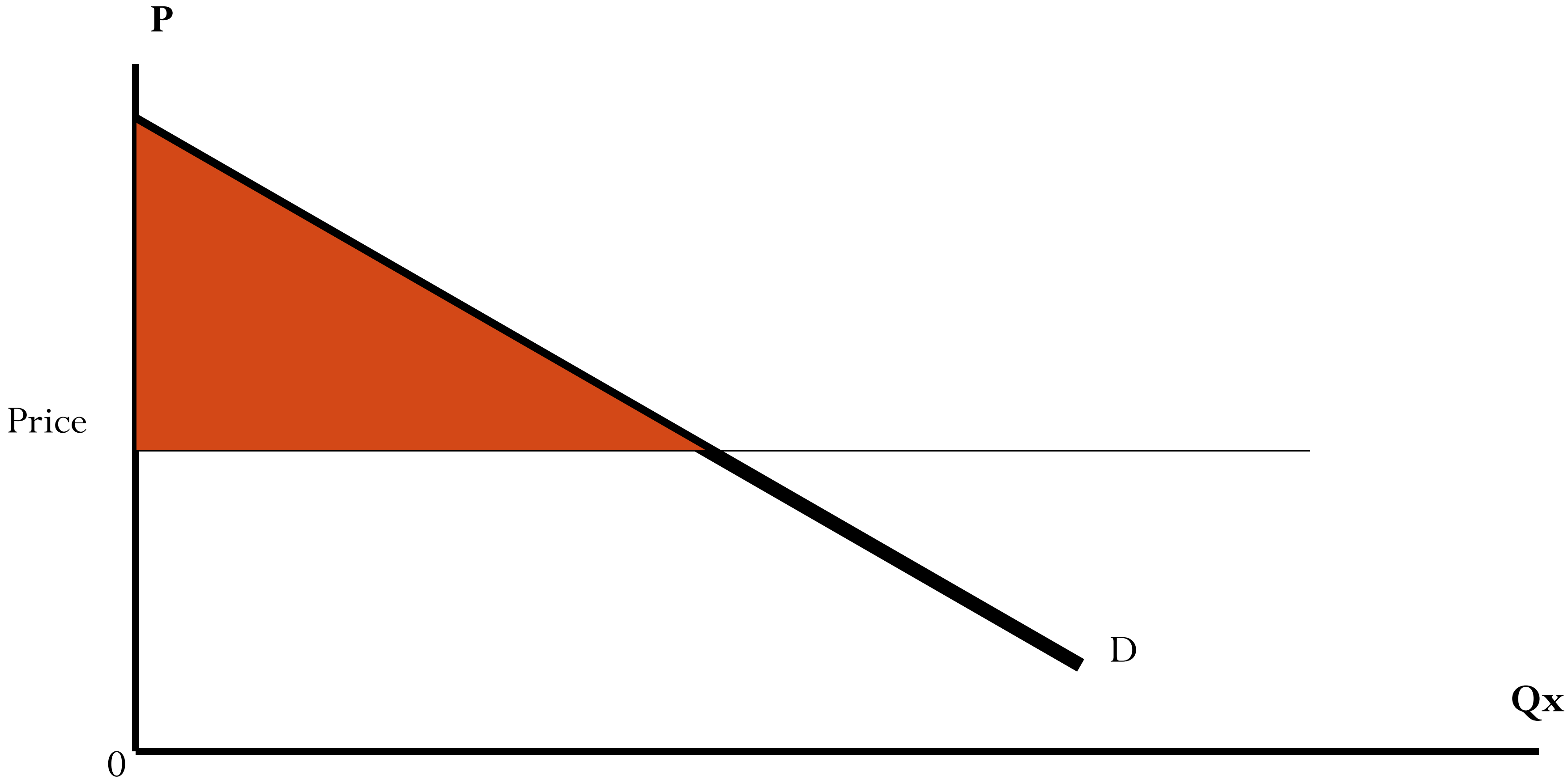
Consumer Surplus

- Consumers buy goods because it makes them better off (or provide utility). Consumer Surplus measures how much better off they are.
- Consumer Surplus
  - from each unit: The amount a buyer is willing to pay for a good minus the amount the buyer actually pays for it.

Consumer Surplus



Consumer Surplus and Demand

- Consumer surplus for a given quantity is therefore the difference between your maximum willingness to pay (reservation price) and what you actually paid (actual price).
- CS = the sum of the difference between MB and MC (price) for all units consumed

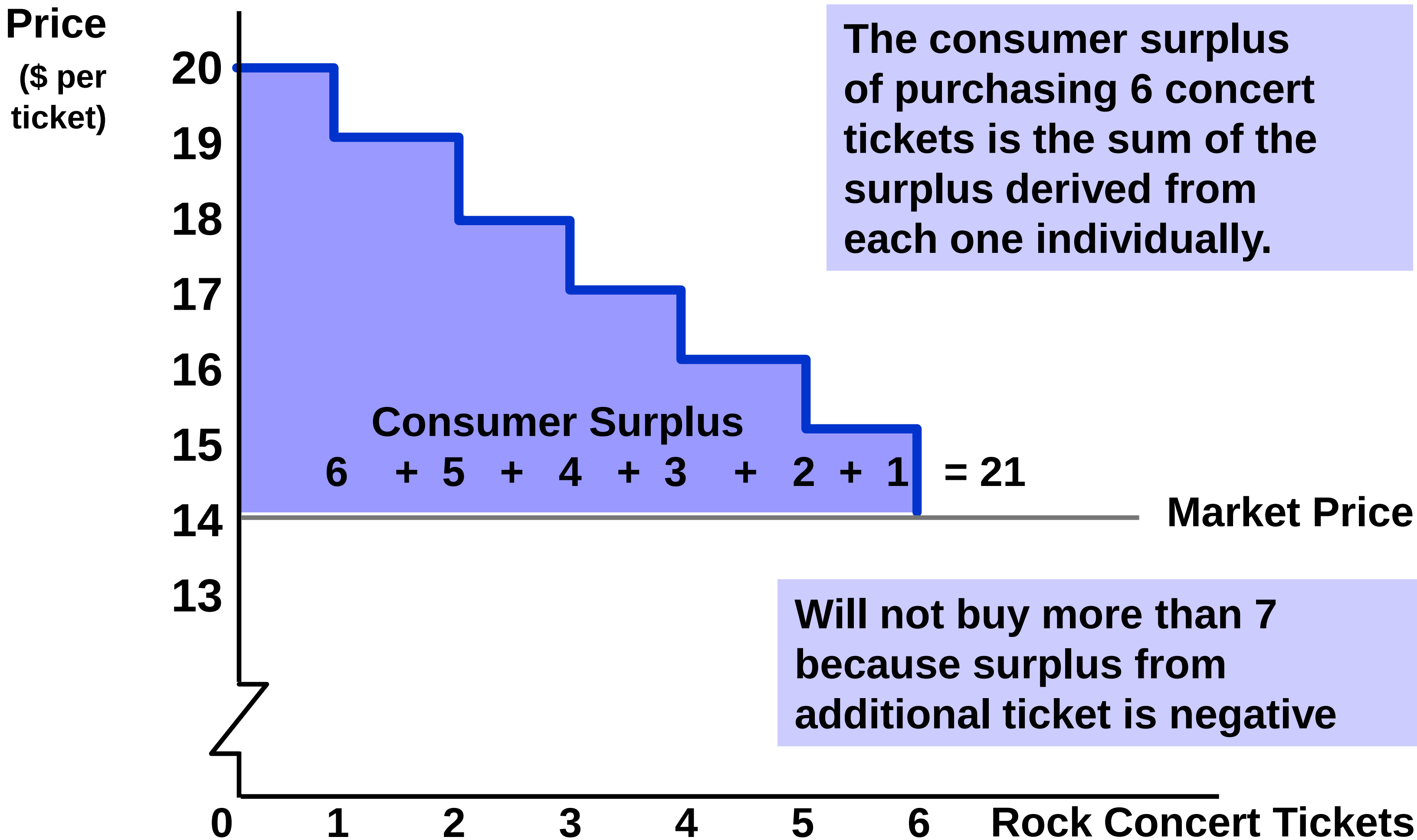
Consumer Surplus example

- What happens when you purchase something for a price that is less than your maximum willingness to pay?
- E.g. you are willing to pay $20,000 for a new car and you buy it for 18,000
- You receive a "surplus" of benefit over cost = $2,000

Consumer Surplus - Example

- Assume a student wants to buy concert tickets.
- Demand curve tells us the student's willingness to pay for each concert ticket
  - 1st ticket worth $20 but price is $14 so student generates $6 worth of surplus.
  - We can measure this for each ticket.
  - Total surplus is sum of surplus from each ticket purchased.

Consumer Surplus - Example



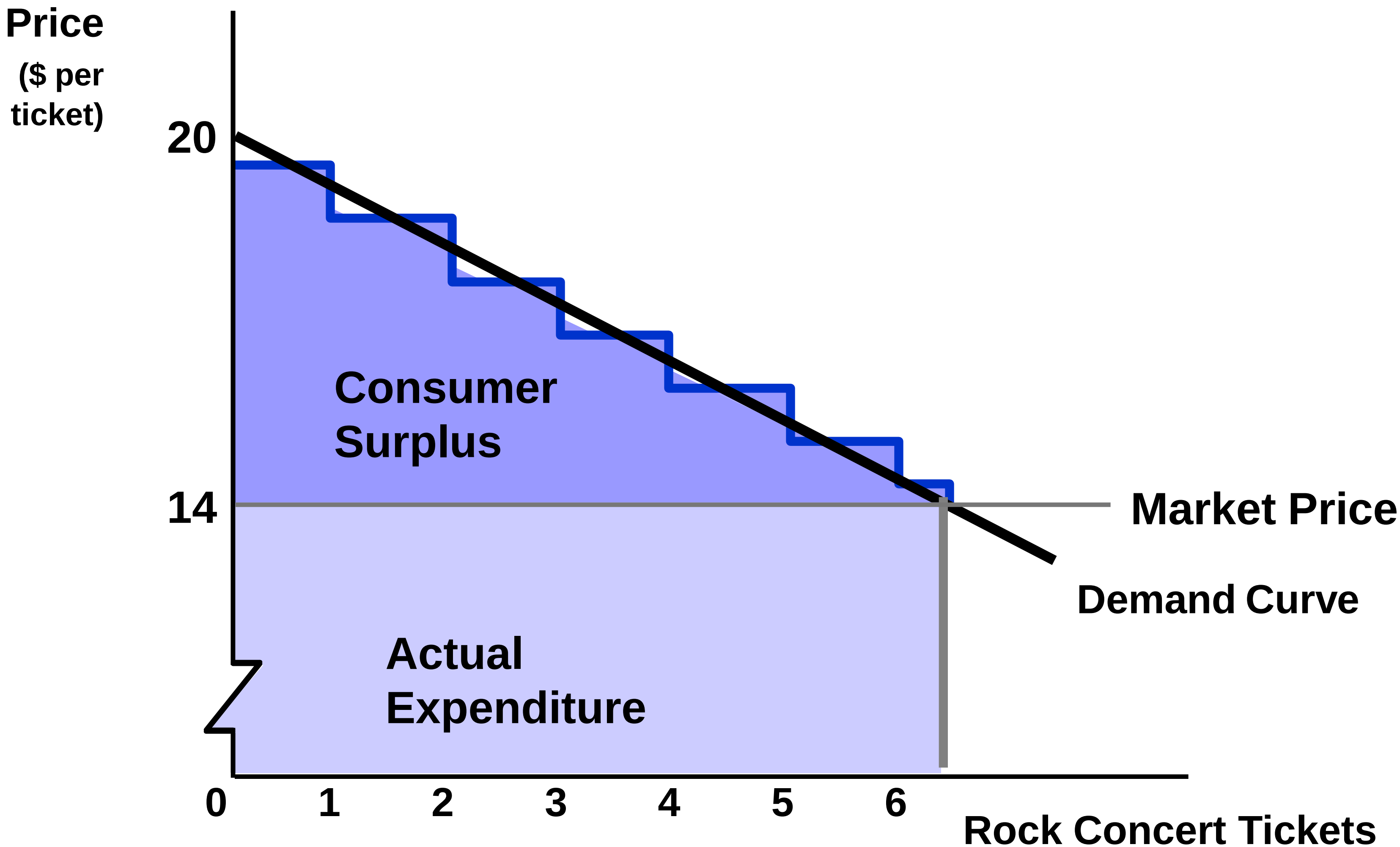
The consumer surplus of purchasing 6 concert tickets is the sum of the surplus derived from each one individually.

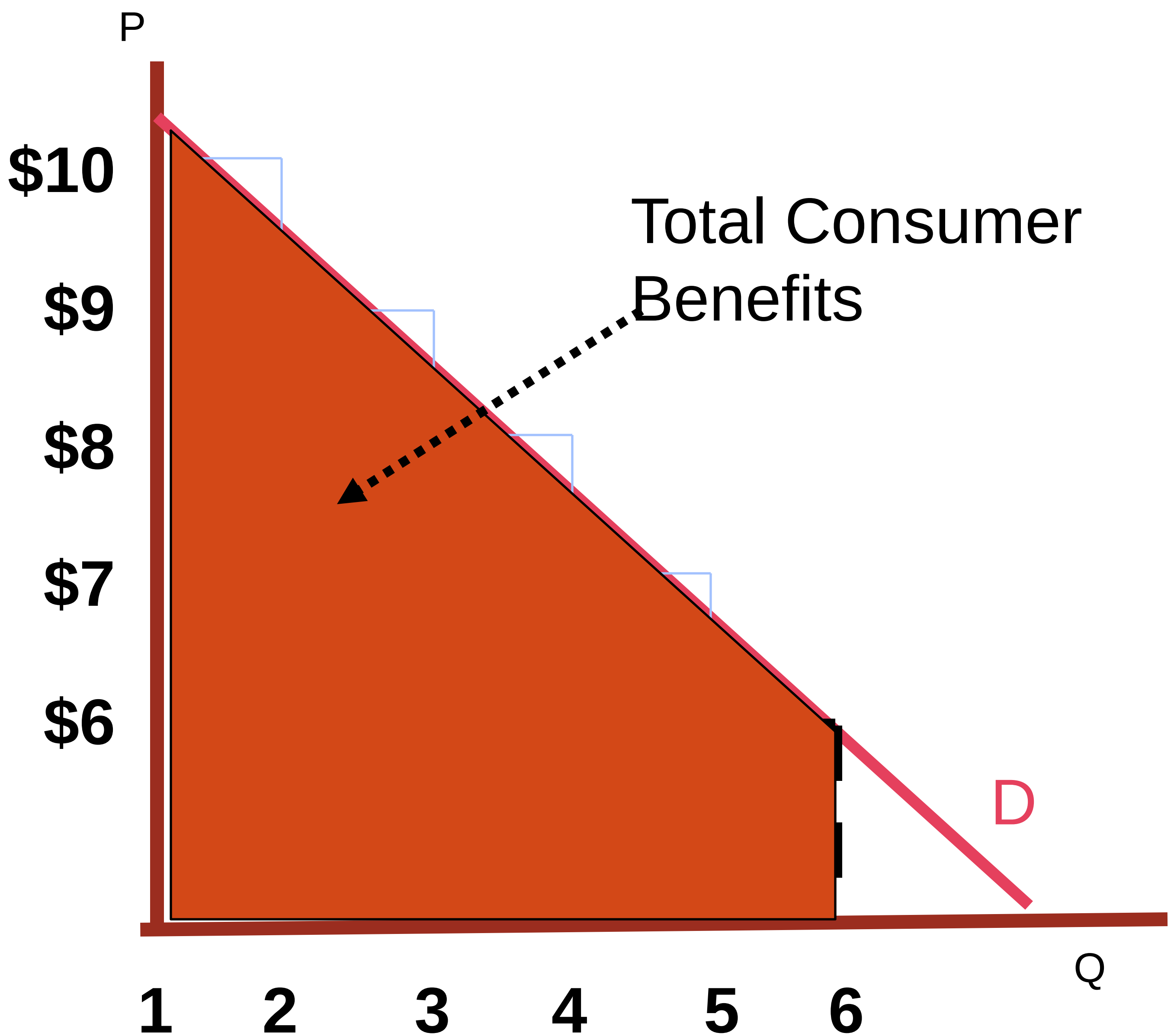
Will not buy more than 7 because surplus from additional ticket is negative

Consumer Surplus

- The stepladder demand curve can be converted into a straight-line demand curve by making the units of the good smaller.
- Consumer surplus measures the total net benefit to consumers = total benefits from consumption minus the total expenses.
- Thus, consumer surplus is area under the demand curve and above the price.
- Note that the area under the demand curve up to the level of consumption measures the total benefits.

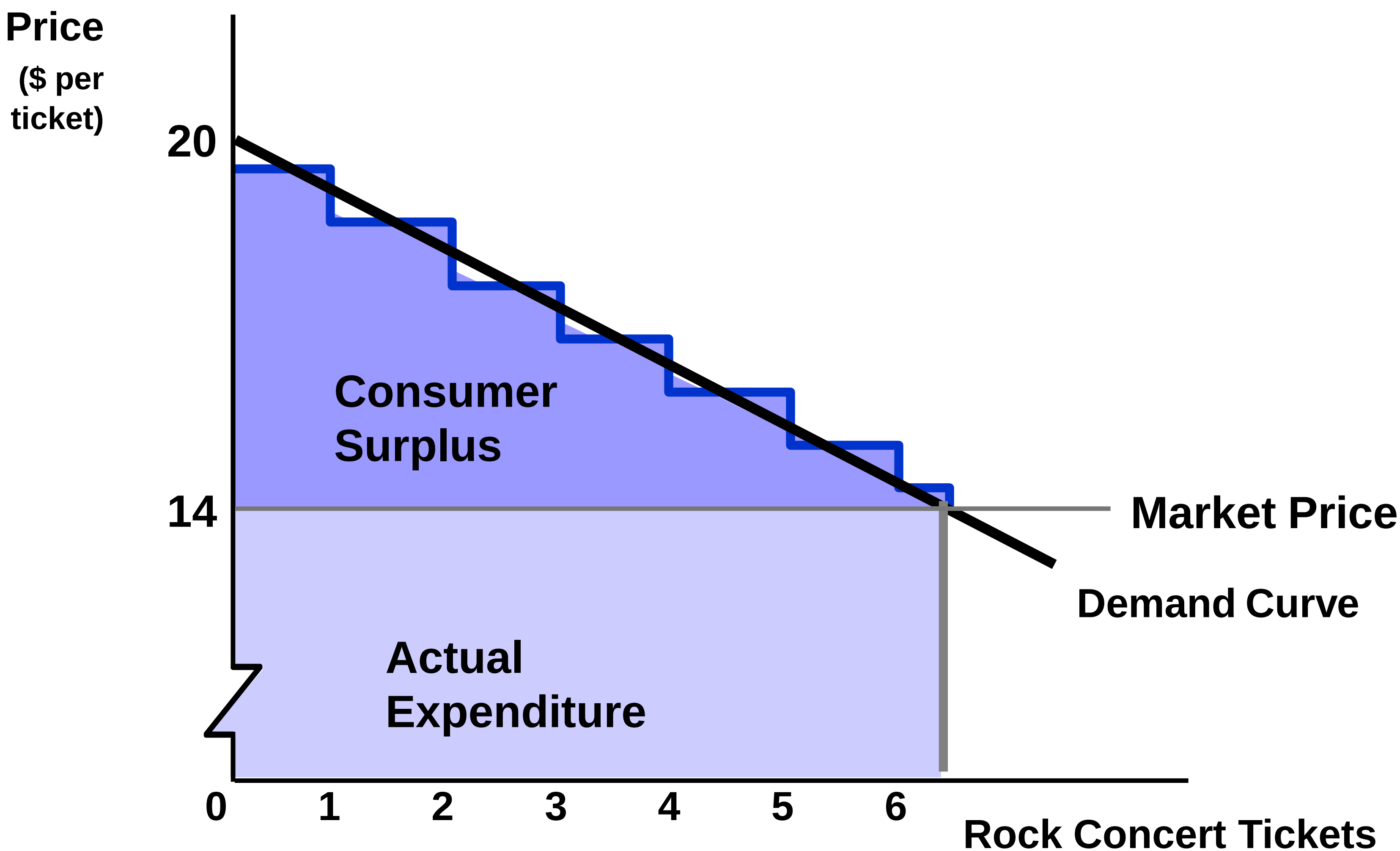
Consumer Surplus





P
$10
$9
$8
$7
$6
Total Consumer Benefits
D
Q
1
2
3
4
5
6

Consumer Surplus



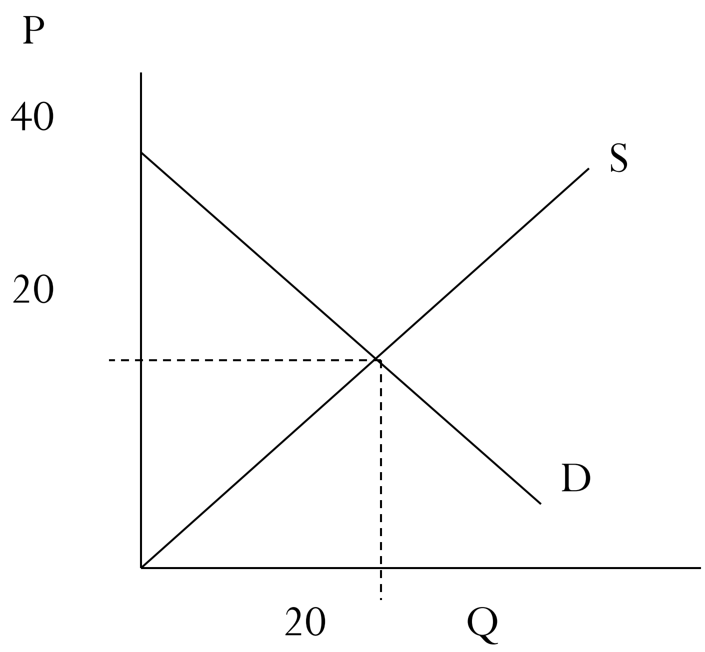
Consumer Surplus and Demand

- Graphically then, CS is the area above the price line and below the demand curve, up to Q*

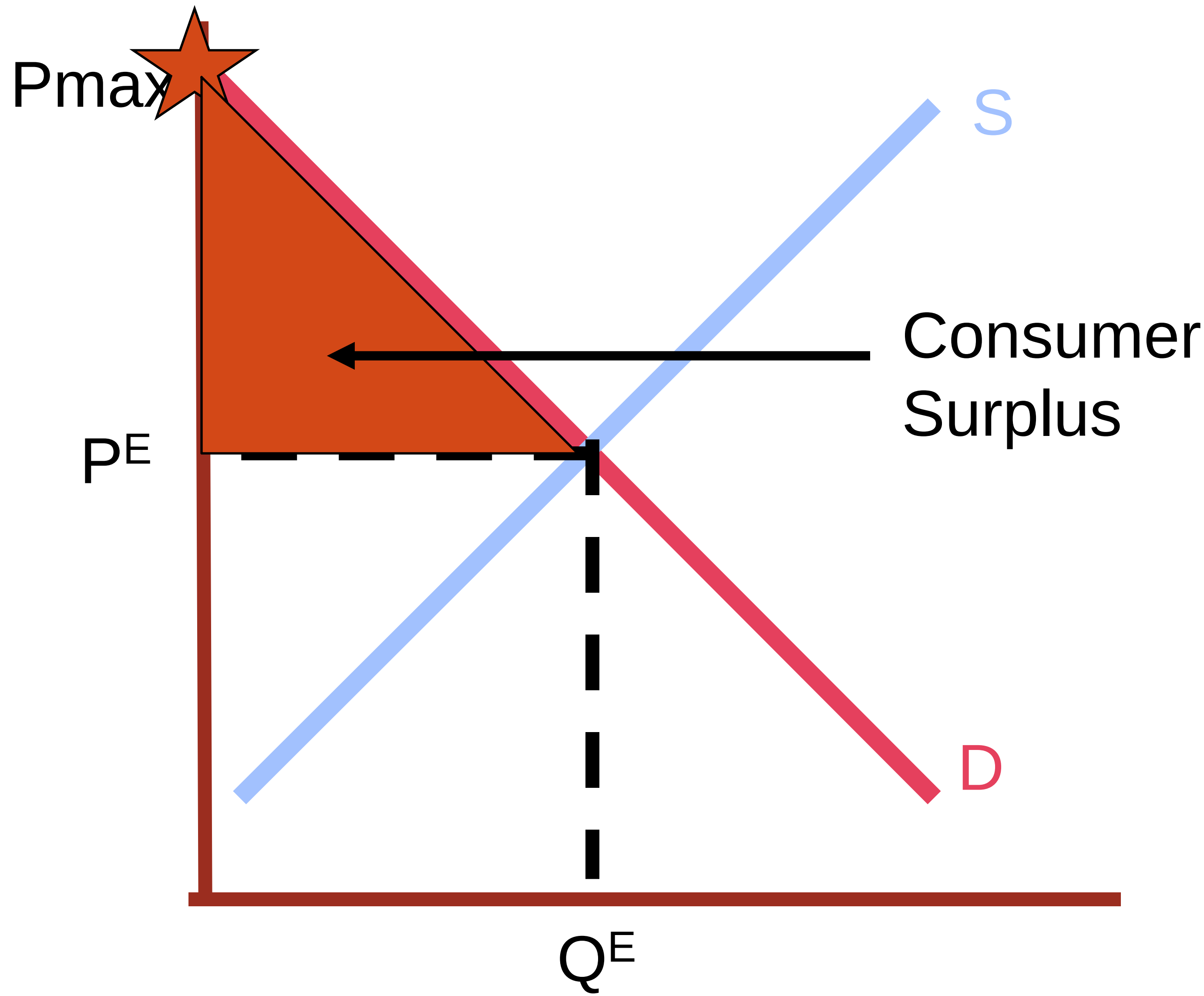
Here, CS = \$200

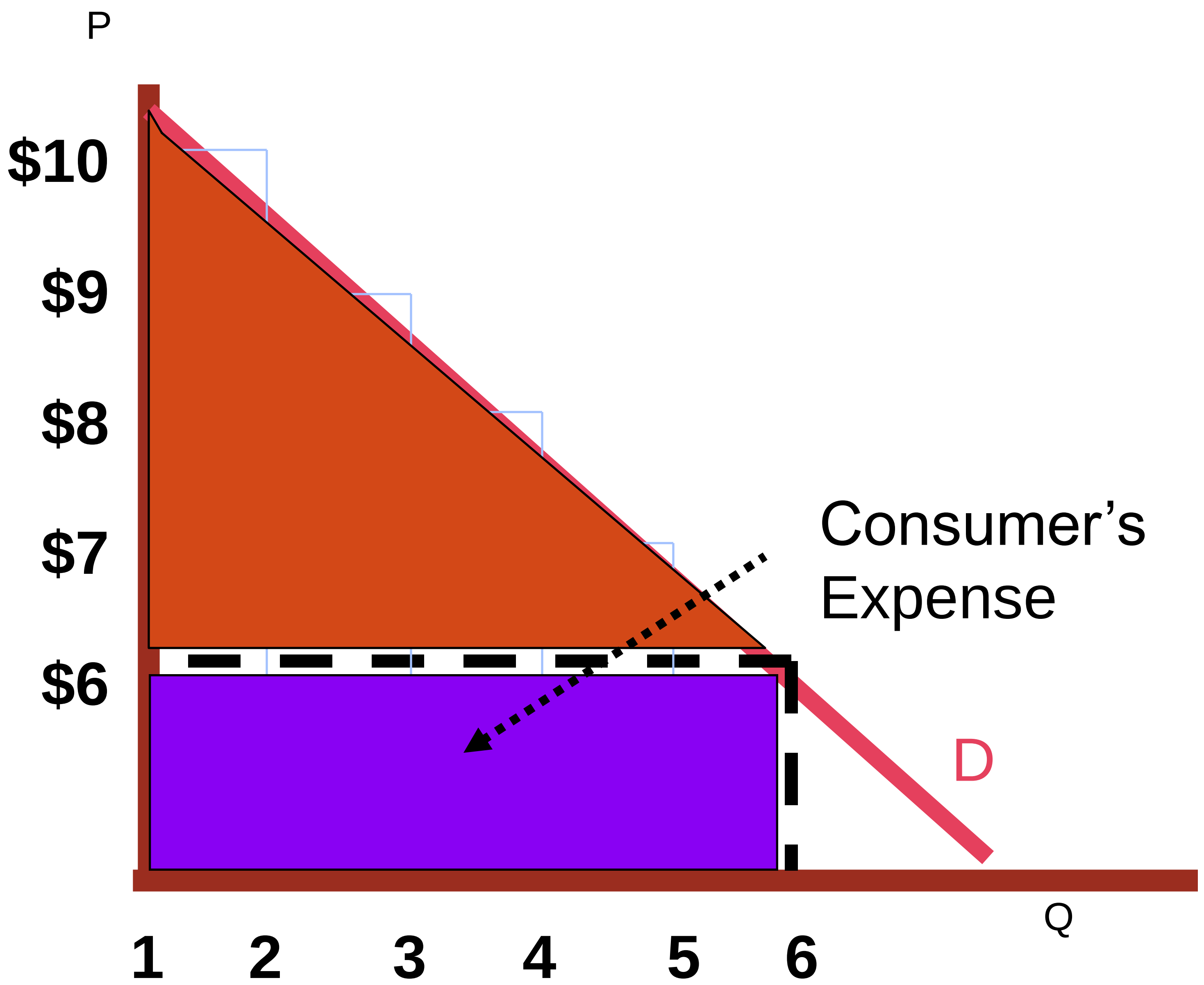
$=\frac{1}{2}$(base)(height)

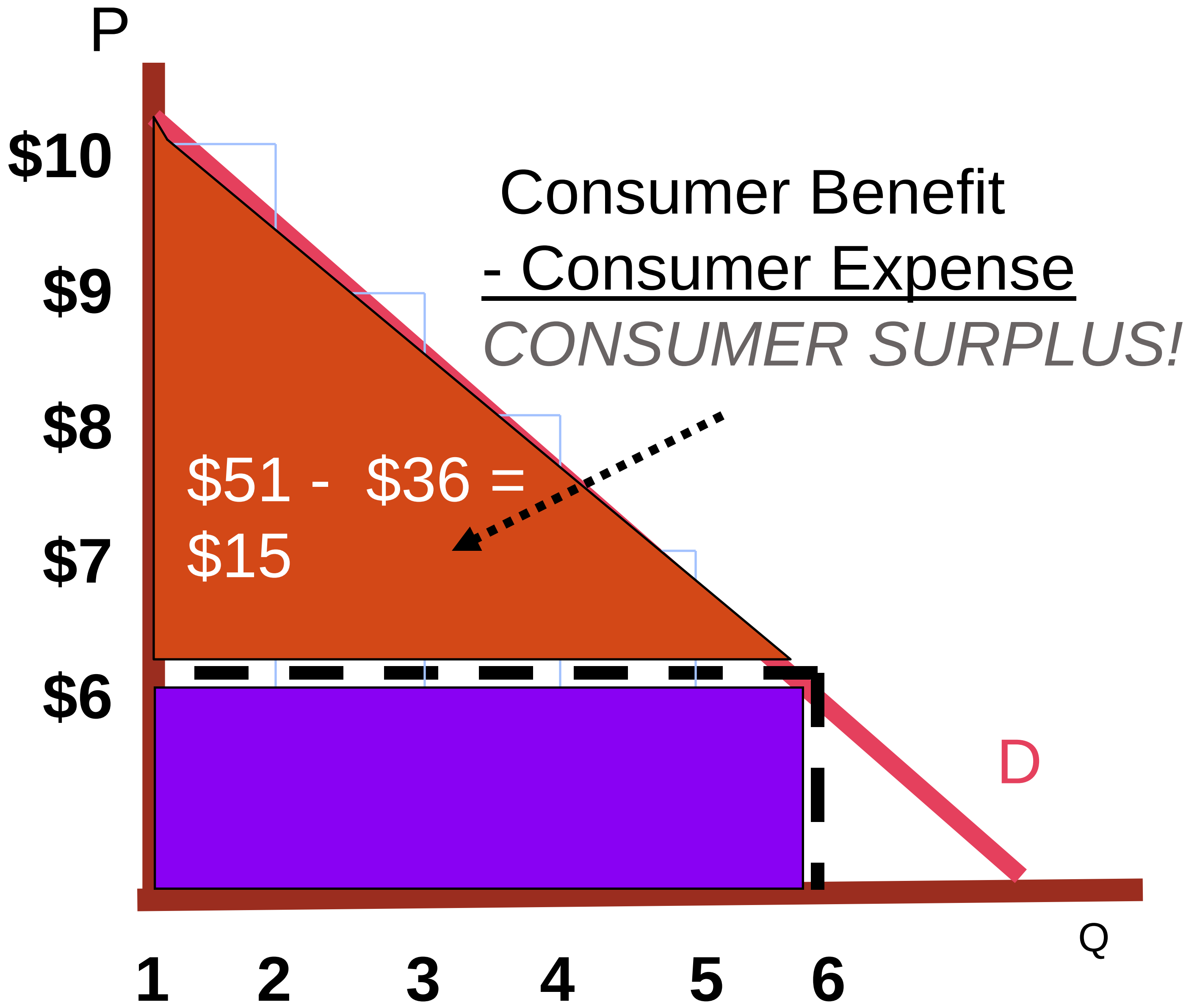
$= \frac{1}{2}(20)(20)$



Consumer Surplus: Graphical




P
$10
$9
$8
$7
$6
Consumer's
Expense
D
Q
1
2
3
4
5
6

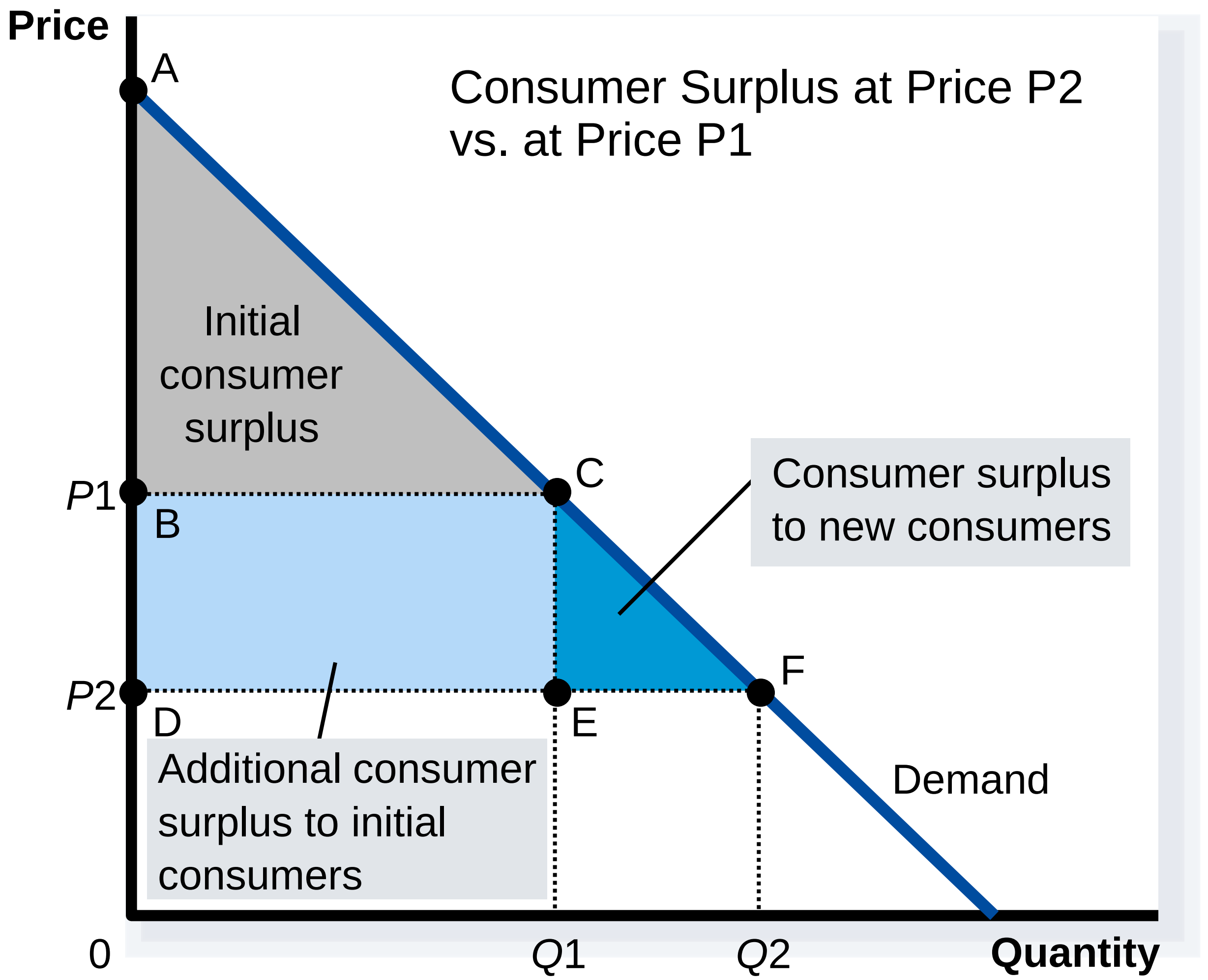

P
$10
$9
$8
$7
$6
Consumer Benefit
- Consumer Expense
CONSUMER SURPLUS!
$51 - $36 =
$15
D
Q
1
2
3
4
5
6

Consumer Surplus and Market Price

- A *lower market price* will usually increase consumer surplus.
- A *higher market price* will usually reduce consumer surplus.

- Consumer surplus will be smaller when the demand curve is more elastic and larger when the demand curve is inelastic.

How the Price Affects Consumer Surplus?



PRODUCER SURPLUS

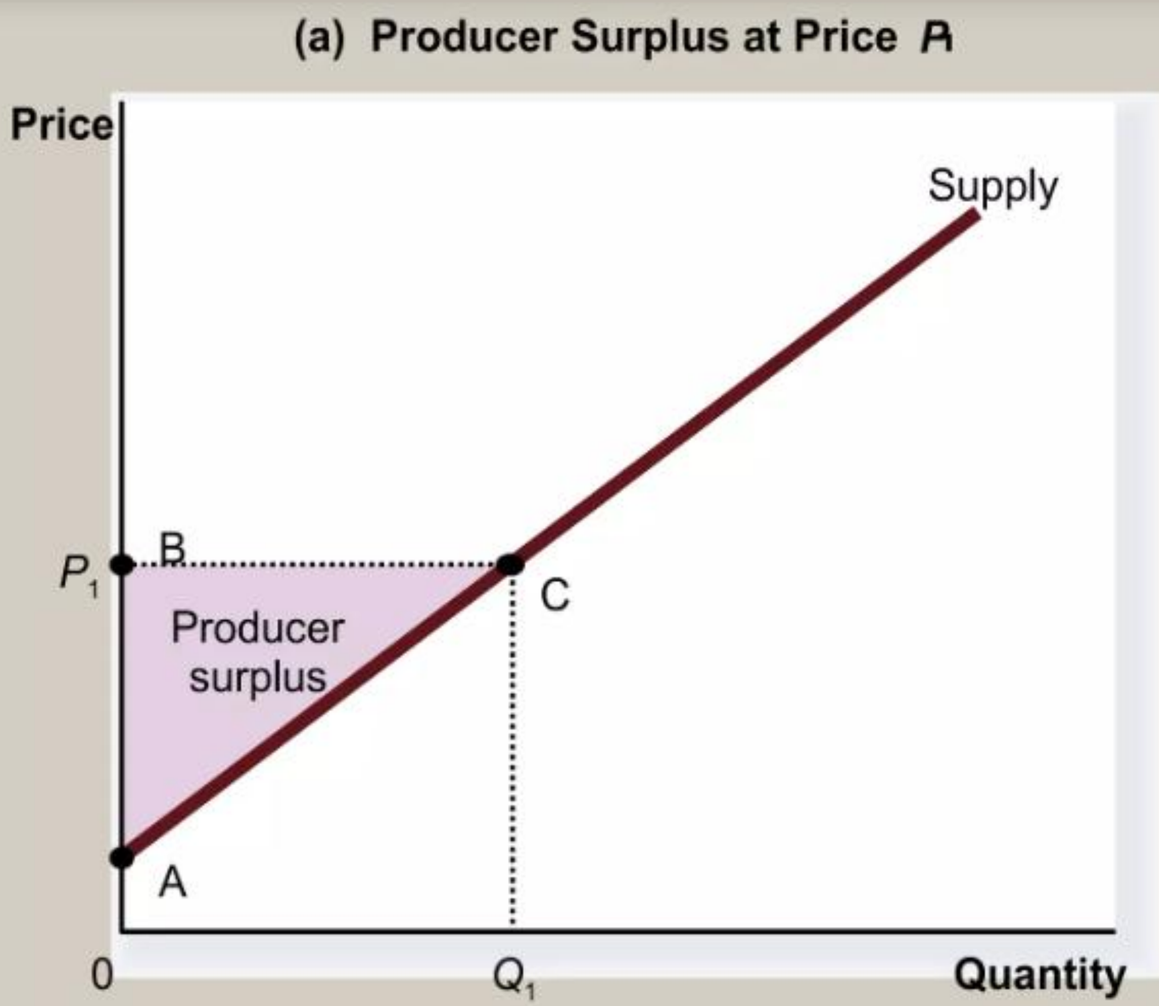
- *Willingness to sell* is the minimum amount that a seller will sell a good for.
- It measures the cost to the seller of producing the good or service.
- *Producer surplus* is the price the seller receives seller's for a good minus the amount it cost to produce it.

Using the Supply Curve to Measure Producer Surplus

- The market supply curve depicts the various quantities that sellers would be willing and able to sell at different prices.

- The area below the price and above the supply curve measures the producer surplus in a market.

How the Price Affects Producer Surplus



How the higher Price raises Producer Surplus