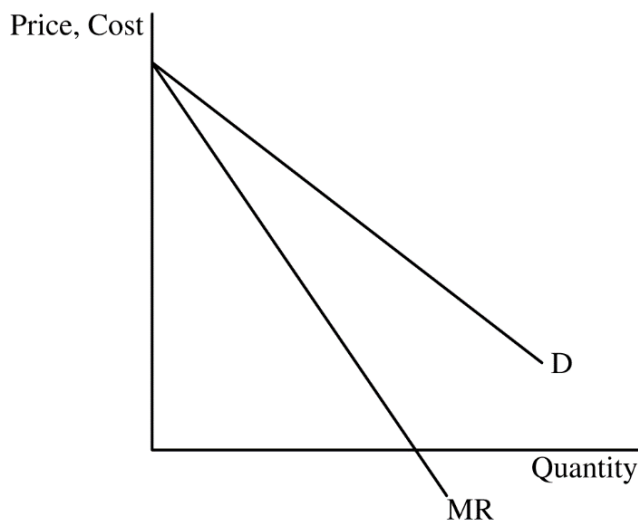
1 point

Point 8

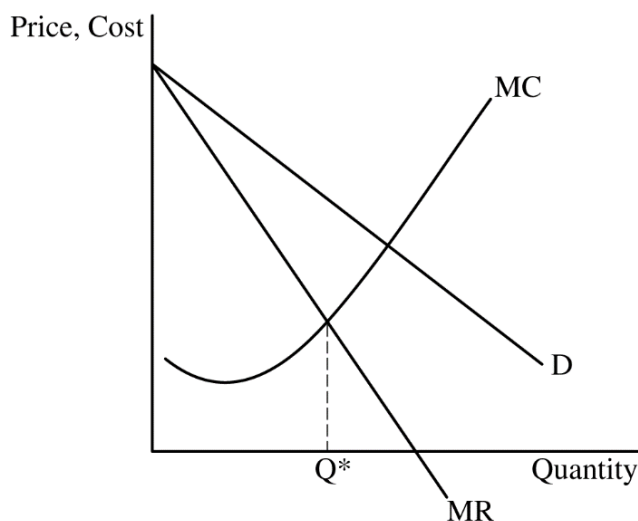
- | | | | |
|----------|-------------|---|----------------|
| E | (i) | State that Voda Reservoir's demand for labor will increase and explain that the increase in demand for bottled water will increase the price and marginal revenue of bottled water, increasing the marginal revenue product of labor. | 1 point |
| Point 9 | | | |
| | (ii) | State that the market wage will increase in the short run and explain that the new regulation will decrease the supply of workers. | 1 point |
| Point 10 | | | |

Question 1: Long**10 points**

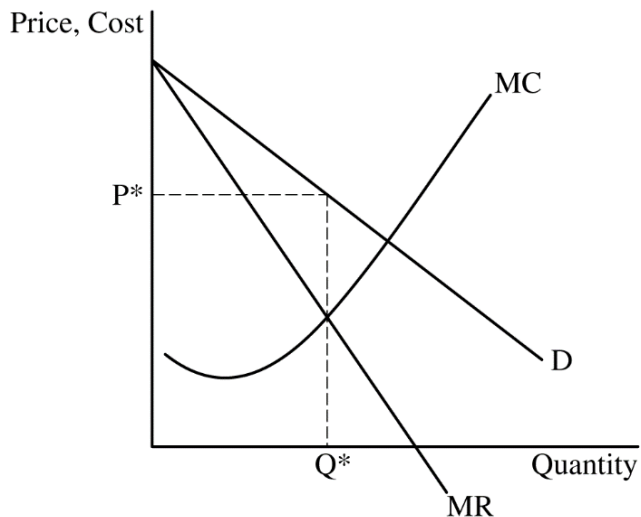
- (a)** Draw a correctly labeled graph of Arzeye Pharma with a downward-sloping demand (D) curve and a downward-sloping marginal revenue (MR) curve with the MR curve below the D curve. **1 point**



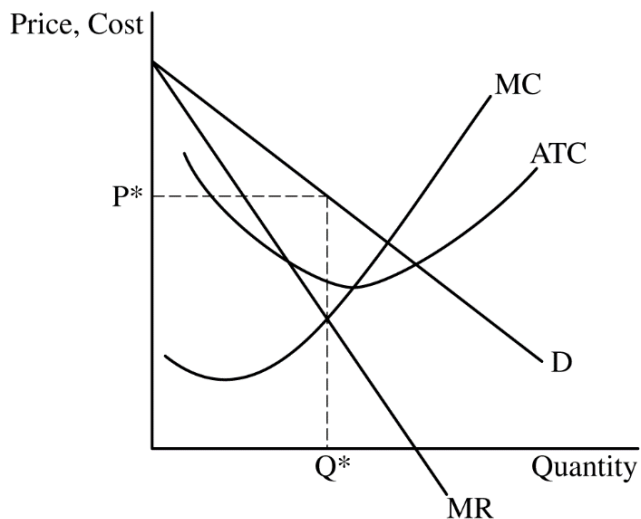
- For the second point, the graph must show a rising marginal cost (MC) curve and the profit-maximizing quantity, labeled Q^* , where $MR = MC$. **1 point**



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

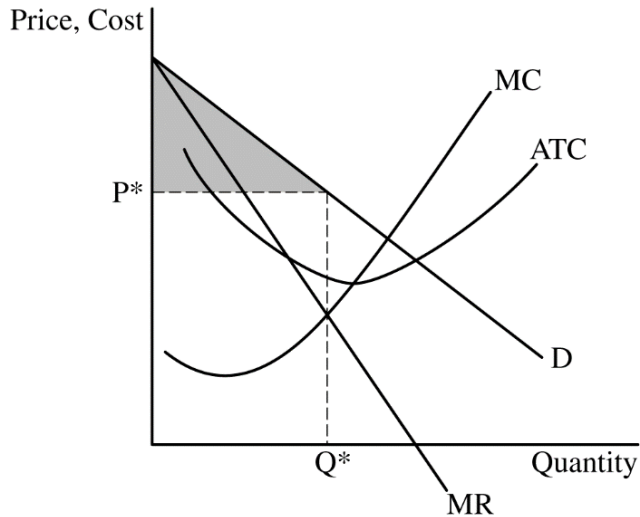


For the fourth point, the graph must show the average total cost (ATC) curve below P^* at Q^* and the marginal cost curve passing through the minimum point of the ATC curve. **1 point**



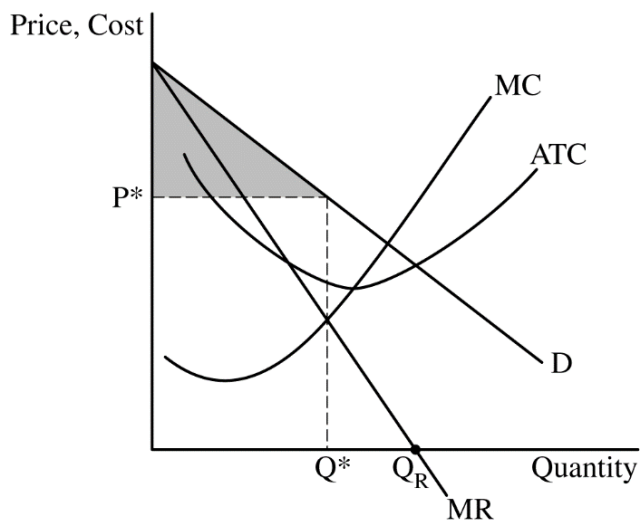
For the fifth point, the graph must show the area of consumer surplus, shaded completely.

1 point



Total for part (a) 5 points

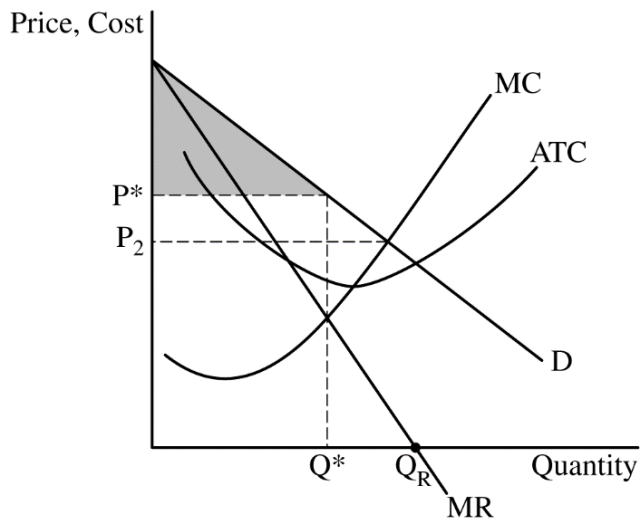
- (b) (i)** The graph from part (a) must show the quantity that maximizes total revenue, labeled Q_R , where marginal revenue equals 0. **1 point**



- (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