Economics 2010-100 University of Colorado
Soojae Moon Fall 2011

Chapter 7: Consumers, Producers, and the Efficiency of Markets

- What is consumer surplus? How is it related to the demand curve?
- What is producer surplus? How is it related to the supply curve?
- So markets produce a desirable allocation of resources? Or could the market outcome be improved upon?

welfare economics:

CONSUMERS

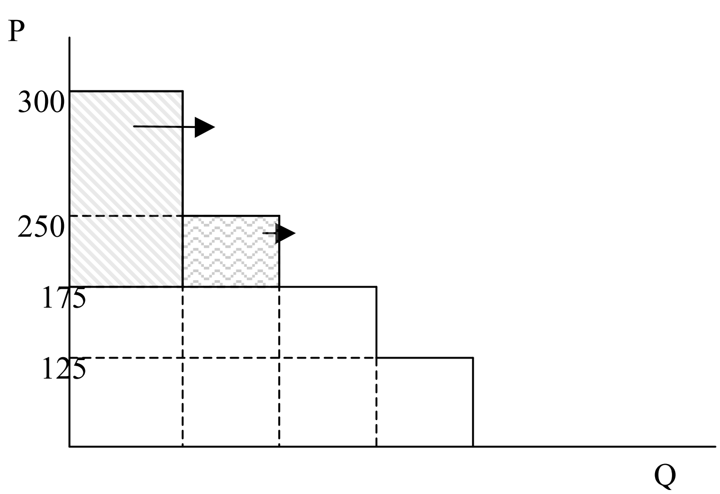
willingness to pay:

4 buyers' WTP for an iPod
Anthony $250
Chad $175
Damon $300
John $125

If price of iPod is $200, who will buy an iPod, and what is quantity demanded?

Derive the demand schedule:

P	Who buys	Q^d
$301 & up	Nobody	0
251-300		
176-250		
126-175		
0-125		



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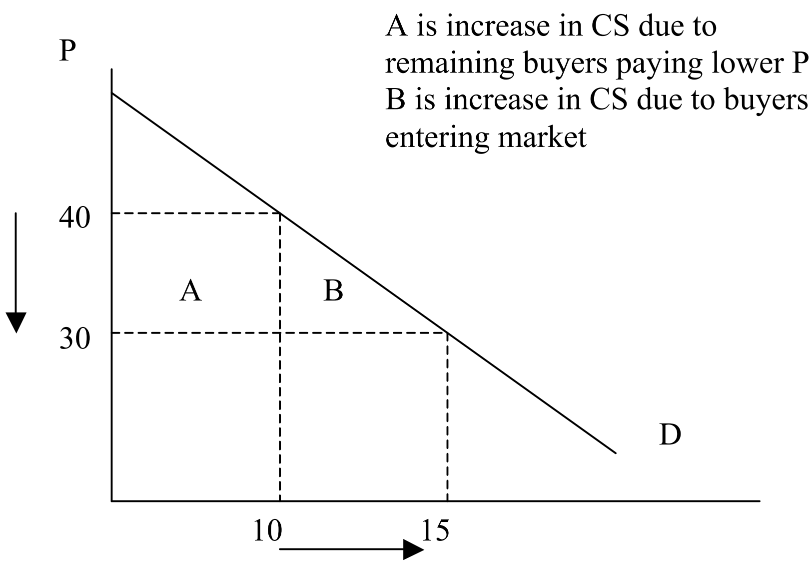
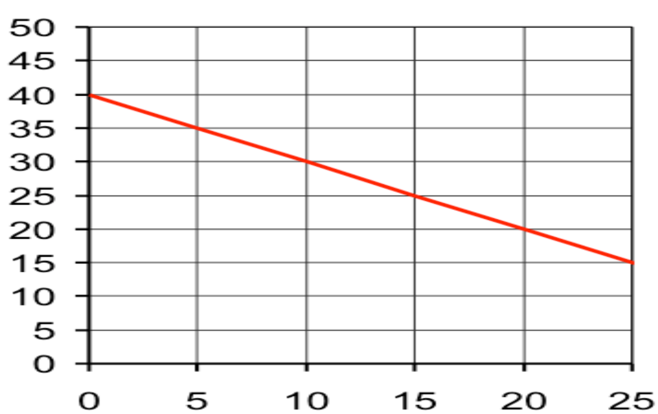
<u>consumer surplus:</u>

o If price is $260 then Damon's CS is _________. Total CS = _____________.
o Instead, suppose P=$220. Damon's CS? Anthony's CS? Total CS?

CS with lots of buyers and a smooth D curve
CS is the area b/w P and the D curve, from 0 to Q.
CS = ½ x base x height

Price Change
As price decreases, how much does the buyers' well-being rise?





A. Marginal buyer's WTP at Q = 10?
B. Find CS for P = $30?

Suppose P falls to $20. How much will CS increase due to…

C. Buyers entering the market
D. Existing buyers paying lower price

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PRODUCERS

- **Cost & Willingness to Sell**
  cost (willingness to sell):

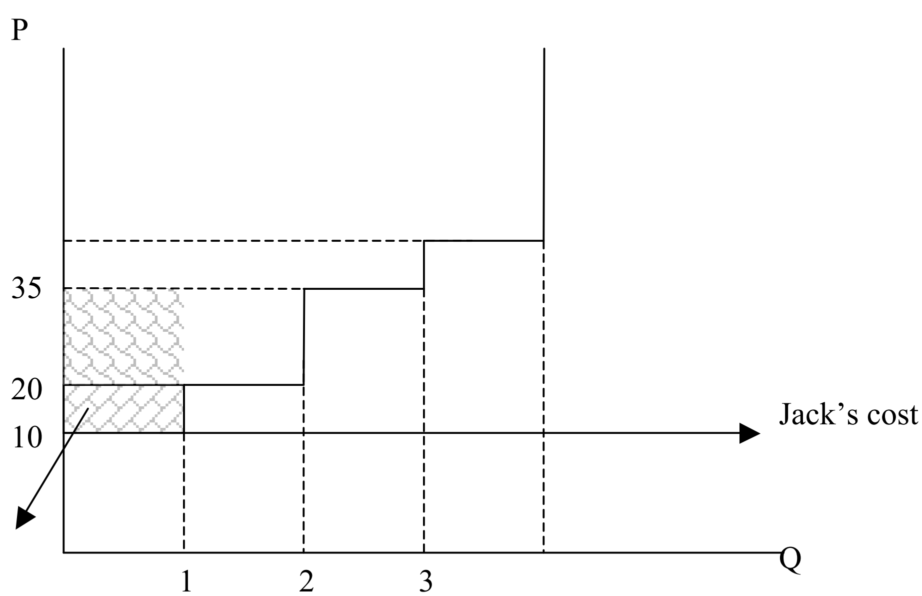
For producers, the cost is the opportunity cost. If P>cost, producers will sell in order to make a profit.

Seller	**Cost**
Jack	$10
Janet	20
Chrissy	35

Example: Costs of 3 sellers in the lawn-cutting business.

Price	Quantity Supplied
$0-9	
10-19	
20-34	
35 & up	

producer surplus:



- PS = P - Cost
- If P=$25, Jack's PC? Janet's PS? Chrissy's PS? Total PS?
- Total PS equals the area above the supply curve under the price, from 0 to Q.

PS with lots of sellers & smooth S curve
PS is the are b/w P and the S curve, from 0 to Q.
PS = ½ x b x h

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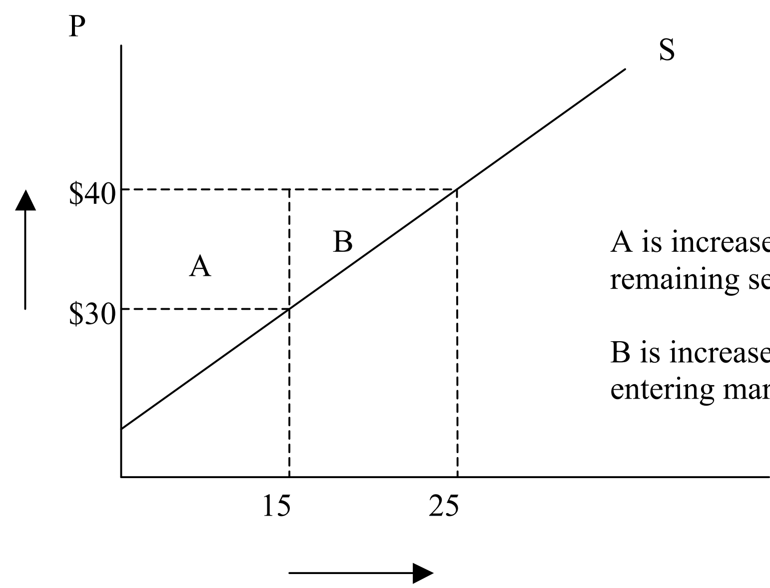
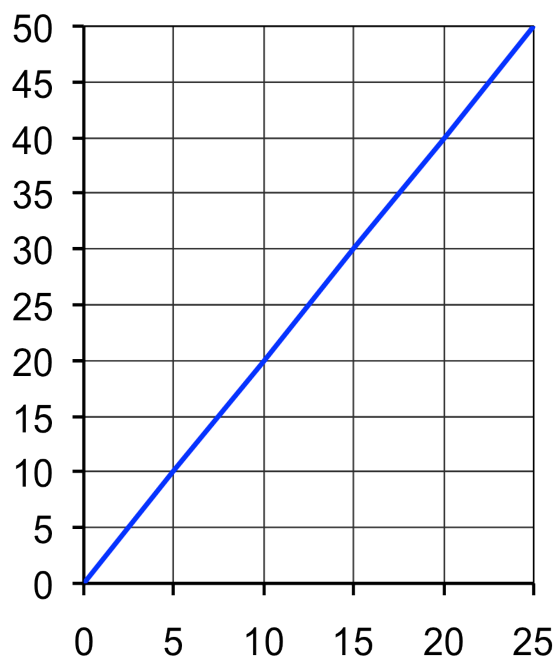
Price Change

If price rises, producer surplus increases.



A is increase in PS due to remaining sellers getting higher P.

B is increase in PS due to sellers entering market.



A. FIND MARGINAL SELLER'S COST AT Q = 10.

B. FIND TOTAL PS FOR P = $20.

SUPPOSE P RISES TO $30. FIND THE INCREASE IN PS DUE TO:

C. SELLING 5 ADDITIONAL UNITS

D. GETTING A HIGHER PRICE ON THE INTITIAL 10 UNITS.

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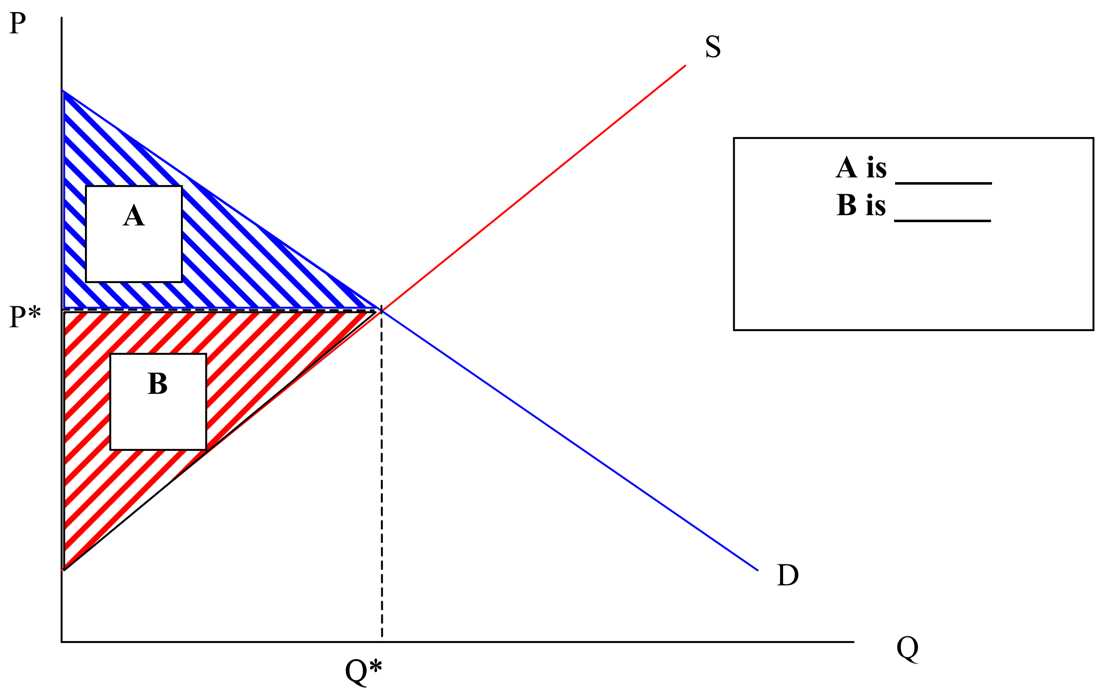
<u>MARKET EFFICIENCY</u>

Consumer surplus(CS) =
Producer surplus(PS)=
Total surplus =

The market's allocation of resources
<u>efficiency:</u>



Which buyers consume the good?
Which sellers produce the good?
Doe equilibrium Q* maximize total surplus?

- At quantity of output below equilibrium quantity, the value of the product to the marginal buyer is _____________ than the cost to the marginal seller so total surplus would rise if output ______________________.
- At quantity of output above equilibrium quantity, the value of the product to the marginal buyer is ________________ than the cost to the marginal seller so total surplus would increase if output ________________.

- **Suggested problems: Problems and Applications- 1, 4, 5**