

## Price Discrimination

When producers have market power and they sell a good that cannot be resold, the possibility for price discrimination arises. Price discrimination occurs when a producer is able to charge consumers with different tastes and preferences different prices for the same good.

We know profit maximization for a firm that is able to set a single price occurs when the firm produces the quantity at which  $MR = MC$ . If a producer is able to price discriminate, however, then profits can be even higher.

### Part A

#### Pricing with Market Power and Consumer Surplus

Pat's Patriotic Tattoos is the only tattoo parlor in town. Pat tattoos only images of the American flag. There are 20 consumers who are willing to buy a tattoo. Each consumer is interested in buying only one tattoo, but they vary in their willingness to pay. One consumer is willing to pay \$20 for a tattoo; another is willing to pay \$19; a third, \$18, down to the consumer least willing to pay who has a reservation price of \$1.

1. The demand schedule is given below in Figure 36.1. Complete the table.



Figure 36.1

#### Demand Schedule

Price	Quantity	Total Revenue	Marginal Revenue
\$20	1		—
19	2		
18	3		
17	4		
16	5		
15	6		
14	7		
13	8		
12	9		
11	10		
10	11		
9	12		
8	13		
7	14		
6	15		
5	16		
4	17		
3	18		
2	19		
1	20		

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2. Recalling Rules: Underline the correct answer.

- (A) A perfectly competitive firm would produce the output at which price is equal to  $(AC / MC / MR)$ .
- (B) A monopolistic firm would produce the output at which MC is equal to  $(AC / P / MR)$ .

## Part B

### First-Degree Price Discrimination

3. Prove to yourself that a market price of \$17 will generate a total consumer surplus of \$6.  
Hint: The consumer surplus generated by the consumer willing to pay \$20 is  $(20 - 17) \times 1 = 3$ .

CS =

4. Assume that the average and marginal costs are constant and equal to 14. If Pat produces the perfectly competitive quantity and charges the perfectly competitive price,

- (A) what price will Pat charge for a tattoo? \_\_\_\_\_
- (B) what quantity will Pat supply? \_\_\_\_\_
- (C) what is the amount of consumer surplus generated? \_\_\_\_\_

CS =

5. Assume that the average and marginal costs are constant and equal to 14. If Pat produces the monopoly quantity and charges the monopoly price,

- (A) what price will Pat charge for a tattoo? \_\_\_\_\_
- (B) what quantity will Pat supply? \_\_\_\_\_
- (C) what is the amount of consumer surplus generated? \_\_\_\_\_

CS =

6. Again, assume that the average and marginal costs are constant and equal to 14. Now assume that Pat knows the tastes and preferences of all consumers and that the conditions that allow price discrimination apply.

- (A) What quantity will Pat supply? \_\_\_\_\_
- (B) At what prices will she sell tattoos?  
\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \$17, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_
- (C) What is the amount of consumer surplus generated? \_\_\_\_\_

CS =

- Without calculating profit, explain how Pat's profits differ among cases 4, 5 and 6.

### **Part C**

#### **The Effects of Price Discrimination**

Use the example of Pat's Patriotic Tattoos to make some conclusions about the effects of price discrimination.

- What happens to consumer surplus if a firm successfully price discriminates?
- What happens to the firm's profits if it successfully price discriminates?
- What happens to the quantity supplied by a successful price-discriminating monopoly firm compared with a nonprice-discriminating monopoly firm?
- How does the quantity supplied by a successful price-discriminating monopoly firm compare with the quantity supplied by firms in a perfectly competitive industry?
- How does price discrimination affect economic efficiency?

### **Part D**

#### **Real Examples of Price Discrimination**

- Pat's Patriotic Tattoos is a fictional case. What are some real examples of price discrimination?

14. Use your examples to determine which factors make price discrimination easier.

15. Is price discrimination a good thing or a bad thing?