

Introduction to Microeconomics

ECO1104 Section E, Fall 2011
(Lecture #12, Oct. 18)

Announcement

First midterm :

- Thursday Oct. 20
- 42 multiple choices for 84 points and 3 « short answer » questions for 20 points
 - Note the 4 bonus points.
- Approximate breakdown of marks:
 - Chapt. 1 and 2: 15 points
 - Chapt. 3 and 4: 45 points
 - Chapt. 5 and 6: 45 points
- Have posted an old exam and answer key on Virtual Campus

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

Key objectives:

- Learn how to define and measure consumer surplus
- Learn how to define and measure producer surplus
- See that the equilibrium of supply and demand maximizes total surplus in a market

Welfare Economics

- Definition: *Welfare economics* is the study of how the allocation of resources affects economic well-being.
- Buyers and sellers receive benefits from participating in the market.
- **Consumer surplus (CS)** measures economic welfare/benefit from the buyer's side.
- **Producer surplus (PS)** measures economic welfare/benefit from the seller's side.

Consumer Surplus

- Definition: *Consumer surplus (CS)* is the buyer's willingness to pay (*WTP*) for a good (that is, the value of a good to the buyer) minus the amount the buyer actually pays for it.
- As we will see, the *CS* at a given price is measured as the *area above the price and under the demand curve*.

Using the Demand Curve to Measure Consumer Surplus—An Example

Suppose four persons would be willing to buy a rare Elvis Presley's album for the prices below (Table 7.1, p. 146)

Buyer	Willingness to Pay
John	\$100
Paul	80
George	70
Ringo	50

Questions:

- What is the demand curve?
- If the price is \$80, what is the *CS*
- If the price is \$70, what is the *CS*?

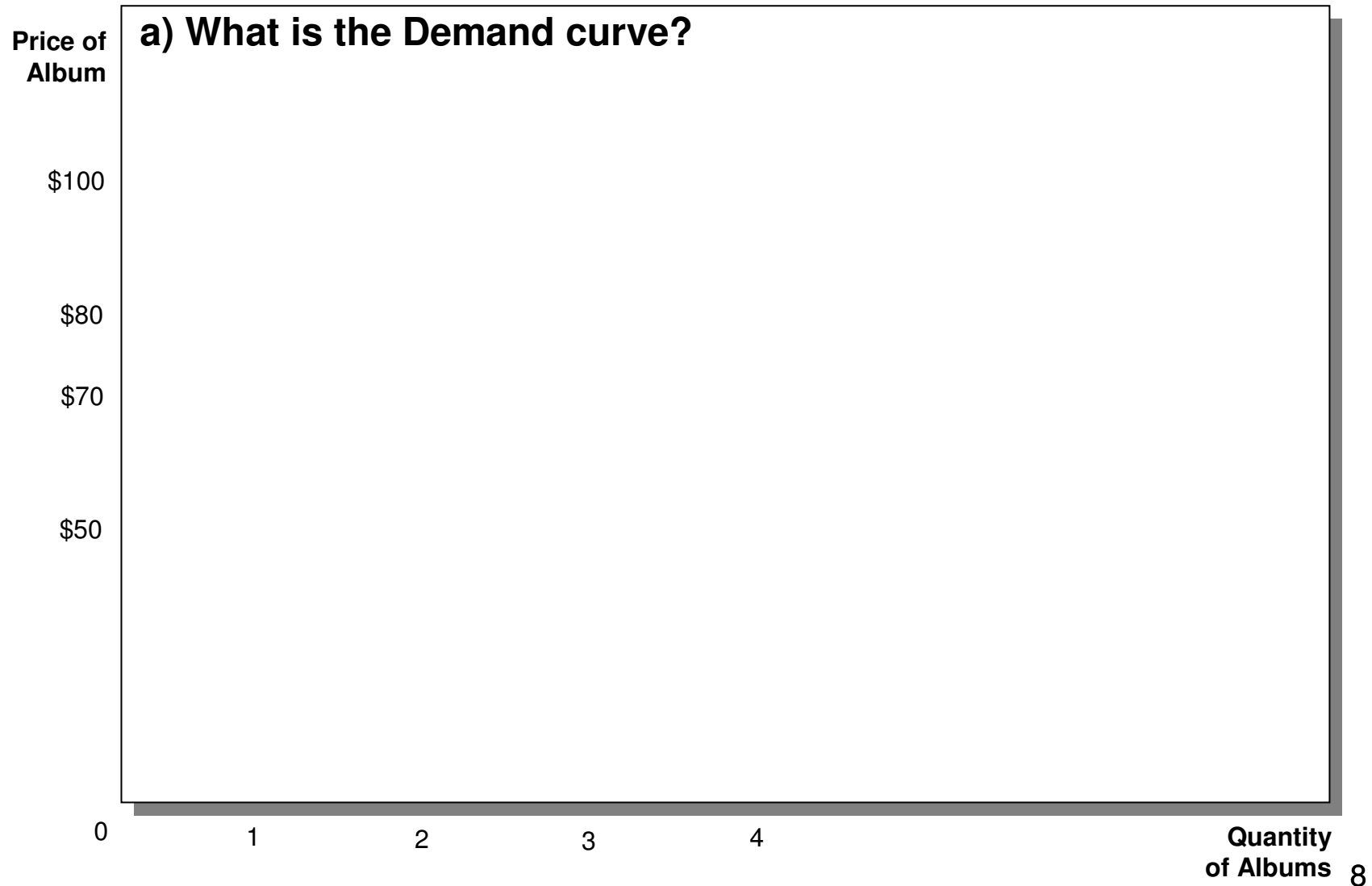
Using the Demand Curve to Measure Consumer Surplus—An Example

a) What is the demand curve?

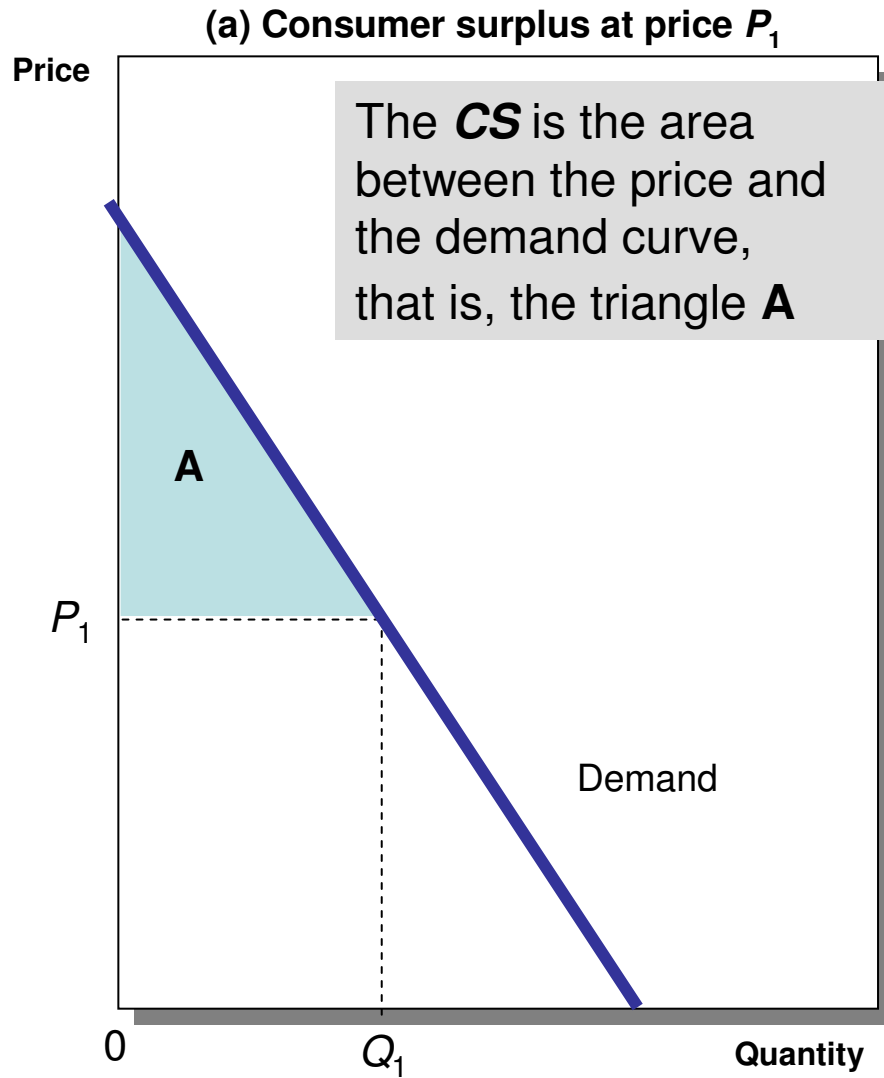
Buyer	Willingness to Pay
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Price	Buyers	Quantity Demanded
More than \$100		
\$81 to \$100		
\$71 to \$80		
\$51 to \$70		
\$50 or less		

Using the Demand Curve to Measure Consumer Surplus—An Example

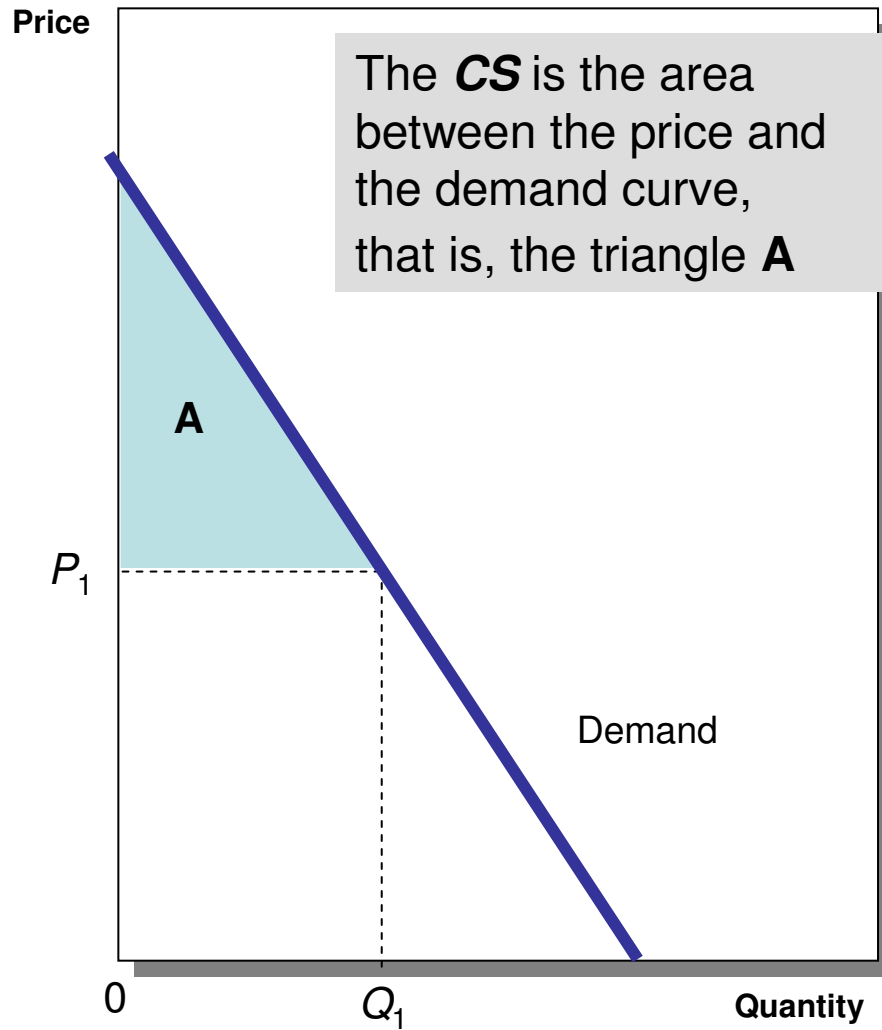


In general....



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(a) Consumer surplus at price P_1



(b) Consumer surplus at price $P_2 < P_1$

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(a) Consumer surplus at price P_1

(b) Consumer surplus at price $P_2 < P_1$

Example: Consumer Surplus

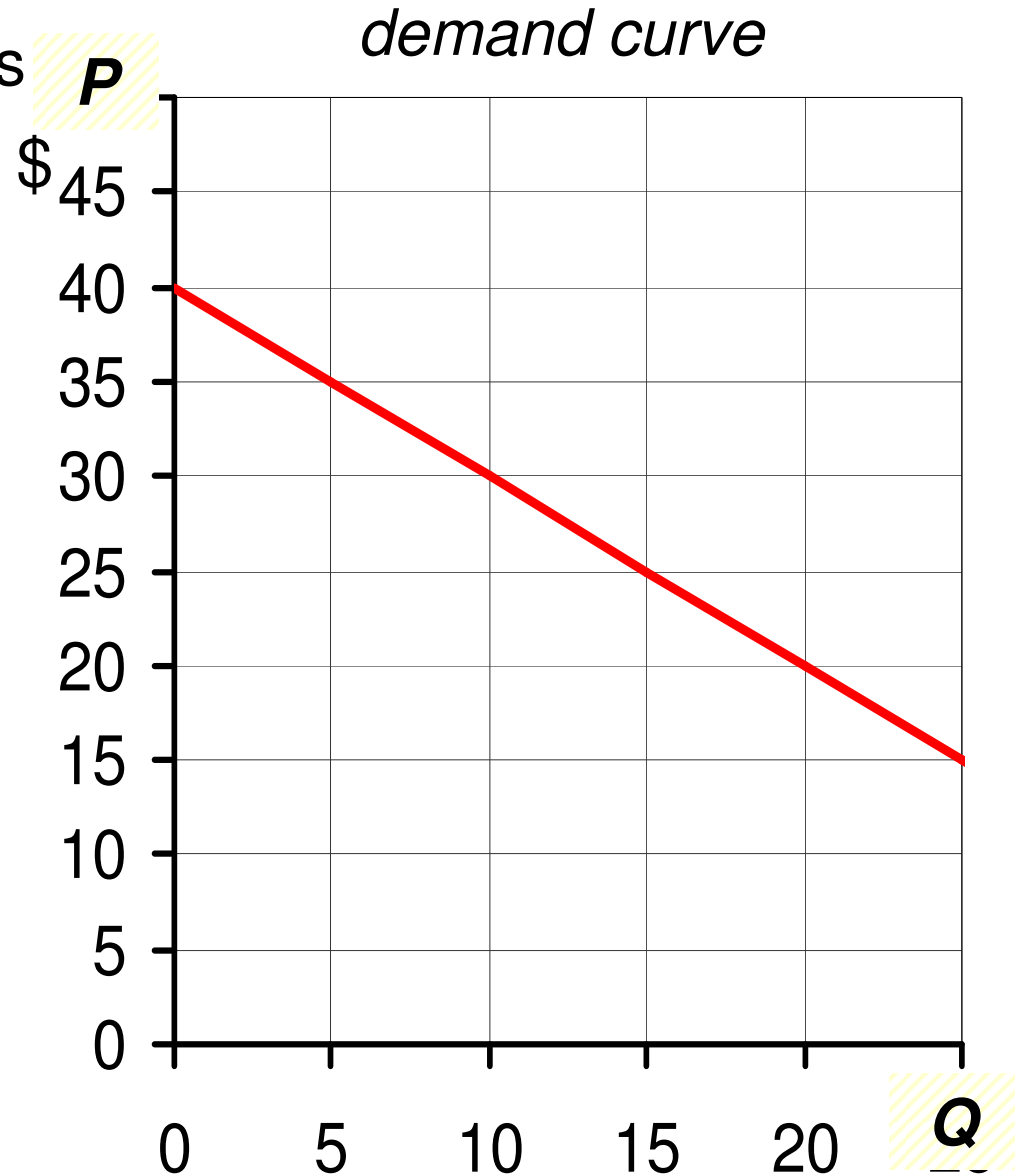
A. Find marginal buyer's *WTP* at $Q = 10$.

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



Example: MKMR,
p. 163, #3

3. It is a hot day, and Bert is thirsty. Here is the value he places on a bottle of water:

Value of first bottle	\$7
Value of second bottle	5
Value of third bottle	3
Value of fourth bottle	1

- From this information, derive Bert's demand schedule. Graph his demand curve for bottled water.
- If the price of a bottle of water is \$4, how many bottles does Bert buy? How much consumer surplus does Bert get from his purchases? Show Bert's consumer surplus in your graph.
- If the price falls to \$2, how does quantity demanded change? How does Bert's consumer surplus change? Show these changes in your graph.

Price	Q_D

Producer Surplus

- Definition: *Producer surplus (PS)* is the amount a seller is paid for a good minus the seller's *willingness to sell* (that is his/her *cost*).
- The producer surplus at a given price is measured as the area below the price and above the supply curve.

Cost and the Supply Curve

- *Cost* is the value of everything a seller must give up to produce a good (*i.e.*, opportunity cost).
- Includes cost of all resources used to produce good, including value of the seller's time.
- A seller will only produce and sell the good if the price exceeds his or her cost.
- Hence, cost is a measure of willingness to sell.