DISCUSSION QUESTION

Name:
Instructor:
Course:

Maid of the Mist has been selling ferry tours of Niagara Falls from the U.S. side of the Niagara gorge since the 1840s. For the past several decades, no other ferry service provider has been permitted to sell tours of Niagara Falls. In 2012, Maid of the Mist signed a contract with New York State in which they agreed to pay $105 million for exclusive rights to provide tours of Niagara Falls for the next 30 years.
Source: http://www.nytimes.com/2012/12/05/nyregion/maid-of-the-mist-corporation-signs-agreement-to-continue-niagara-tours.html

a) What type of a barrier to entry does this represent?

b) Why has the government allowed Maid of the Mist to act as a Monopoly in this industry? Why doesn't the government allow ferry tours of Niagara Falls to be offered by say, 20 different providers?

c) What would happen to the expected price and quantity sold of tours of Niagara Falls if this barrier to entry did not exist (if there was additional competition in this market)? Economists generally prefer competitive markets to monopolies, but would it necessarily be a net positive change from society's perspective if greater competition existed in this industry?

PEER GROUP PROBLEM SOLVING

Name:
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Fill in all the blanks in the following production table – as if it's a single price firm.

Q	P	TR	MR	TC	MC	ATC
0	--	--	--	$100	--	--
1	$100			$140		
2	$90			$180		
3	$80			$220		
4	$70			$260		
5	$60			$300		
6	$50			$340		
7	$40			$380		
8	$30			$420		

a) If this represents a single price monopolist, what is the profit maximizing quantity and price?

b) If this is a single price monopolist, what do their profits equal?

c) If this represents a competitive industry, what will the equilibrium price and quantity equal?

d) What is the amount of deadweight loss associated with this being a monopoly?

IN-CLASS EXPERIMENT / ACTIVE EXERCISE

Suppose a new firm has start-up costs equal to $2,000,000. Their marginal costs are constant at $20/unit.

a) Calculate their average total costs at the following quantities:

   1. Q=10,000

   2. Q=50,000

   3. Q=100,000

b) On a clearly labeled set of axes, graph out their MC and ATC curve for the quantities listed above. Be sure that the amounts are clearly indicated on both axes.

c) Suppose this product is sold at a price of $25/unit. How many units does this firm have to sell before it becomes profitable?

d) Suppose a competitor is considering entering this market and they would also incur start-up costs equal to $2,000,000. They expect to sell 200,000 units/year. Will this firm enter the market? Explain what this decision would depend on.

SOLUTIONS AND INSTRUCTOR NOTES

Discussion Question

Maid of the Mist has been selling ferry tours of Niagara Falls from the U.S. side of the Niagara gorge since the 1840s. For the past several decades, no other ferry service provider has been permitted to sell tours of Niagara Falls. In 2012, Maid of the Mist signed a contract with New York State in which they agreed to pay $105 million for exclusive rights to provide tours of Niagara Falls for the next 30 years.

a) What type of a barrier to entry does this represent?

They are provided with an exclusive license, so it is a government granted barrier to entry.

b) Why does the government allow Maid of the Mist to act as a Monopoly in this industry? Why doesn't the government allow ferry tours of Niagara Falls to be offered by say, 20 different providers?

If competition were allowed in this market, it might actually be dangerous to consumers and reduce the aesthetic quality of Niagara Falls to observers.

c) What would happen to the expected price and quantity sold of tours of Niagara Falls if this barrier to entry did not exist (if there was additional competition in this market)? Economists generally prefer competitive markets to monopolies, but would it necessarily be a net positive change from society's perspective if greater competition existed in this industry?

As with all markets, if more competition were allowed, the price would be lowered and the quantity sold would be higher. However, unlike most other markets, this would not necessarily make society better off. In particular, a large quantity of boats near Niagara Falls might reduce the benefits that all consumers and observers of the Falls receive. The point is that restricting competition can enhance welfare in certain markets.

Peer Group Problem Solving

Fill in all the blanks in the following production table – as if it's a single price firm.

Q	P	TR	MR	TC	MC	ATC
0	--	--	--	$100	--	--
1	$100	$100	$100	$140	$40	$140
2	$90	$180	$80	$180	$40	$90
3	$80	$240	$60	$220	$40	$73.33
4	$70	$280	$40	$260	$40	$65
5	$60	$300	$20	$300	$40	$60
6	$50	$300	$0	$340	$40	$56.67
7	$40	$280	-$20	$380	$40	$54.29
8	$30	$240	-$40	$420	$40	$52.50

a) If this represents a single price monopolist, what is the profit maximizing quantity and price?
This is where MR = MC; Q = 4; P = 70

b) If this is a single price monopolist, what do their profits equal?
TR - TC at Q = 4; $280 - $260 = $20

c) If this represents a competitive industry, what will the equilibrium price and quantity equal?
P = MC; Q = 7; P = 40

d) What is the amount of deadweight loss associated with this being a monopoly?

The amount of deadweight loss is given by the difference between demand and MC, and between the competitive quantity (7) and the monopolist's quantity (4). In this case it equals:

($70 - $40) + ($60 - $40) + ($50 - $40) + ($40 - $40) = $60.

Note: It might help students to graph out the demand curve and MC curve to show the calculation for deadweight loss on the graph.

In-Class Experiment / Active Exercise

a) Calculate their average total costs at the following quantities:

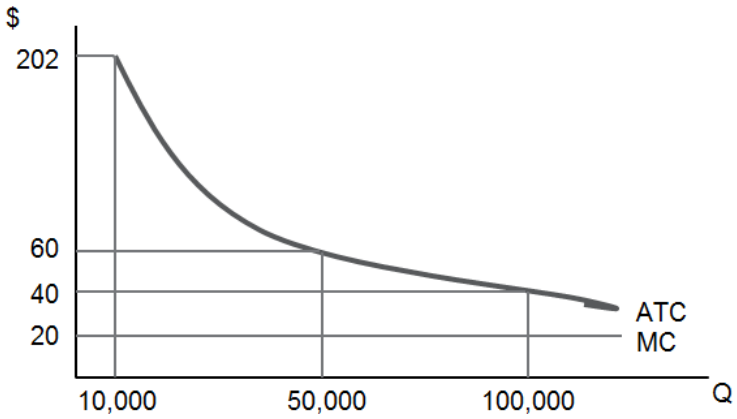
TC = FC + MC x Q

1. Q = 10,000*; TC = $2,000,000 + $20 x 1,0000 = $2,020,000; ATC = $2,020,000/10,000 = $202*

2. Q = 50,000*; TC = $2,000,000 + $20 x 50,000 = $3,000,000; ATC = $3,000,000/50,000 = $60*

3. Q = 100,000*; TC = $2,000,000 + $20 x 100,000 = $4,000,000; ATC = $4,000,000/100,000 = $40*

b) On a clearly labeled set of axes graph out their MC and ATC curve for the quantities listed above. Be sure that the amounts are clearly indicated on both axes.



c) Suppose this product is sold at a price of $25/unit. How many units does this firm have to sell before it becomes profitable?

This firms will become profitable whenever TR = TC; TR = $25 x Q; TC = 2,000,000 + $20Q; $25Q = 200,000+$20Q; 5Q = $2,000,000; Q = 400,000.

d) Suppose a competitor is considering entering this market and they would also incur start-up costs equal to $2,000,000. They expect to sell 200,000 units/year. Will this firm enter the market? Explain what this decision would depend on.

We cannot be sure whether this firm will enter the market. This firm would consider what price they can charge, what their marginal costs equal, and how long they could potentially sustain losses. If they do not expect they could be profitable in a reasonable amount of time, they will not enter the market.

For more in-class experiment and active learning ideas, visit www.econedactive.com.