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

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MARKET EQUILIBRIUM FOR
THE PAPER CLIP GAME

$/Unit:
610  590  570  550  530  510  490  470  450  430  410  390  370  350

2  4  6  8  10  12  14  16  18  20  22  24  26  28

SUPPLY

DEMAND
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


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
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

- Restricting output to level $Q_L$, e.g., by monopoly, blocks mutually beneficial trades and reduces the surplus.

- Pushing output to level $Q_H$, e.g., by subsidy forces trades that hurt one party and also reduces the surplus.
WATER VERSUS DIAMONDS

$/UNIT

$P_D$

$P_W$

$Q_D$

$Q_W$

QUANTITY

DIAMONDS

WATER
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: \( \varepsilon_D = -\frac{\Delta Q/Q}{\Delta P/P} \)

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:

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