

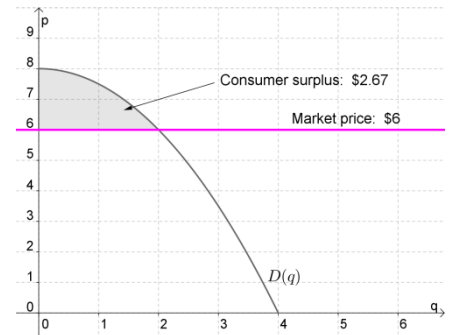
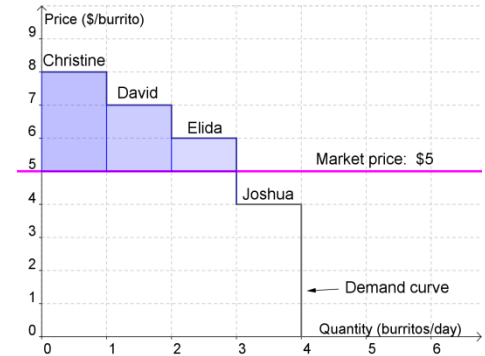
## Additional Applications to Business and Economics

Suppose there are 4 consumers in the market for burritos: Christine, David, Elida, and Joshua. The demand curve is shown (so, for example, David is willing to buy a burrito per day at a price of \$7). The current market price line (at \$5) is also shown.

The total differences between the prices consumers are willing to pay and the prices they actually pay is called \_\_\_\_\_.

In the graph to the upper right, it is:

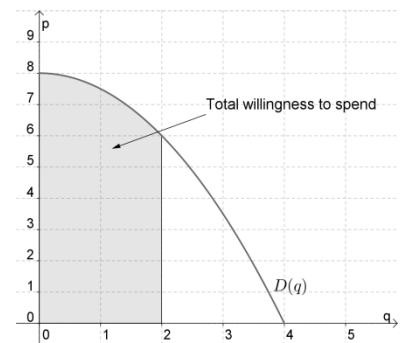
In general, consumer surplus is the *area between the demand curve and the price line*. (See example graph to right.)



**Ex 1.**

Suppose a demand curve (in dollars per unit) is  $D(q) = 2(25 - q^2)$ . First, find the price (call it  $p_0$ ) at which 3 units will be demanded. Then, compute the consumer surplus at that price.

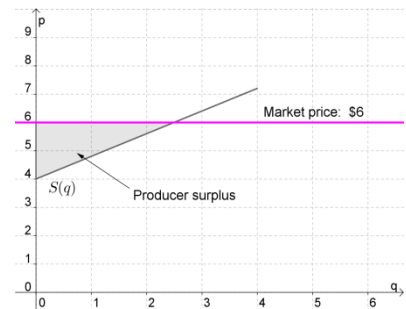
The \_\_\_\_\_ is simply the area under the demand curve.



**Ex 2.**

Find the total amount of money consumers are willing to spend to get 10 units if  $D(q) = \frac{300}{4q+3}$  dollars per unit.

The total differences between the prices producers actually receive and the prices at which they are willing to sell is called \_\_\_\_\_ . It is the *area between the price line and the supply curve*.

**Ex 3.**

Suppose a supply curve (in dollars per unit) is  $S(q) = 0.5q + 15$ .

First, find the price (call it  $p_0$ ) at which 5 units will be supplied. Then, compute the producer surplus at that price.

Q: What are the two strongest days of the week?