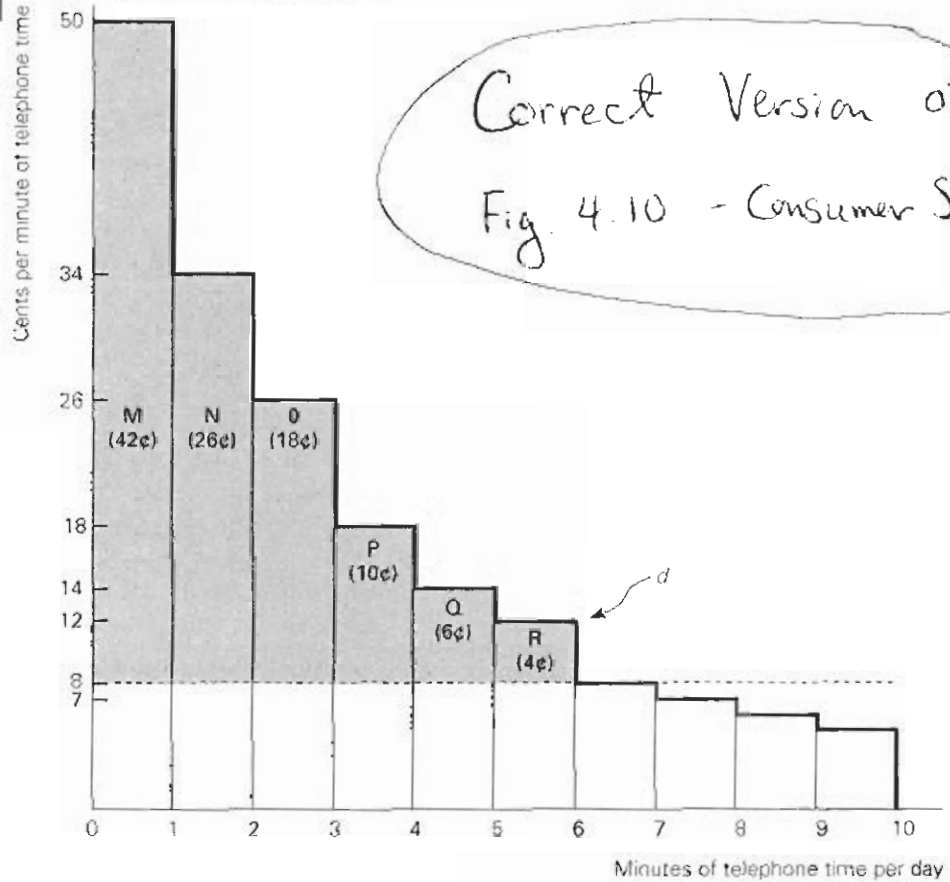


Figure 4.10

Consumer Surplus

The surplus on each unit purchased is the marginal valuation of that unit minus the price. Hence, if the market price is 8 cents, the consumer surplus for the first unit is area *M*; for the second unit, area *N*; and so on. The consumer surplus associated with the ability to buy as many units as demanded at the going price is the area beneath the demand curve and above the going price.



the seventh one, for which his surplus is exactly zero. That is, Alexander comes out neither behind nor ahead on his purchase of the seventh unit. Note that if Alexander purchased an eighth minute, the associated surplus would be negative—the price (8 cents) would exceed the marginal value (7 cents). This is another way of stating what we knew already—it is not in Alexander's interest to purchase more than seven minutes of telephone time when the price is 8 cents per minute.

What is the total amount of surplus that Alexander obtains by being able to purchase seven minutes of telephone time at a price of 8 cents per minute? The total surplus is just the sum of the surplus obtained on each minute purchased, or the sum of shaded areas *M* + *N* + *O* + *P* + *Q* + *R*, which is \$1.06. More generally, *the consumer surplus associated with the ability to purchase as many units of a commodity as you want at the going price is the area under the demand curve and above the going price.* The shaded area in Figure 4.11, for example, is the consumer surplus when the price of sugar is p_2 .

To firm up your intuition about consumer surplus, consider the following situation. To gain access to the telephone system, you have to pay a monthly fee. Once you have paid this fee, you can buy as many minutes of phone service as you want at the going price. What is the largest access fee you would pay, rather