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IMPERFECT COMPETITION

OVERVIEW

1. Monopolistic competition is a market that has many sellers, a differentiated product, and easy entry. Product differentiation is the source of the firm's market power.
2. The profit maximizing monopolistic competitor produces where marginal revenue equals marginal cost. Because of easy entry, only a normal profit will be earned in the long run. But the firm misallocates resources by not producing at the efficient level of output.
3. Oligopoly is a market with a few sellers protected by barriers to entry. Each firm in an oligopoly has some market power, but all firms are interdependent.
4. The kinked demand model shows that the interdependence among oligopolists results in rigid prices.
5. Because of the interdependence of firms, firms may decide to cooperate (collude) rather than compete. In a cartel, firms may agree to raise price and restrict the total output.
6. Another model of cooperative oligopoly behavior is price leadership. In this model all other firms imitate the pricing decisions of the price leader.
7. There are laws against collusive behavior. These antitrust laws are aimed at monopoly, attempts to monopolize, and restraint of trade.
8. Three cases of market failure include natural monopoly, externalities, and public goods. In natural monopoly, the market is only large enough to support one firm.
9. An externality occurs when the cost to society of producing a good differs from the cost to the firm. The firm may use a resource for which it does not have to pay, since no one owns the resource.
10. A public good is one that you cannot be excluded from consuming, and your consumption does not diminish mine. Since one person cannot be excluded from consumption, once others pay, a person can consume without paying. Since everyone hopes the other person is paying, we each pay less than we are willing to pay, and the socially desirable amount of the good is not produced in the market.

MATCHING

- | | | | | |
|-------|----|--------------------------|----|---|
| _____ | 1. | monopolistic competition | a. | when the cost to society differs from the cost to the producer |
| _____ | 2. | oligopoly | b. | a market with few sellers and barriers to entry |
| _____ | 3. | kinked demand | c. | a good where my consumption does not reduce your consumption |
| _____ | 4. | cartel | d. | a group of firms acting as one to determine the profit maximizing price and to divide up the market |
| _____ | 5. | price leadership | e. | a market with many firms, differentiated product, easy entry, and each firm has some market power |
| _____ | 6. | antitrust | f. | laws to counteract collusion |
| _____ | 7. | externality | g. | an oligopoly model where one firm sets price and the other firms follow |
| _____ | 8. | public good | h. | a market where the demand is steeper below but flatter above the current price |

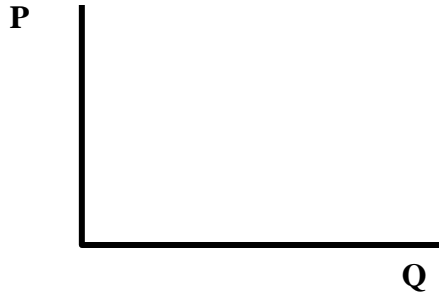
TRUE-FALSE

- | | | |
|-------|----|--|
| _____ | 1. | An externality causes the market to misallocate resources. |
| _____ | 2. | A public good is a good that can be provided by markets to the public. |
| _____ | 3. | Monopolistic competition will, in the long run, have normal profit. |
| _____ | 4. | Monopolistic competition will misallocate resources. |

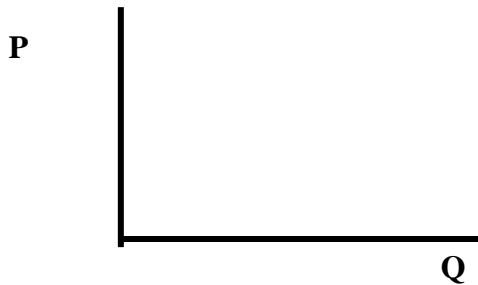
_____ 5. Cartels can usually last a long time because they are stable.

PROBLEMS

1. Draw a graph of a monopolistic competitor in long run equilibrium.



2. Draw the kinked demand curve of the oligopolist. Explain this shape.



IN THE NEWS

1. The restaurant business is a real dogfight. Location is an important aspect, but a restaurant can also improve its opportunities by offering something different. In addition to French, or Chinese, or Moroccan food, the restaurant may want to offer entertainment. Other attractions are early evening meals at lower prices or membership in dining clubs which offer two meals for the price of one. Good food alone is no longer enough to make a successful restaurant.

a. What kind of market is this industry? Explain. _____

b. What can restaurants do besides lower price to increase revenue? _____

2. Chrysler started the minivan wars by offering a \$1,000 rebate on their minivans. General Motors lost customers to Chrysler and is now trying to lure customers with a \$1,000

rebate of their own. How will Chrysler respond?

a. What will happen to Chrysler's revenue if it does not respond?

b. What will happen to Chrysler's revenue if it offers another rebate?

c. What kind of market is the auto industry? What model would most closely approximate the behavior described here?

3. There are several brand names of ketchup, but the leader is Heinz. Heinz has worked hard to make its ketchup different than the others and for 20 years has successfully stressed its thickness as a desirable feature. Hunt's has finally caught up with a thicker ketchup. Heinz ads no longer focus on thickness but taste. Now Heinz has introduced a new plastic squeeze bottle. Hunt's is expected to introduce a plastic bottle soon. The battle continues.¹

a. What kind of market is the ketchup industry? _____

b. Is product differentiation really possible in ketchup? _____

c. Why didn't other brands stress other aspects of their product such as taste or color?

d. Why is the focus on the attributes of the product, not its price?

4. The granite industry is picking up. There is a movement away from steel and glass buildings, both because of their appearance as well as their energy expense. Granite is an attractive alternative and is energy efficient. By cutting granite in thin blocks, builders can use granite veneer with concrete and steel and improve the appearance and energy expense of buildings.

a. What is the market structure of the granite industry?

b. What factor is most likely to provide granite firms with market power?

c. Discuss how one firm's revenue will be related to the revenues of other firms in this industry. How will the glass industry be affected?

5. There has been recent pressure on medical schools to tighten requirements and reduce enrollment because there are too many doctors. Yet health costs will continue to increase since more doctors are specializing and promoting more expensive procedures.

a. How can a doctor decide what fees to charge? _____

¹ Adapted from "Thwack! Smack! Sounds Thrill Makers of Hunt's Ketchup," by Betsy Morris, The Wall Street Journal, April 27, 1984, page 1.

- b. What incentives do doctors have to specialize? _____
- c. An important decision for a doctor is where to locate. Would you expect a doctor to be more likely to choose a large city or a small town? _____

PRACTICE TEST

Circle the correct answer.

- In the long run, a monopolistic competitor earns:
 - economic profit.
 - normal profit.
 - economic loss.
 - both a and b.
- The firm's demand slopes downward for all but:
 - monopolistic competition.
 - monopoly.
 - oligopoly.
 - perfect competition.
- When an oligopolist with a kinked demand curve raises price, other firms will:
 - also raise price.
 - lower price.
 - not change price.
 - decrease output.
- A group of firms acting as a monopoly in the determination of price and quantity is an example of:
 - price leadership.
 - monopolistic competition.
 - oligopoly.
 - cartel.
- Examples of market failure include all but:
 - public goods.
 - externalities.
 - the stock market.
 - natural monopoly.

ANSWERS

Matching

- e
- b
- h

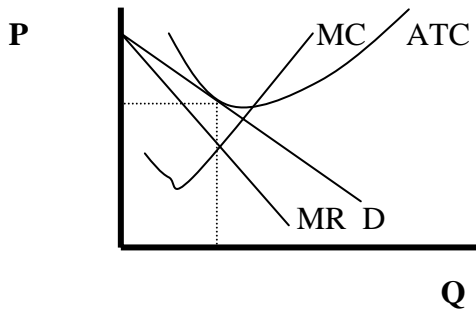
- 4. d
- 5. g
- 6. f
- 7. a
- 8. c

True-False

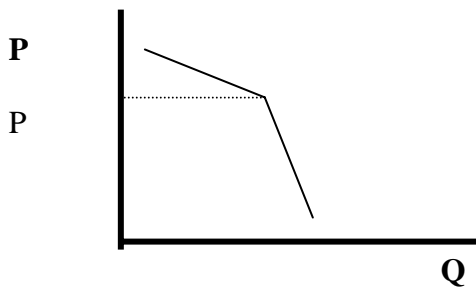
- 1. T
- 2. F
- 3. T
- 4. T
- 5. F

Problems

1.



2.



The reason for the kink in demand is that if one firm decides to raise price, the other firms will maintain their price so the firm will lose sales to the other firms. This accounts for the flat portion of demand above the price. If the firm decides to lower price, then all other firms follow and no firm gains sales from the other firms. This accounts for the steep portion of demand below the price.

In the News

- 1.a. The restaurant business is an example of monopolistic competition. Entry is relatively easy, but the product is differentiated.

- b. By offering special services which differentiate the product, the restaurant may be able to attract more customers.
- 2.a. If Chrysler does not match GM, Chrysler will lose part of its market share and some revenue.
 - b. Chrysler hopes that by lowering price, it may be able to attract enough buyers to make revenue rise.
 - c. The automobile market is an oligopoly. This reading illustrates the kinked demand model. If any firm lowers its price, its competitors are forced to follow. A case may also be made for price leadership in this industry.
 - 3.a. The market is an oligopoly. There are probably barriers to entry in terms of obtaining tomato supplies and having the equipment to make ketchup. Also ketchup is a seasonal product; you must be able to use your ketchup capacity to make other products in the off season. National advertising appears to be a major barrier.
 - b. If one firm can find a way to differentiate its product, the other firms can learn how to match whatever the differentiation is. So if there is differentiation, it is probably short-lived. However, the important differentiation is in the mind of the buyer.
 - c. other brands do advertise their qualities. But somehow the Heinz ads featuring thickness became the standard for ketchup and caused the other firms to mimic Heinz.
 - d. The reason that firms do not compete in terms of price is because the impact on revenues is too great. If Heinz lowers price, other firms will match it, and the profit of all firms will go down. So rather than compete in terms of price, they compete in terms of the attributes of the product.
 - 4.a. The industry is probably an oligopoly. The main barrier to entry is access to the raw material. Granite is an exclusively owned resource. It is also an industry of high fixed cost. Substantial excavation would be necessary and much heavy equipment would be needed to begin production.
 - b. The most important factor is the exclusively owned resource. The fact that granite is not readily available causes the firms in the industry to have market power.
 - c. If one firm gets a job providing granite for a new building, then no other firm will get the revenue from that job. Thus what one firm gains is another's loss. observe that the gains by granite are to some extent due to losses in the glass industry. To try to maintain their position, the glass manufacturers may try to cut price.
 - 5.a. The doctor will charge what other doctors charge. In part, the charge will be determined by what insurance companies will pay.
 - b. The incentive is to differentiate their product. If they are specialists, they are different than other doctors. The differentiation allows the specialists to charge more.
 - c. Where the doctor locates will depend on such factors as the availability of equipment to practice medicine. Are there good hospitals available for the doctor to use? Another factor will be the number and mix of other doctors in the community. If there are a great number of doctors in the community, especially in

the same specialty, then a doctor may choose another location. The glut of doctors is resulting in more specialists locating in small communities.

Practice Test

1.b., 2.d., 3.c., 4.d., 5.c.