

# APPLIED ECON. FOR MANAGERS—SESSION 2

## I. REVIEW

A. ECONOMICS AS THE STUDY OF RATIONAL CHOICE NECESSITATED BY THE FACT OF SCARCITY

B. SOCIETY'S THREE BIG CHOICES

1. WHAT TO PRODUCE?

2. HOW TO PRODUCE IT?

3. WHO GETS IT?

C. THE EFFICIENCY CRITERION

D. EFFICIENCY OF MARKET OUTCOMES

1. IN A FREE AND VOLUNTARY EXCHANGE, **BOTH** PARTIES MUST GAIN (OR, AT LEAST, ONE GAIN AND THE OTHER BE NO WORSE OFF FOR THE TRADE TO OCCUR.)

2. MARKETS TEND TO EXPLOIT ALL MUTUALLY BENEFICIAL TRADES

## II. AN AUCTION MARKET FOR PAPER CLIPS

A. THE LAW OF ONE PRICE

B. DIFFERENCE BETWEEN THE AUCTION MARKET AND THE EXPERIMENTAL ONE

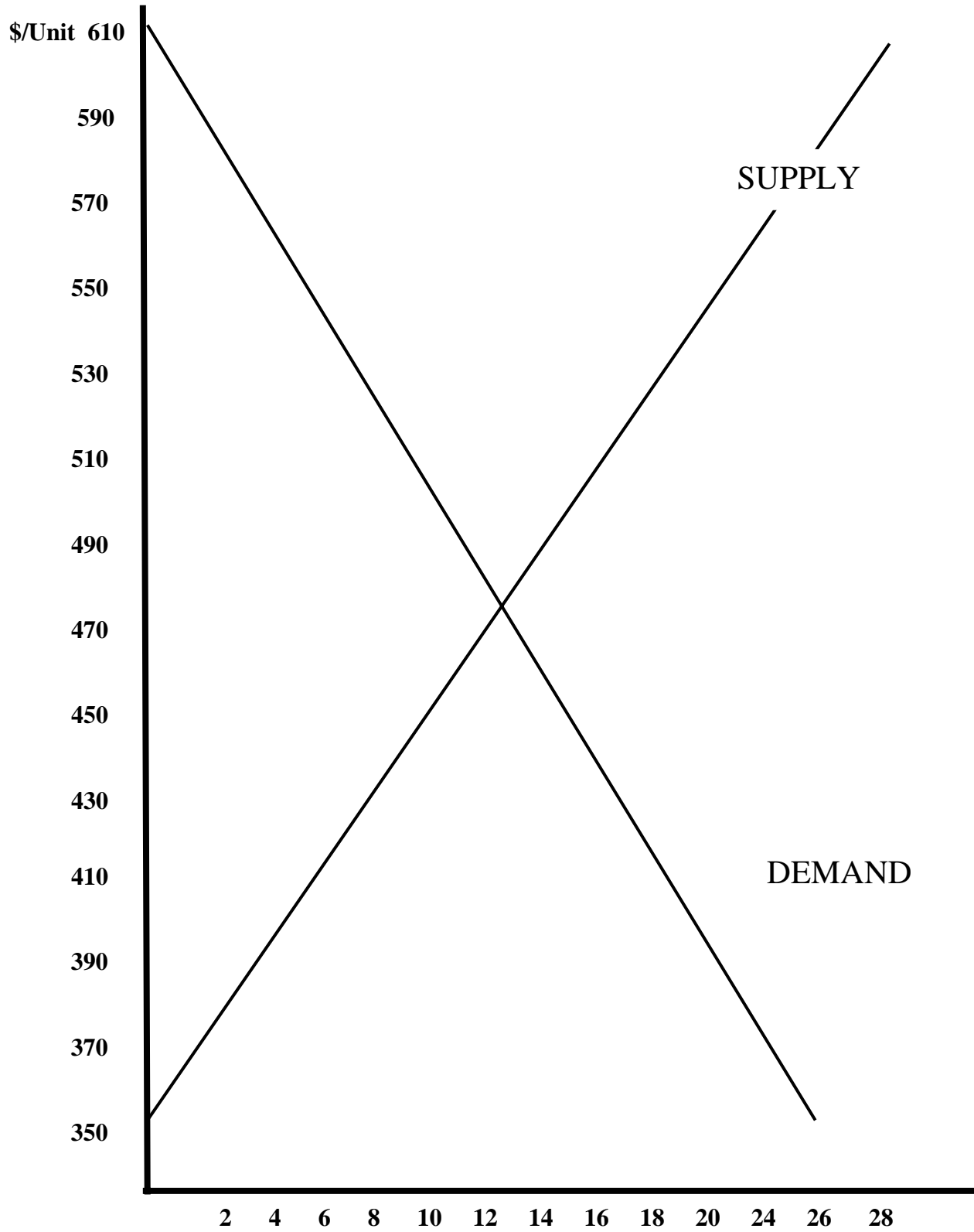
A. MONOPOLY POWER

B. INFORMATION

## The Magic Paper Clip Market With an Auctioneer

<u>Price</u>	<u>Quantity Supplied</u>	<u>Quantity Demanded</u>
350	0	23
370	1	21
390	2	19
410	3	17
430	5	15
450	7	13
470	9	11
490	11	9
510	13	7
530	15	5
550	17	3
570	19	2
590	21	1
610	23	0

**MARKET EQUILIBRIUM FOR  
THE PAPER CLIP GAME**



### III. INFORMATION, PRICE, VALUE, AND COST

A. PRICE AS A SIGNAL TO COORDINATE THE ACTIVITIES OF INDIVIDUAL CONSUMERS AND FIRMS

B. POSSIBLE DEFINITION OF AN ECONOMIST: “ONE WHO KNOWS THE PRICE OF EVERYTHING AND THE VALUE OF NOTHING”, E.G., DIAMONDS VS WATER

1. DEMAND INTERPRETATION OF THE MARKET PRICE IN THE PAPER CLIP MARKET

2. THE DIAMONDS VS WATER PARADOX RESOLVED

a. TOTAL VALUE = AREA UNDER THE DEMAND CURVE

b. MARGINAL VALUE EQUALS VALUE OF ONE ADDITIONAL UNIT

3. LESSON: IN A WELL-FUNCTIONING MARKET, THE PRICE JUST EQUALS THE SOCIAL VALUE OF THE LAST UNIT SOLD--I.E., IT MEASURES *VALUE AT THE MARGIN*

C. SUPPLY INTERPRETATION OF PRICE IN THE PAPER CLIP MARKET

1. TOTAL COST = AREA UNDER THE SUPPLY CURVE

2. MARGINAL COST IS COST OF ONE ADDITIONAL UNIT

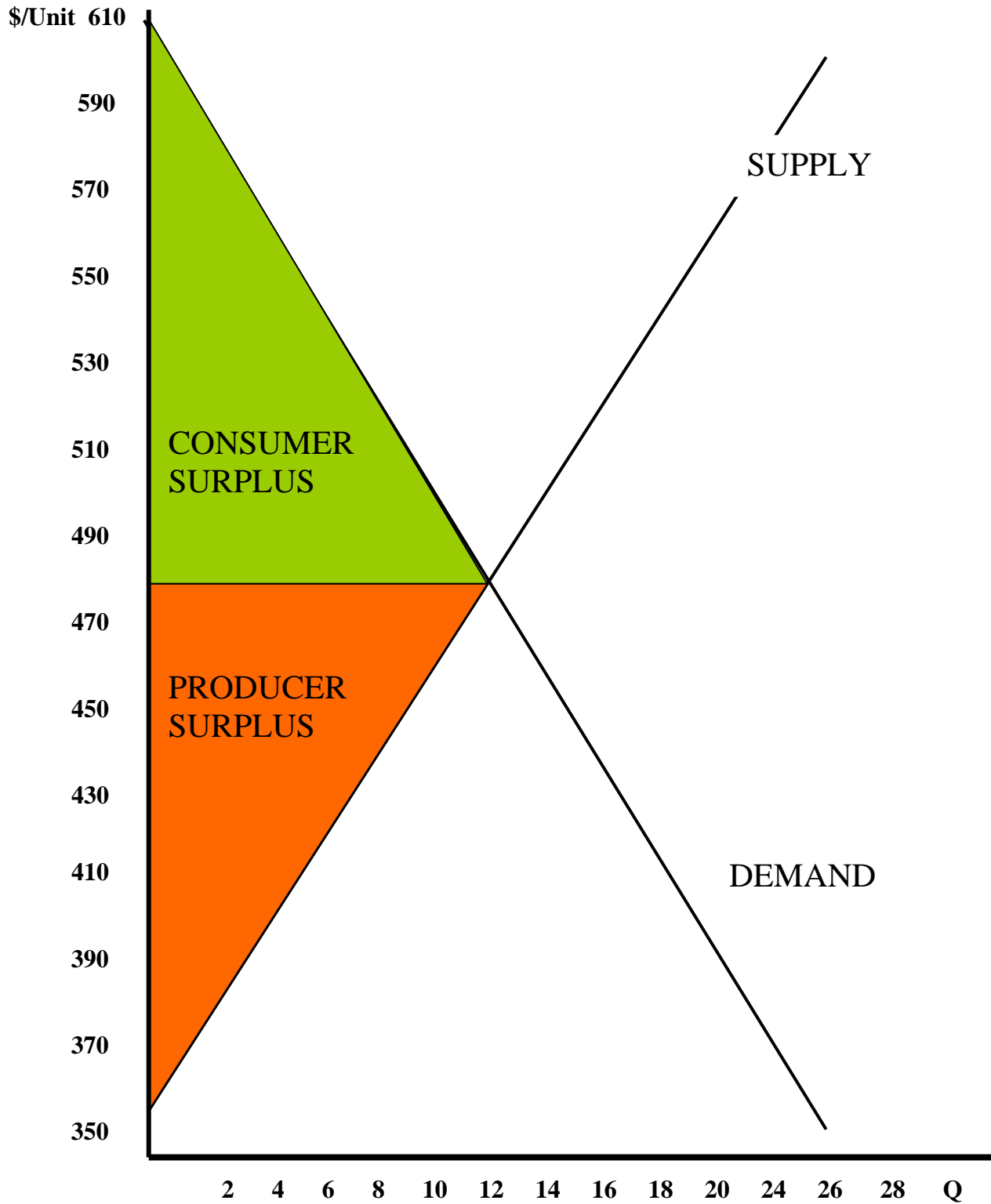
IN A WELL-FUNCTIONING MARKET, THE PRICE WILL ALSO JUST EQUAL THE COST OF THE LAST UNIT PRODUCED

1. TOTAL COST = AREA UNDER THE SUPPLY CURVE

2. MARGINAL COST EQUALS VALUE OF ONE ADDITIONAL UNIT

D. EFFICIENCY IMPLIES: PRICE = MARGINAL COST

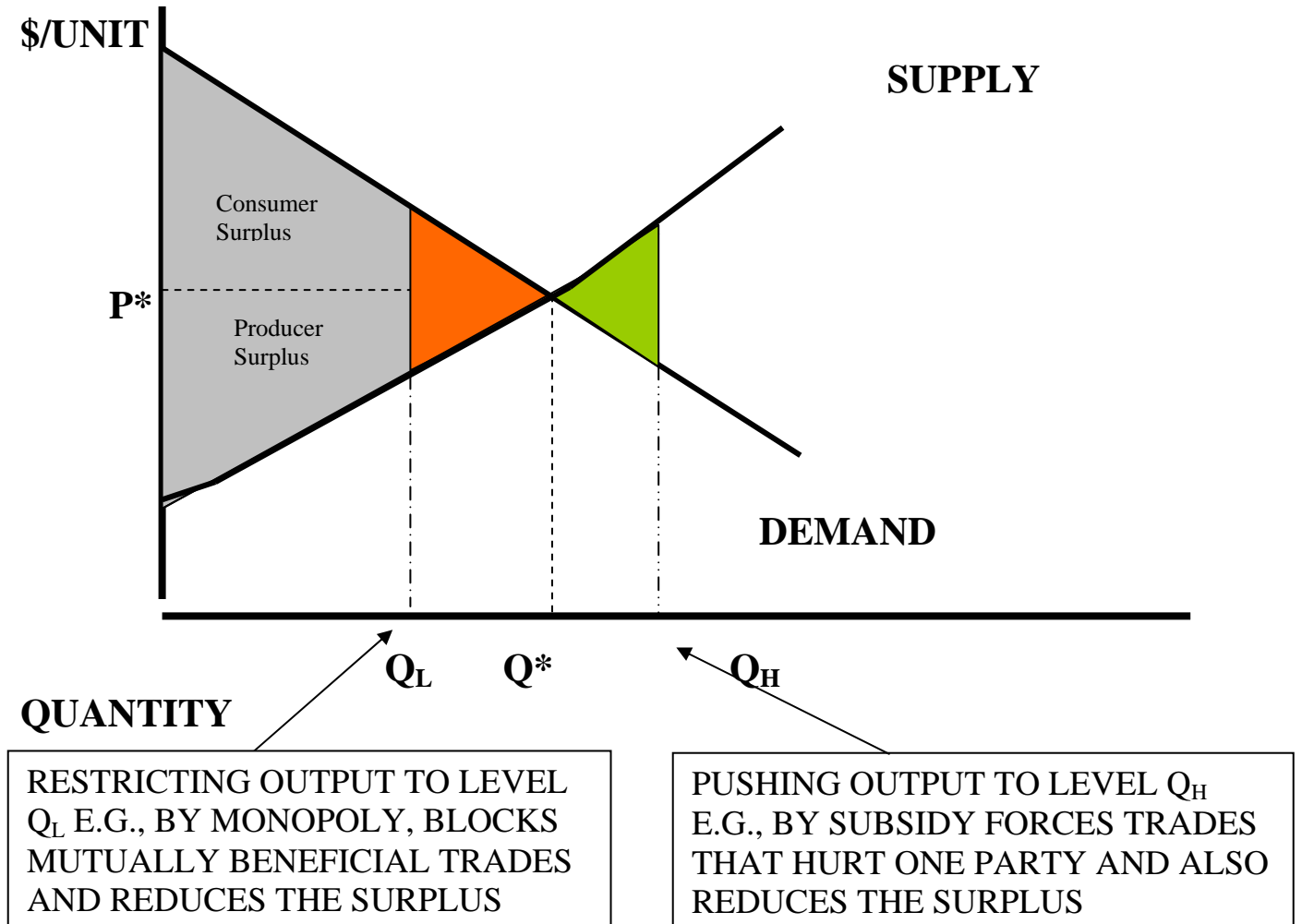
# SURPLUS IN THE PAPER CLIP MARKET



EFFICIENT EQUILIBRIUM MAXIMIZES THE SUM OF CONSUMER AND PRODUCER SURPLUS

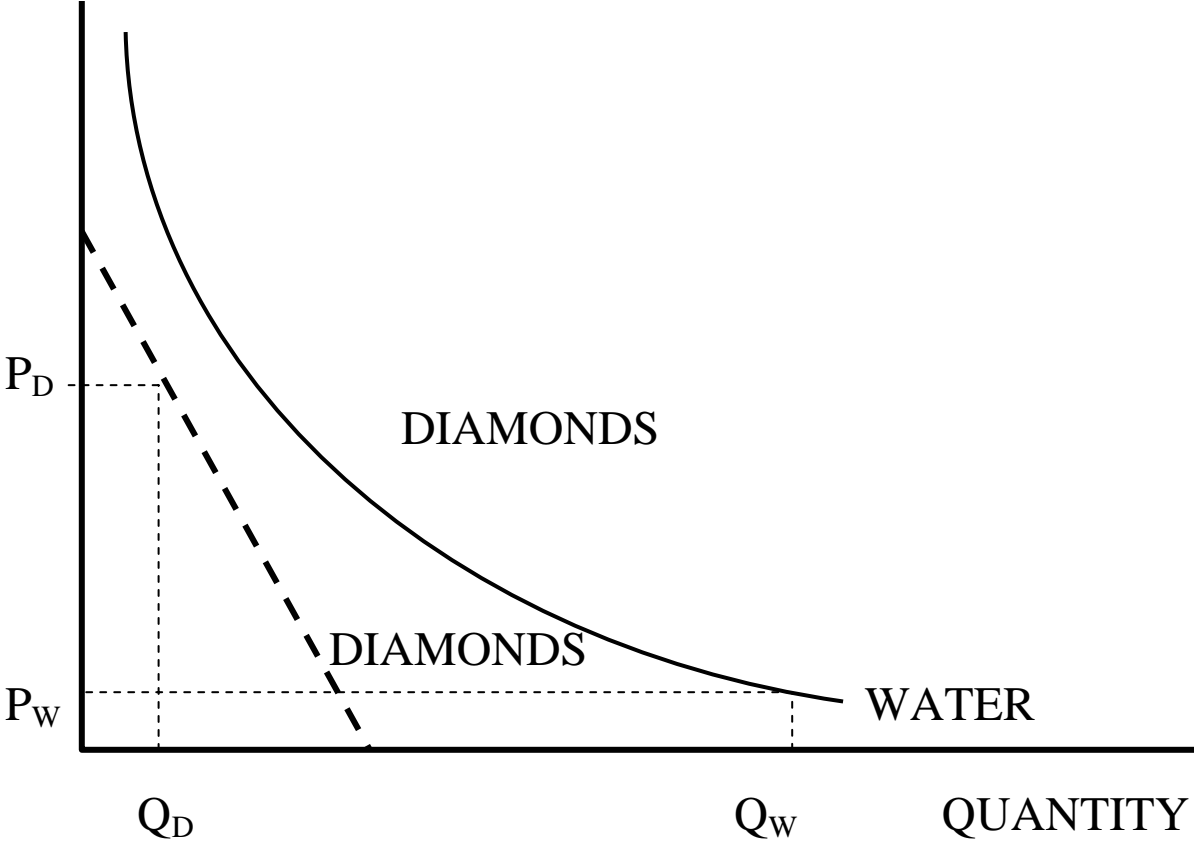
## IV. SUPPLY AND DEMAND IN ACTION

### A. SUPPLY AND DEMAND DETERMINE EQUILIBRIUM PRICE AND QUANTITY



# WATER VERSUS DIAMONDS

\$/UNIT



## B. SHIFTS IN THE SUPPLY CURVE

### 1. MOVE ALONG THE DEMAND CURVE

- a. FALL (RISE) IN SUPPLY RAISES (LOWERS) PRICE
- b. FALL (RISE) IN SUPPLY LOWERS (RAISES) QUANTITY

### 2. ELASTICITY OF DEMAND

- a. RESPONSIVENESS OF DEMAND TO PRICE CHANGES
- b. ELASTICITY OF DEMAND:  $\epsilon_d = -\frac{\Delta Q/Q}{\Delta P/P}$

## C. SHIFTS IN THE DEMAND CURVE

### 1. MOVE ALONG THE SUPPLY CURVE

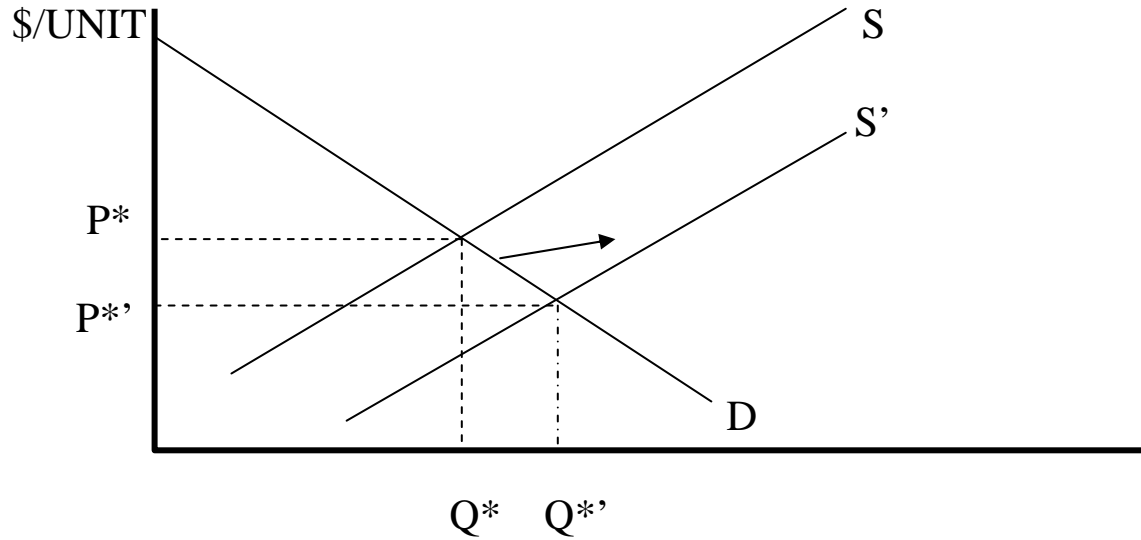
- c. RISE (FALL) IN DEMAND RAISES (LOWERS) PRICE
- d. RISE (FALL) IN SUPPLY LOWERS (RAISES) QUANTITY

### 2. ELASTICITY OF SUPPLY

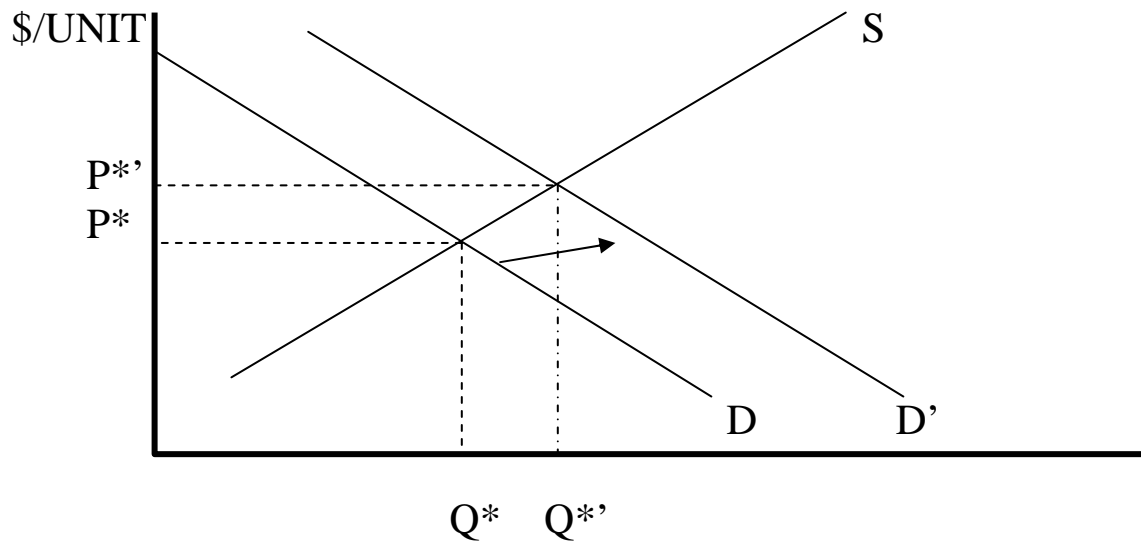
- a. RESPONSIVENESS OF SUPPLY TO PRICE CHANGES
- b. ELASTICITY OF SUPPLY:  $\eta_s = \frac{\Delta Q/Q}{\Delta P/P}$



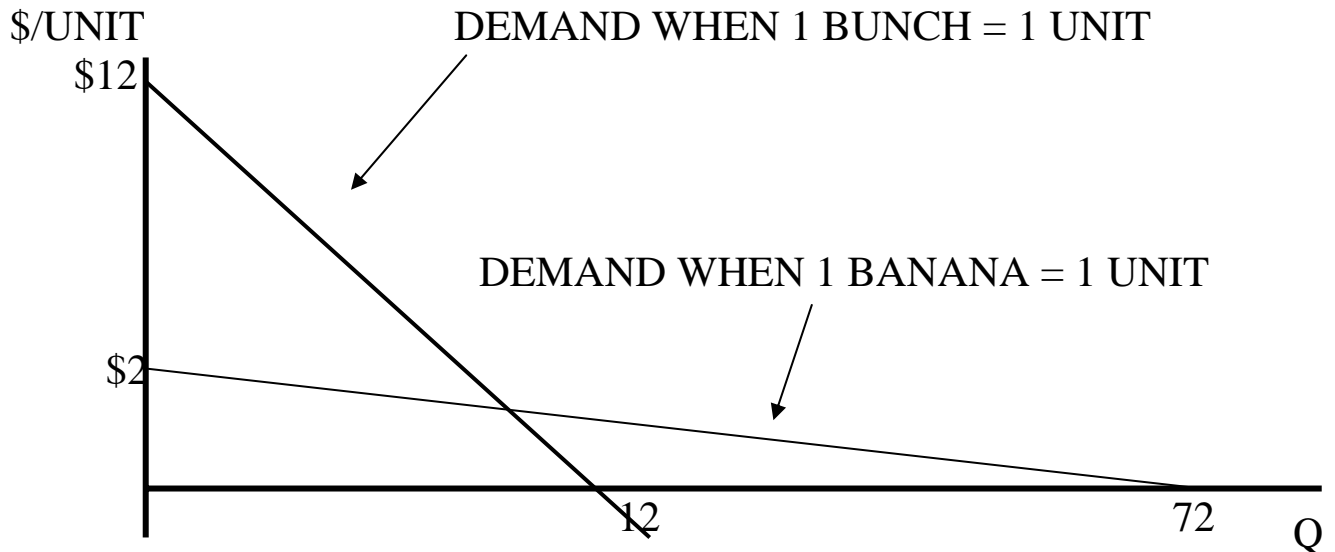
SHIFTS IN THE SUPPLY CURVE MOVE PRICE AND QUANTITY  
IN THE OPPOSITE DIRECTION



SHIFTS IN THE DEMAND CURVE MOVE PRICE AND QUANTITY  
IN THE SAME DIRECTION



## ELASTICITY VS SLOPE: THE PRICE OF BANANAS



CONSIDER A SMALL VILLAGE IN THE FRENCH COUNTRYSIDE.

SUPPOSE WE DEFINE ONE UNIT OF BANANAS TO BE A BUNCH OF 6 BANANAS. SUPPOSE FURTHER THAT AT A PRICE OF \$12 PER BUNCH, VILLAGE DEMAND FOR BANANAS IS ZERO UNITS (ZERO BUNCHES) WHILE AT A PRICE OF \$0 PER BUNCH, TOTAL DEMAND IS 12 UNITS (72 BANANAS). THEN VILLAGE BANANA DEMAND IS GIVEN BY THE EQUATION:

$$P = 12 - Q, \text{ I.E., THE DEMAND SLOPE IS } -1$$

NOW SUPPOSE THAT WE DEFINE ONE BANANA UNIT AS JUST ONE BANANA. THE DEMAND CURVE JUST DEFINED SAYS THAT WHEN THE PRICE PER BANANA IS \$2 (OR \$12 PER 6), DEMAND IS 0, WHILE DEMAND IS 72 BANANAS AT  $P = 0$ . THUS, WHEN WE DEFINE A BANANA UNIT AS 1 BANANA, THE VILLAGE DEMAND CURVE IS GIVEN BY:

$$P = 2 - \left(\frac{1}{36}\right)Q, \text{ I.E., THE DEMAND SLOPE IS } -\frac{1}{36}$$