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Two basketball players, Barbara and Juanita, are the best offensive players on the school's team. They know if they "cooperate" and work together offensively-feeding the ball to each other, providing screens for the other player, and the like- they can each score 12 points. If one player "monopolizes" the offensive game, while the other player "cooperates," however, the player who monopolizes the offensive game can score 18 points, while the other player can only score 2 points. If both players try to monopolize the offensive game, they each score 8 points. Construct a payoff matrix for the players that captures the essence of the decision of Barbara and Juanita to cooperate or monopolize the offensive game.
a. If the players play only once, what strategy do you expect the players to adopt?
b. If the players expect to play in many games together, what strategy do you expect the players to adopt? Explain.
$\qquad$
A firm in this market is a mixture of an imperfect competitor and price taker in the perfect competition market. An example is Bob's Beanless Burritos who operates a lunch wagon in a busy downtown in Muscatine, Iowa. Bob can easily shut down on slow days or move his business to different parts of the city on a whim. Bob is still in the short run. Shown below are Bob's short-run cost and average revenue curves.


1) On the graph, indicate profit maximizing price and output.
2) On the graph, indicate the area of total revenue, total cost, and profit.
3) Explain why Bob's business is inefficient.
4) What will happen to profits in the long run?

As other businesses see that Bob is making a profit, they enter the soybean market. On the curve below, sketch a long-run equilibrium.

## Bob's Soybean Burritos



Short-Run and Long-Run Equilibrium for a Monopolistic Competitor


QUANIIIY
Short-Run Losses


Long-Run Equilibrium


1. Explain how monopolistic competition is similar to and different from a monopoly. From perfect competition?
2. Draw a graph showing the long run equilibrium of a monopolistically competitive market. How is price related to average total cost? How is price related to marginal cost?
3. Explain how brand names play a role in monopolistic competition.
4. Thirty years ago, the market for chicken was perfectly competitive. The Frank Purdue created a brand name for his chicken. What did he gain from doing so? How did society gain from this brand naming? In what way did society potentially lose?
5. Sleeker Shoe Company is one of many firms in the market for shoes.
a. Assume that Sleek is currently earning short-run economic profits. On a correctly labeled graph, show Sleek's profit-maximizing output and price, as well as the area representing profit.
b. What happens to Sleek's price, output and profit in the long run? Explain this change in words, and show in on a new graph.
c. Suppose that over time consumers become more focused on stylistic differences among shoe brands. How would this change in attitudes affect each firm's price elasticity of demand? In the long run, how will this change in demand affect Sleek's price, output, and profits?
d. At the profit maximizing price you identified in part c, is Sleek's demand curve elastic or inelastic? Explain.
6. Sparkle is one firm of many in the market for toothpaste, which is in long-run equilibrium.
a. Draw a graph showing Sparkle's output and price.
b. What is Sparkle's profit? Explain.
c. On you graph, show, the consumer surplus derived from the purchase of Sparkle toothpaste. Also show the deadweight loss relative to the socially optimal level of output ( $\mathrm{P}=\mathrm{MC}$ ).




What would you do?
LIZ

|  |  | Raise | Lower |
| :--- | :--- | :---: | :---: |
| B |  | RaiZ |  |
| O | Raise | 400,300 | $-800,500$ |
| B | Lower | $600,-800$ | $-500,-500$ |
|  |  |  |  |

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|  | Cooperate | Defect |
| ---: | :---: | :---: |
| Cooperate | 2,2 | 0,3 |
| Defect | $3, \mathbf{0}$ | $\mathbf{1 , 1}$ |

12 Graph a monopolistically competitive firm, in long run equilibrium.
Indicate each of the following (if applicable)
Equilibrium price and quantity ( $\mathrm{P}^{*}, \mathrm{Q}^{*}$ )
Profits or losses
Consumer surplus and deadweight loss
The allocatively efficient point (A)
The productively efficient point (B)

13 Graph a monopolistically competitive firm earning positive economic profits in the short run.

Label: Equilibrium price and quantity

Area of profit
Consumer surplus and deadweight loss

The al. $R$ catixaly efficient point $A$
The productively efficient point B

Explain why the monopolistically competitive firm cannot sustain positive profits in the long run.

A monopolistically competitive firm cannot
a) incur losses in the short run.
b) earn zero profits in the short run.
c) earn a normal profit in the long run.
d) earn economic profits in the short run.
e) earn a positive profit in the long run.

In which market structure model(s) does price exceed marginal cost in long run equilibrium?
a) In perfect competition only
b) In both perfect competition and monopolistic competition
c) In every market structure model but perfect competition
d) In all market structure models
e) In no market structure models

When firms in an industry jointly make pricing and output decisions, they are
a) dumping.
b) colluding.
c) arbitrating.
d) regulating.
e) trying to irritate the government..

## In oligopoly,

a) each firm is completely independent.
b) there are so many firms that no single firm has any influence over market price.
c) each firm's pricing and output decisions depend on those of its rivals.
d) firms always manufacture differentiated products.
e) there are no barriers to entry.

## Product differentiation

a) separates monopolistically competitive firms from perfectly competitive firms.
b) means the firm has an elastic demand curve.
c) allows the firm to raise its price without losing all of its customers.
d) is often accomplished through advertising or trivial product changes.
e) All of the above.

The market structure called monopolistic competition is named using both monopoly and perfect competition. Why?
a) There are few firms in the market all producing the same product.
b) There is just one firm whose products cannot be easily differentiated.
c) There are a huge number of firms where entry and exit are both difficult.
d) There are many firms with easy entry and exit but each firm sells a unique product.
e) Firms spend very little on advertising and promotion and thus are price takers.

