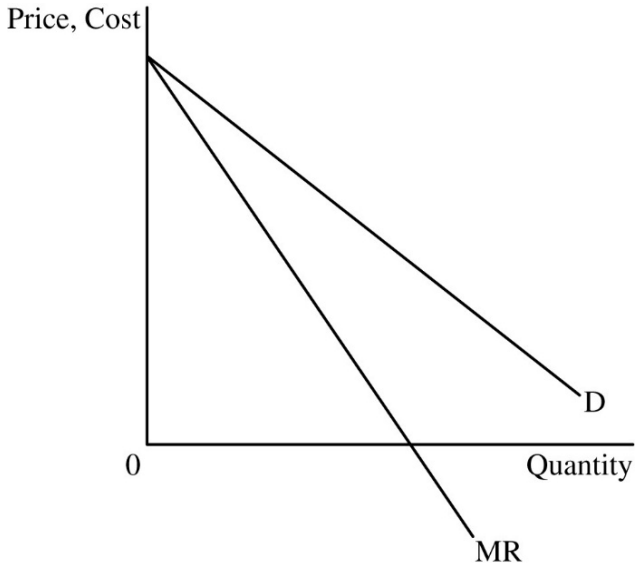
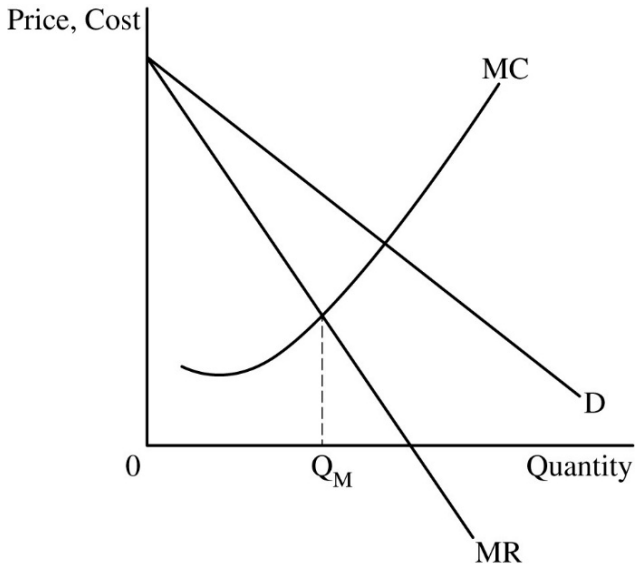
Question 1: Long — 10 points

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**

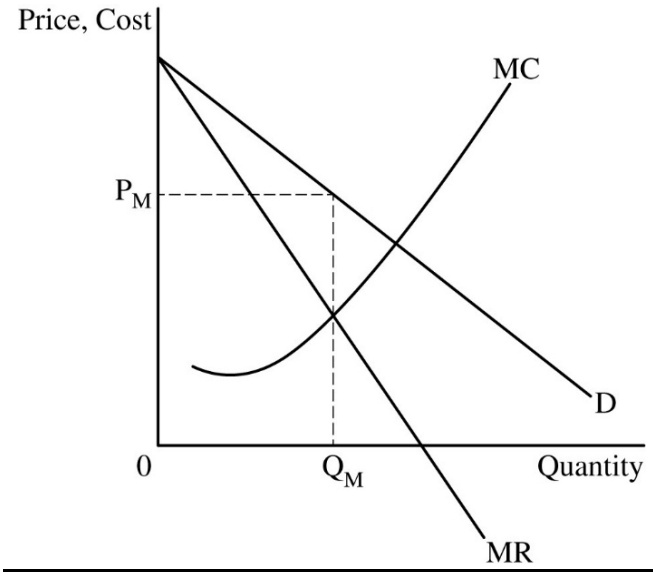
Point 1



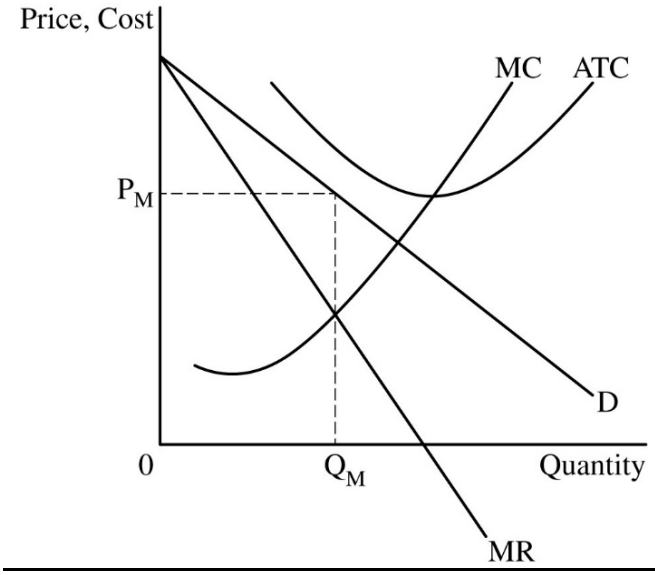
Point 2 — The graph must show a rising marginal cost (MC) curve and the profit-maximizing quantity, labeled Q_M, where MR = MC. **1 point**



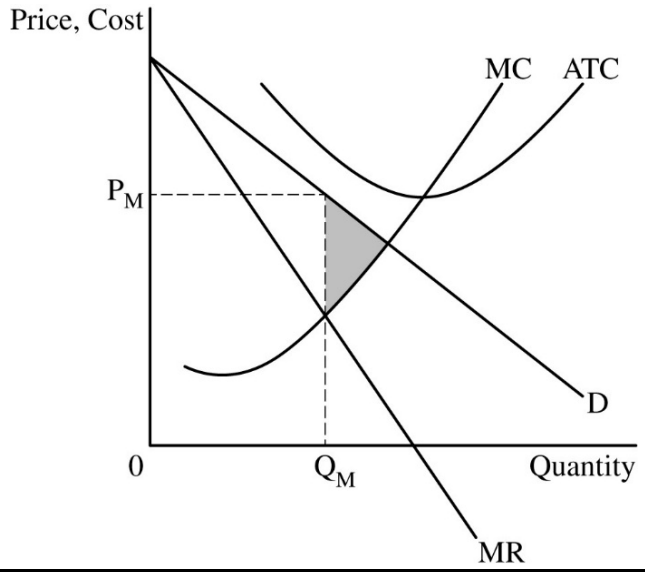
Point 3 The graph must show the profit-maximizing price, labeled P_M, from the D curve at Q_M. **1 point**



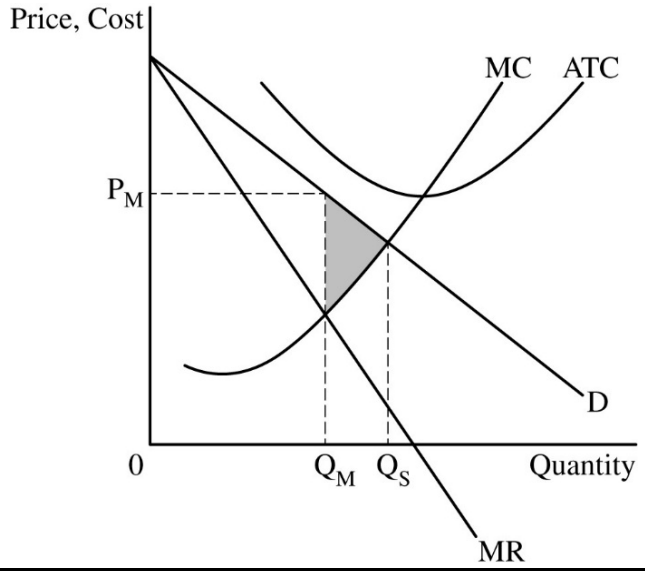
Point 4 The graph must show the average total cost (ATC) curve above the D curve and show the MC curve passing through the minimum point of the ATC curve. **1 point**



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



B Point 6 — 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 Point 7 — State that Voda Reservoir's profit-maximizing quantity of bottled water will increase and explain with **ONE** of the following: **1 point**

- 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 Point 8 — State that the demand for Voda Reservoir's bottled water will become more elastic. **1 point**

E (i) Point 9	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**
(ii) Point 10	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**

Question 2: Short — 5 points

A Point 1	State that the profit-maximizing number of miners is 4.	**1 point**
B Point 2	State that Quartz Excavations will pay a wage rate that is less than \$15 and explain that the wage rate paid by a monopsonist is determined by the supply of labor at the quantity of labor hired. Thus, the wage rate associated with the hiring of 4 miners is \$10.	**1 point**
C Point 3	Calculate the total wage bill as \$50 and show your work. $\text{Total Wage Bill} = \$25 \times 2 = \$50$	**1 point**
D (i) Point 4	State that the marginal revenue product of miners will increase and explain that the increase in demand for quartz will increase the price and marginal revenue of quartz.	**1 point**
(ii) Point 5	State that the marginal factor cost of the last miner hired will be greater than the marginal factor cost of the last miner hired before the increase in the demand for quartz.	**1 point**

Question 2: Short — 5 points

(a)	State that Southland has a comparative advantage in producing wheat and explain that the opportunity cost of producing one bushel of wheat in Southland is 1/2 yard of cloth, which is less than the opportunity cost of producing one bushel of wheat in Northland, which is 3 yards of cloth.	**1 point**
(b)	Identify any specific number between 5 and 30 yards of cloth.	**1 point**
(c)	State no and explain that Southland's opportunity cost to produce one yard of cloth is 1.5 bushels of wheat, which is greater than Northland's opportunity cost of producing cloth, which is 1/3 of a bushel of wheat.	**1 point**
(d)(i)	State no, the market results in an inefficient allocation of resources and explain with **ONE** of the following: • The negative externality causes the marginal social cost to be greater than the marginal social benefit (MSC > MSB) at the market equilibrium. • The negative externality in production causes the marginal social cost to be greater than the marginal private cost (MSC > MPC) at the market equilibrium.	**1 point**
(ii)	State that a lump-sum tax will not change the market equilibrium price and quantity in the short run.	**1 point**
	Total for part (d)	**2 points**
	Total for question 2	**5 points**