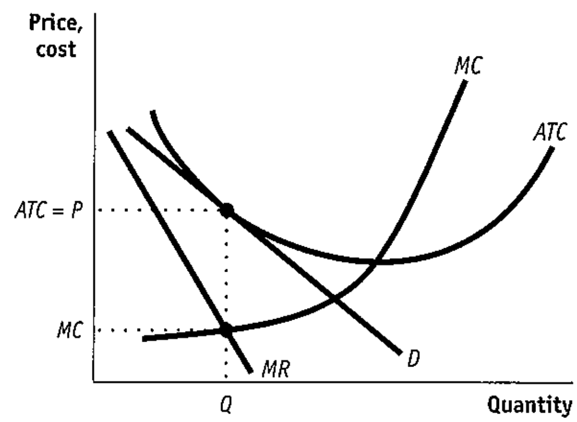
TIP: In long-run equilibrium, a monopolistic competitor will produce a level of output where price equals average total cost, price exceeds marginal cost, and average total cost is not at a minimum.

Figure 16.4 shows a monopolistic competitor in long-run equilibrium. Since there are few if any barriers to entry, all monopolistic competitors will just break even; price equals average total cost. This is the same as in a perfectly competitive market. We also know that a monopolistic competitor faces a downward-sloping demand curve, so that price exceeds marginal revenue; at the same time, marginal revenue equals marginal cost (the optimal output rule), so price must exceed marginal cost. Unlike perfect competitors, who produce where price equals marginal cost, monopolistic competitors produce with a deadweight loss because some mutually beneficial trades do not take place. Finally, monopolistic competitors produce with excess capacity; they produce along the downward-sloping portion of the average total cost curve. Again, if we compare them to perfect competitors, who produce where price equals minimum average total cost, monopolistic competitors produce where average total cost is greater than marginal cost and average total cost is declining.

Figure 16.4



Multiple-Choice Questions

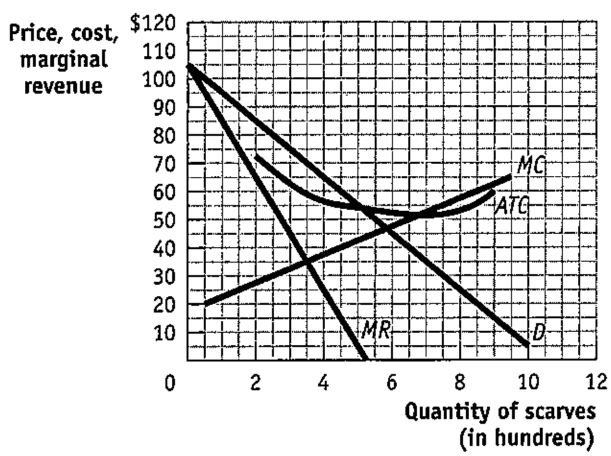
1. A market that is characterized by monopolistic competition is like a monopoly in that ________________________________, and like a perfectly competitive market in that ________________________.
   a. firms face a downward-sloping demand curve; there are no barriers to entry
   b. firms face a perfectly price elastic demand curve; it has no supply curve
   c. firms may earn economic profits in the long run; there is no deadweight loss
   d. firms break even; firms produce with excess capacity

2. Which of the following industries is monopolistically competitive in the United States?
   a. soft drink industry
   b. diamond industry
   c. wheat industry
   d. clothing industry

3. If a restaurant tries to cater to the low-price end of a monopolistically competitive market by only offering counter service (customers must order and take their meals from a counter) and skimping on ingredients, we could say that it is trying to differentiate itself on the basis of
   a. location.
   b. quality.
   c. style or type.
   d. both b and c.

4. In monopolistically competitive markets, there is product differentiation because
   a. each firm is a price taker.
   b. there is competition among sellers.
   c. there is value in diversity.
   d. both b and c.

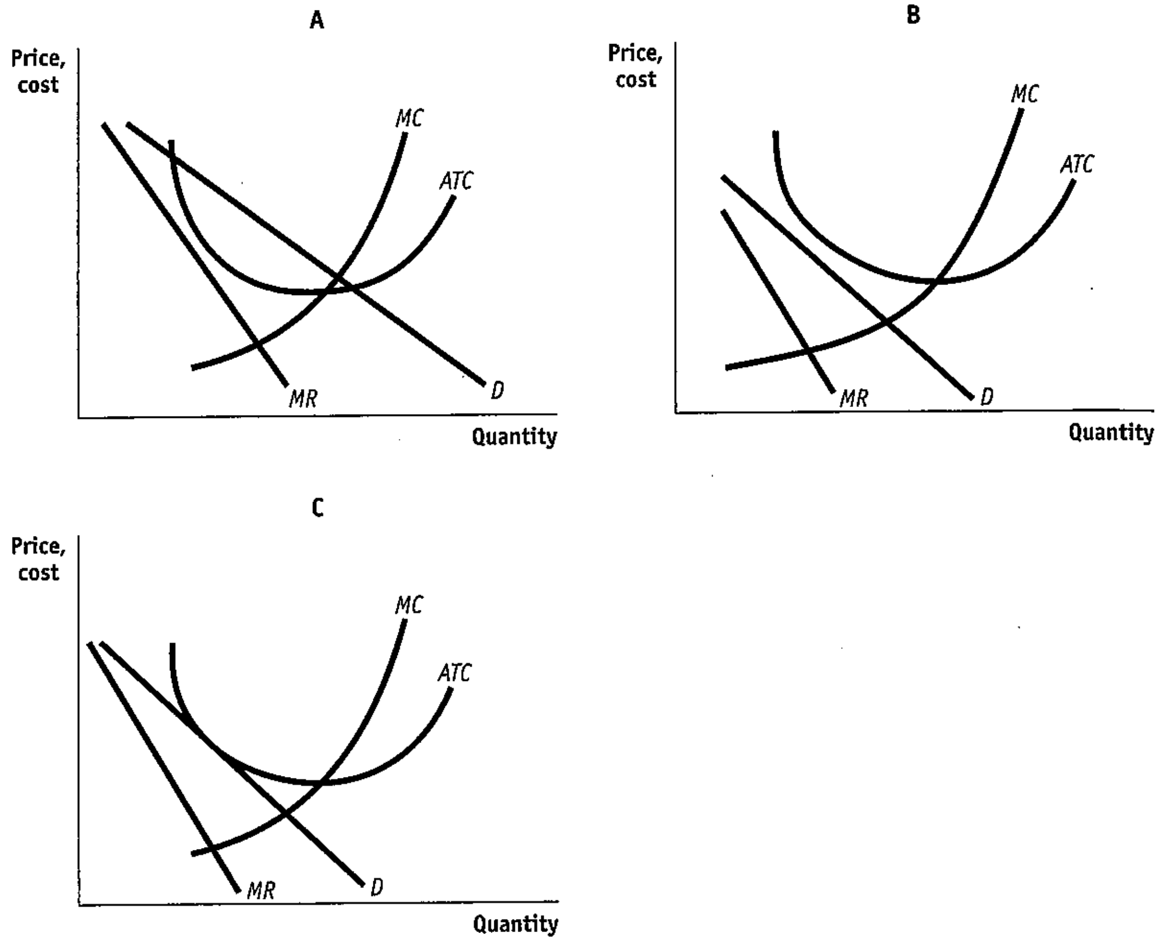
Use the following figure to answer the next two questions. It shows the monthly demand, average total cost, marginal revenue, and marginal cost curves for Silkee Scarves, a monopolistically competitive firm.



5. In the short run, Silkee Scarves will produce ___________ hundred scarves, charge a price of ___________, and earn a profit of ___________.
   a. 8; $25; $0
   b. 3.5; $35; $3,500
   c. 3.5; $70; $3,500
   d. 5; $55; $0

6. In the long run,
   a. Silkee Scarves will experience a decrease in demand.
   b. Silkee Scarves will experience an increase in demand.
   c. Silkee Scarves will not experience a change in demand.
   d. it is impossible to determine what will happen to Silkee Scarves' demand.

The accompanying figure shows different profit positions for a monopolistic competitor in the short run. Use this figure to answer the next five questions.



7. Which of the panels in the figure shows a monopolistic competitor in long-run equilibrium?
   a. A
   b. B
   c. C
   d. None of the above.

8. Which of the panels in the figure shows a monopolistic competitor earning an economic profit?
   a. A
   b. B
   c. C
   d. Both A and B.

9. Which of the panels in the figure shows a monopolistic competitor earning an economic loss in the short run?
   a. A
   b. B
   c. C
   d. None of the above.

10. Which of the panels in the figure show a monopolistic competitor producing with excess capacity?
a. only A and B
b. only B and C
c. only A and C
d. A, B, and C

11. If monopolistic competitors find themselves in a position similar to panel B in the figure, in the long run the ______________________________ curves facing firms in the industry will ____________________.
a. demand and marginal revenue; shift to the right
b. demand and marginal revenue; shift to the left
c. average total cost and marginal cost; shift to the right
d. average total cost and marginal cost; shift to the left

12. In zero-profit equilibrium, the demand curve must be tangent to the average total cost curve because
a. if any part of the demand curve lies above the average total cost curve, the firm will earn positive profits.
b. if the demand curve lies everywhere below the average total cost curve, the firm will earn negative profits.
c. firms will enter or leave the industry if there are either positive profits or negative profits in the industry.
d. of all of the above.

13. In long-run equilibrium, a perfectly competitive firm and a monopolistically competitive firm are similar in that they both produce a level of output at which
a. price equals marginal cost.
b. price equals average total cost.
c. marginal cost equals average total cost.
d. there is excess capacity.

14. In long-run equilibrium in a monopolistically competitive industry, we know that some mutually beneficial trades do not take place because price is
a. less than average total cost.
b. less than marginal revenue.
c. greater than marginal cost.
d. greater than average total cost.

15. In long-run equilibrium in a monopolistically competitive industry, there is excess capacity because marginal cost is
a. less than average total cost.
b. less than the price.
c. greater than marginal revenue.
d. greater than average total cost.

16. Unlike perfect competitors, monopolistic competitors often advertise because
a. they are price takers.
b. they sell standardized products.
c. they produce with excess capacity.
d. they want to produce where price equals marginal cost.

17. Some argue that even though monopolistic competitors produce where price exceeds marginal cost, this inefficiency may be beneficial because it is offset by
  a. the economic profit earned by the firms.
  b. the value of the diversity of products.
  c. the market power wielded by firms.
  d. all of the above.

18. A monopolistic competitor engages in advertising to
  a. provide information about its good or product.
  b. differentiate its product from those of its rivals.
  c. increase the demand for its good or service.
  d. all of the above.

19. Which of the following advertisements provides information to the consumer?
  a. "CarbChips have half the carbohydrates of regular potato chips."
  b. "The Taj Mahal restaurant is like a trip to India."
  c. "Brainpower Books—just think it!"
  d. "Avion Airlines wants to take you higher."

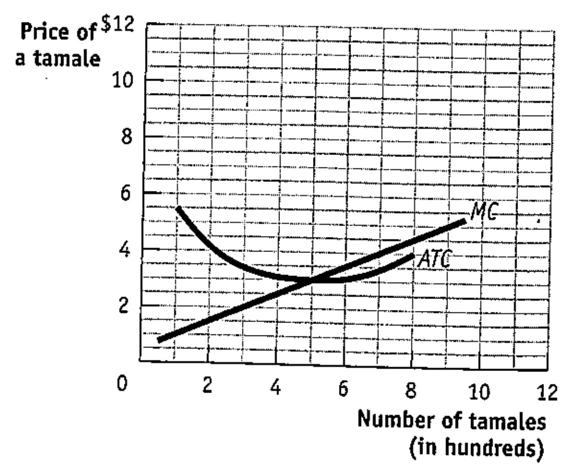
20. One of the drawbacks of advertising and brand names is that
  a. they increase profits for firms in the industry.
  b. they may create product differentiation and market power where there is no real difference in the product.
  c. they encourage competition.
  d. they minimize the difference between price and marginal cost.

Problems and Exercises

Read each question carefully and then write your answers in the space provided or on a separate sheet of paper.

1. Tango's Tamales is a small restaurant on a busy street known as Restaurant Row. The following table shows the firm's demand schedule and the following figure shows the restaurant's marginal cost and average total cost curves.

Number of tamales (in hundreds)	Price of a tamale
0	$11.00
1	9.50
2	8.00
3	6.50
4	5.00
5	3.50
6	2.00
7	0.50



Answers to How Well Do You Understand the Chapter

1. large
2. differentiated
3. exit out
4. service
5. too many
6. market power
7. competition
8. market power
9. real
10. similar
11. location
12. type
13. closest
14. quality
15. value in diversity
16. competition
17. limited
18. gains
19. downward-sloping
20. marginal revenue
21. optimal output
22. break even
23. is greater than
24. break even
25. average total cost
26. economic profits
27. left
28. leave
29. right
30. break even
31. perfect competitors
32. minimum
33. equals
34. excess capacity
35. diversity
36. is greater than
37. mutually beneficial
38. advertising
39. differentiate
40. advertise
41. information
42. signal
43. waste
44. brand name
45. asset
46. benefits
47. market power

Answers to Multiple-Choice Questions

1. A monopolistic competitor is like a monopoly in that the firm faces a downward-sloping demand curve and has market power to set a price above marginal cost. It is like a perfect competitor in that there are no barriers to entry and all firms break even in the long run. **Answer: A.**
2. The soft drink industry is oligopolistic, the diamond industry is a monopoly, the wheat industry is perfectly competitive, and the clothing industry is monopolistically competitive. **Answer: D.**
3. The restaurant is differentiating itself both in terms of quality, because it is a low-price restaurant, and of style or type, because counter service does not appeal to all diners. **Answer: D.**
4. Monopolistic competitors differentiate their products because they want to attract buyers from their rivals and consumers will pay for diversity. **Answer: D.**
5. Silkee Scarves will produce 3.5 hundred (350) scarves because that is where marginal revenue equals marginal cost (the optimal output rule), and it will charge a price of $70. The average total cost of producing the 3.5 hundred scarves is $60; average profit is $10, and total profit is $3,500. **Answer: C.**
6. In the long run, firms will be attracted to the scarf industry by the short-run profits and the demand for Silkee Scarves will fall. **Answer: A.**
7. In long-run equilibrium, a monopolistic competitor will just break even. Panel C shows a monopolistic competitor breaking even. At the level of output where marginal revenue equals marginal cost, price equals average total cost. **Answer: C.**

8. Panel A shows a monopolistic competitor earning an economic profit. In panel A, at the level of output at which marginal revenue equals marginal cost, price is greater than average total cost. **Answer: A.**

9. Panel B shows a monopolistic competitor earning a loss in the short run. At the level of output at which marginal revenue equals marginal cost, average total cost is greater than price (the firm earns a loss). **Answer: B.**

10. A firm is producing with excess capacity if it is producing a level of output for which average total cost is decreasing. If average total cost is decreasing, marginal revenue must be less than average total cost. In all three panels, at the level of output at which marginal revenue equals marginal cost, the firm is producing with excess capacity. **Answer: D.**

11. Panel B shows a monopolistic competitor earning a loss but continuing in business in the short run. In the long run, firms will leave the industry and the demand and marginal revenue curves facing the remaining firms in the industry will shift to the right. **Answer: A.**

12. If the demand curve at any point lies above the average total cost curve in the short run, a monopolistic competitor will earn a positive profit, other firms will enter the industry in the long run, and the demand curve facing the original firm will fall until it is just tangent to the demand curve and all firms break even. If a firm's demand curve lies everywhere below the average total cost curve in the short run, a monopolistic competitor will earn a loss and leave the industry in the long run. The demand curves facing the remaining firms will rise until they are just tangent to the demand curves and all firms break even. **Answer: D.**

13. Because there are no barriers to entry or exit, perfect competitors and monopolistic competitors will break even in the long run; price equals average total cost. **Answer: B.**

14. We know that in long-run equilibrium in a monopolistically competitive industry, some mutually beneficial trades do not take place because price is greater than marginal cost. Society would be better off with more produced. **Answer: C.**

15. A monopolistic competitor always produces where marginal revenue equals marginal cost and price is greater than marginal revenue; it produces where marginal revenue is less than price. In long-run equilibrium, a monopolistic competitor will produce where price equals average total cost. Therefore, in the long run, a monopolistic competitor will produce where marginal revenue is less than average total cost and average total cost must be declining. A monopolistic competitor in the long run will produce with excess capacity. **Answer: A.**

16. Unlike perfect competitors, who can sell as much as they want at the market price, monopolistic competitors produce with excess capacity and would like to sell more at the market price. Monopolistic competitors advertise to increase sales. **Answer: C.**

17. Since consumers value the diversity of products in monopolistically competitive markets, it may be worth paying a price that is greater than marginal cost. **Answer: B.**

18. The goal of advertising is to provide information and differentiate the product to increase the demand for the good or service. **Answer: D.**

19. The only advertising slogan to provide information is "CarbChips have half the carbohydrates of regular potato chips." The other slogans tell little about the monopolistic competitors' products as distinct from their competitors. **Answer: A.**