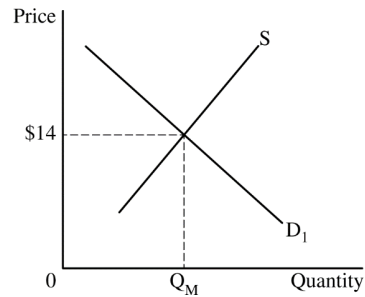


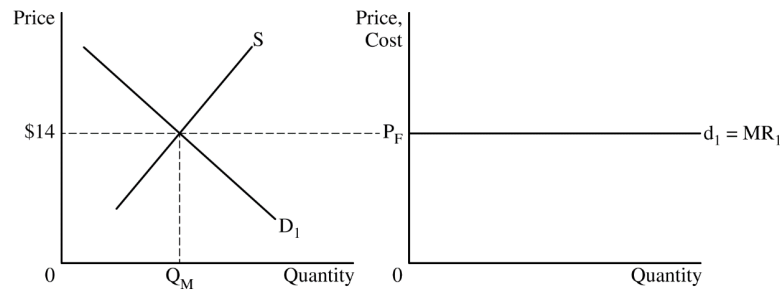
## Question 1: Long

10 points

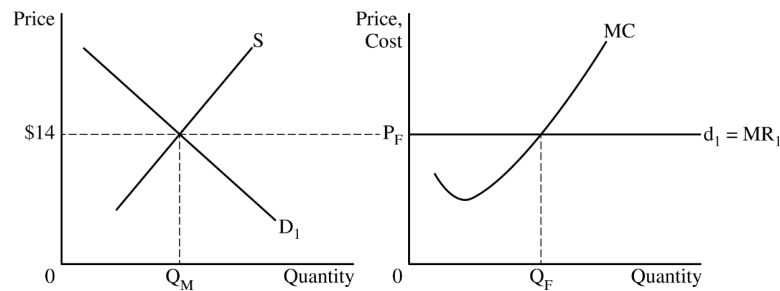
- (a) Draw a correctly labeled graph of the market for soybeans with a downward-sloping demand ( $D_1$ ) curve and an upward-sloping supply ( $S$ ) curve and label the market equilibrium price as \$14 and the market equilibrium quantity as  $Q_M$ . **1 point**



For the second point, draw a correctly labeled graph of Soja Farm and show the firm's horizontal demand and marginal revenue ( $d_1 = MR_1$ ) curve extended from the market equilibrium price and label the firm's price as  $P_F$ . **1 point**

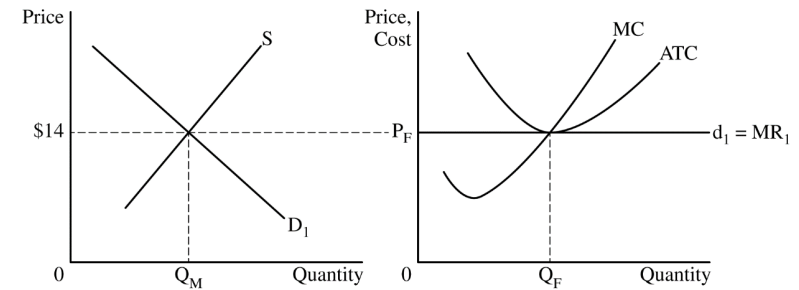


For the third point, the firm's graph must show a rising marginal cost ( $MC$ ) curve, and show the profit-maximizing quantity, labeled  $Q_F$  where  $MR = MC$ . **1 point**



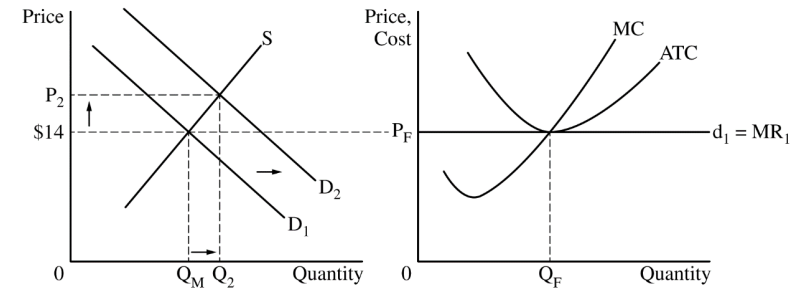
①

For the fourth point, the firm's graph must show the average total cost ( $ATC$ ) curve tangent to the firm's demand curve at  $Q_F$  and show the  $MC$  curve passing through the minimum point of the  $ATC$  curve. **1 point**

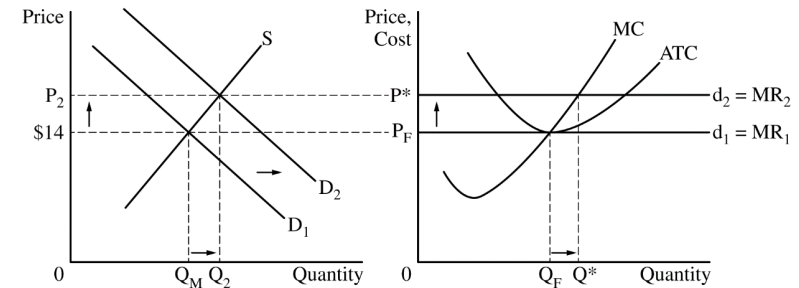
Total for part (a) **4 points**

- (b) State that Soja Farm's total revenues would decrease to \$0 and explain that all consumers of soybeans would buy soybeans from other sellers who charge the market price of \$14. **1 point**

- (c) (i) The market graph from part (a) must show a rightward shift of the market demand curve and the new equilibrium price labeled  $P_2$  and the new equilibrium quantity labeled  $Q_2$ . **1 point**



- (ii) The firm's graph from part (a) must show an upward shift in the firm's marginal revenue (demand) curve at  $P_2$  and the new profit-maximizing quantity for Soja Farms, labeled  $Q^*$ . **1 point**



②

| Total for part (c) 2 points                                                                                                                           |                                                                                                                                                                                                                                             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (d)                                                                                                                                                   | State that the number of firms will increase in the long run and explain that the positive economic profits earned by soybean producers will encourage new firms to enter the market. 1 point                                               |
| (e) (i)                                                                                                                                               | State that demand for quinoa is inelastic and explain with <b>ONE</b> of the following. 1 point                                                                                                                                             |
|                                                                                                                                                       | <ul style="list-style-type: none"> <li>The absolute value of the price elasticity of demand for quinoa is 0.2.</li> <li>The 5% decrease in the quantity demanded of quinoa is less than the 25% increase in the price of quinoa.</li> </ul> |
| (ii)                                                                                                                                                  | Calculate the cross-price elasticity of demand as 0.4 and show your work. 1 point                                                                                                                                                           |
| Cross Price Elasticity of Demand = $\frac{\% \text{ Change in } Q_D \text{ of Tofu}}{\% \text{ Change in Price of Quinoa}} = \frac{10\%}{25\%} = 0.4$ |                                                                                                                                                                                                                                             |
| Total for part (e) 2 points                                                                                                                           |                                                                                                                                                                                                                                             |
| Total for question 1 10 points                                                                                                                        |                                                                                                                                                                                                                                             |