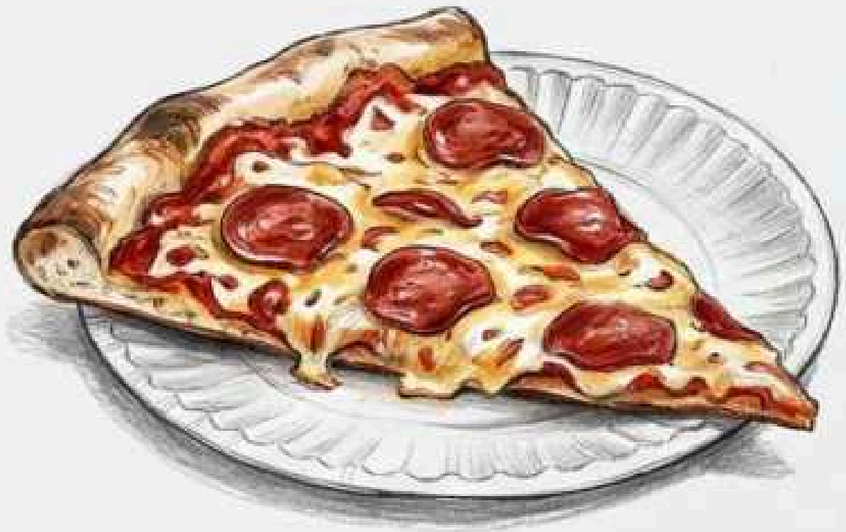
¶ 2.1 - 2.2

ECON 120 B: Demand & Supply

A **market** is a place or process where buyers and sellers meet. How does a market set prices and quantities?



The Market for University Pizza Slices

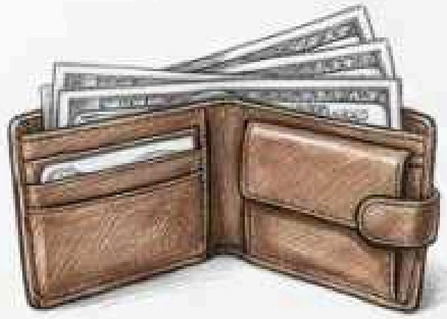
- Quantity (Q): Measured in slices per hour
- Price (P): Measured in dollars ($)

Laws of demand & supply • Equilibrium • Jobs of prices • Shifts vs. Movements

¶ 2.3 - 2.4

Defining Demand



WILLING to buy +  = **Quantity Demanded**

ABLE to pay

The Law of Demand: Other things equal, when **P ↑**, **Q_d ↓**

Price Rises

Quantity Demanded Falls

1. **Substitutes:** Buyers switch to cheaper alternatives.
2. **Purchasing Power:** Higher prices make buyers feel poorer.
3. **Diminishing Marginal Benefit:** Extra units are simply worth less to the buyer.

Plotting the Demand Schedule

¶ 2.5 - 2.6

Data Tale	Dable
• P: $10	Q: 0
• P: $6	Q: 40
• P: $4	Q: 60
• P: $2	Q: 80



Formulas are just compact schedules:

$$Q_d = 100 - 10P$$

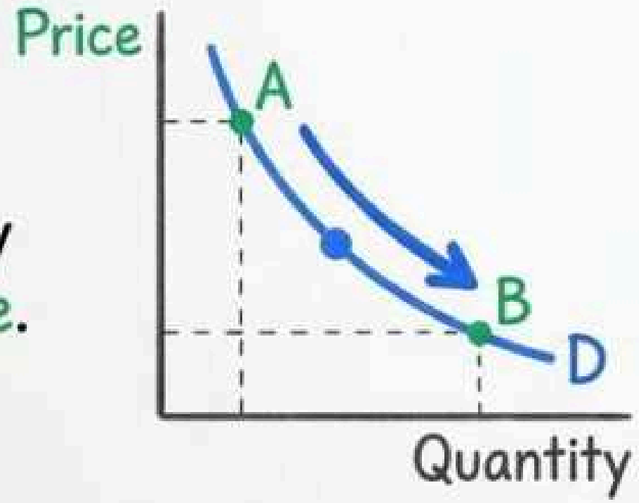
Test at P = $3:

$Q_d = 100 - 10(3) = 100 - 30 = 70$ slices

¶ 2.7 - 2.8

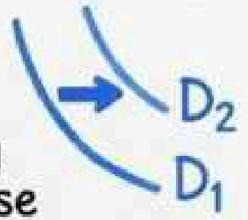
Movement vs. Shifts

Movement:
Caused ONLY by a change in Price.



Graphical Comparison

Shift:
Caused by a ___ in anything demand else (Right shift = more wanted at every price).

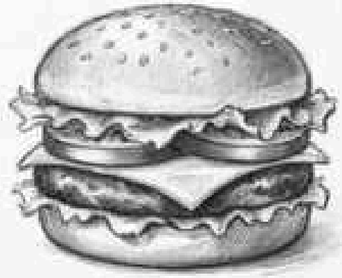


Burger P↑, Pizza D↓

Normal Good:
Income↑, Demand↑

The Main Shifters

Substitutes:
Can replace each other



Burger P↑, Pizza D↑

Complements:
Used together



Soda P↑, Pizza D↓

Normal Good:
Income↑, Demand↑

Inferior Good:
Income↑, Demand↓

¶ 2.9

The Supply Side

Definition: Quantity supplied is the amount sellers are willing to sell sell at a given price.

The Law of Supply: Other things equal, a higher price raises the quantity supplied (P ↑, Qs ↑).



Why?

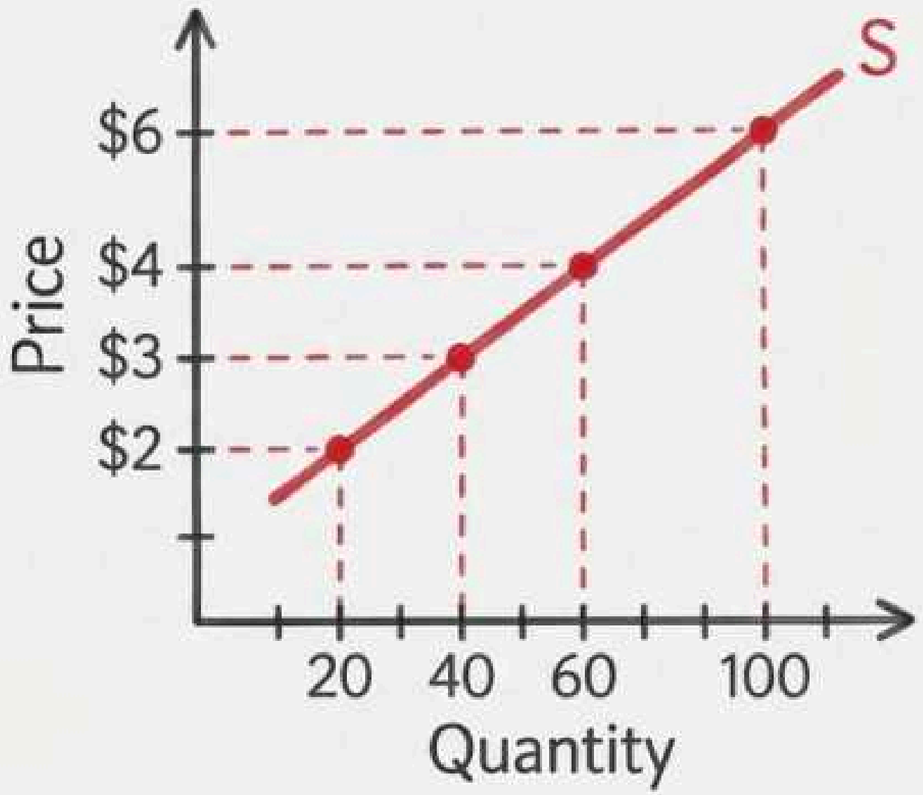
- Producing more usually costs more per unit.
- Sellers require a higher price to make production worthwhile.
- Higher prices make extra sales more profitable.

Plotting the Supply Schedule

¶ 2.10

• P: $2	Q: 20
• P: $3	Q: 40
• P: $4	Q: 60
• P: $6	Q: 100

Every $1 rise in price adds 20 slices.

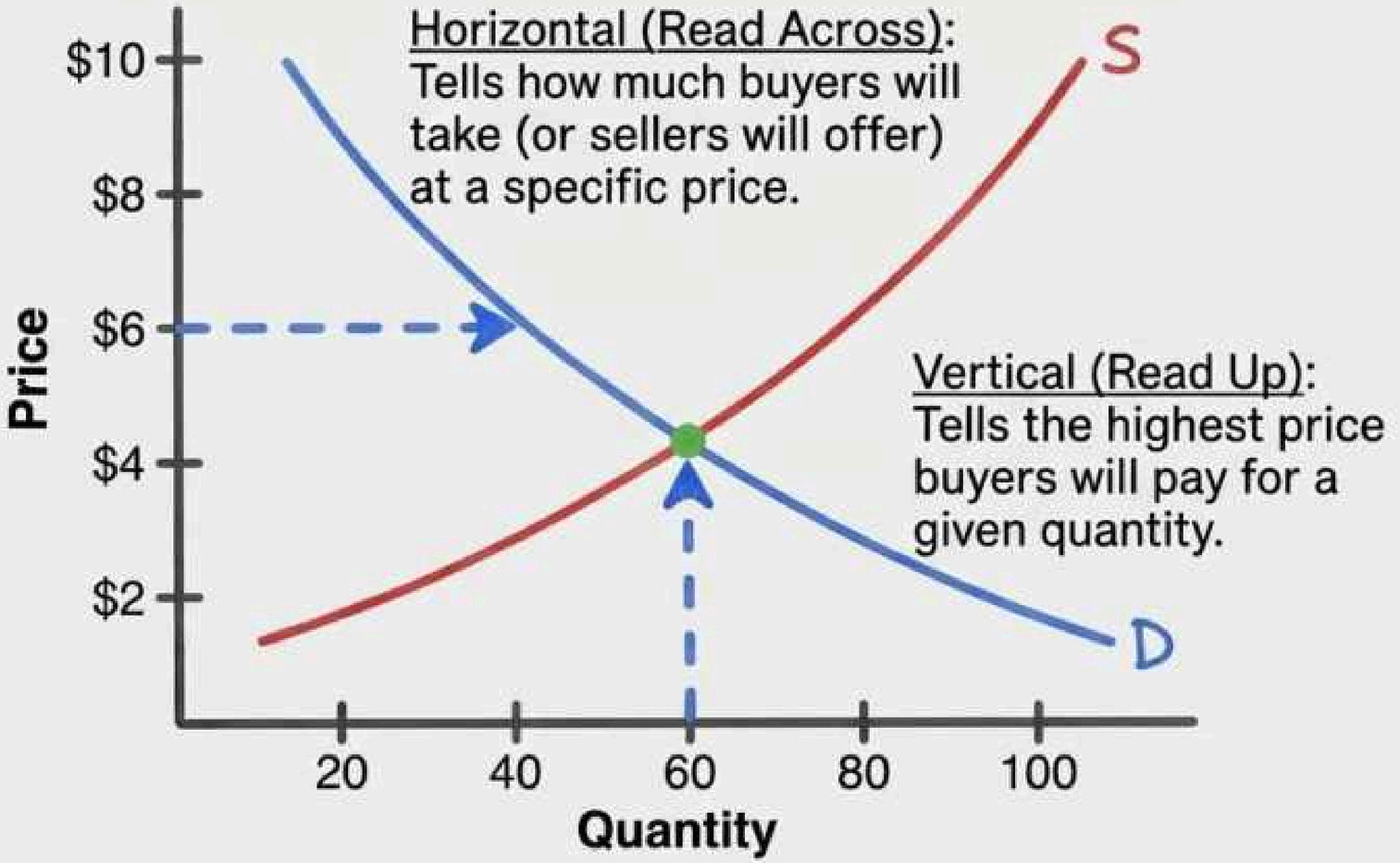


Math Section: $Q_S = 20(P - 1)$

Test at P = $3: $Q_S = 20(3 - 1) = 20(2) = 40$ slices

Two Ways to Read a Curve

¶ 2.11



The Dual Meaning:

- The Demand Curve = Marginal Benefit Curve
- The Supply Curve = Marginal Cost Curve

¶ 2.12

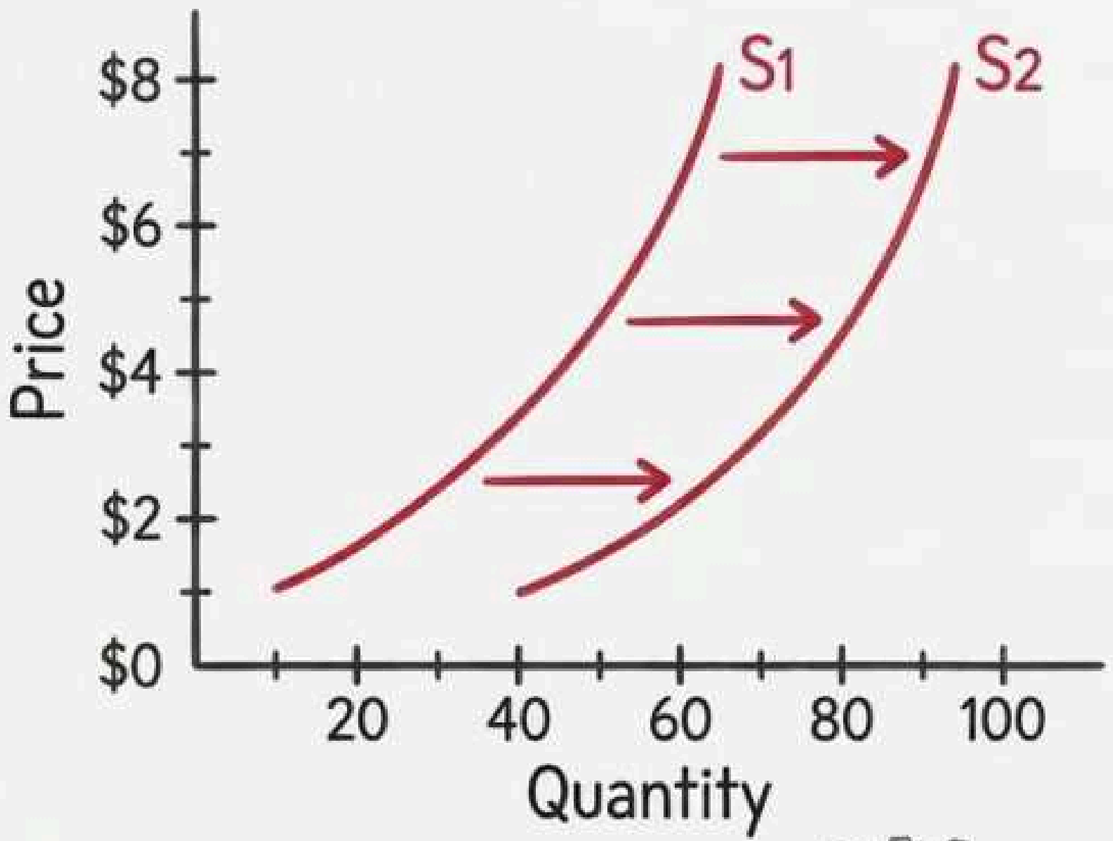
Shifting Supply

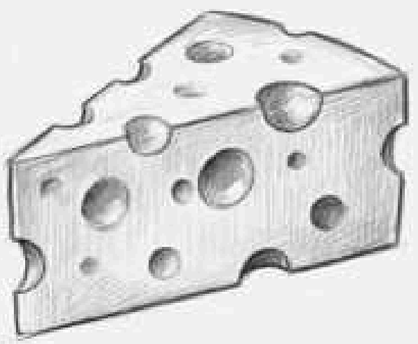
Mechanics: An increase in supply shifts the curve to the right (sellers supply more at every price).

Example: Cheese gets cheaper, or a better oven is invented.

The Main Supply Shifters:

- Prices of inputs
- Technology
- Number of sellers
- Taxes and subsidies
- Expectations



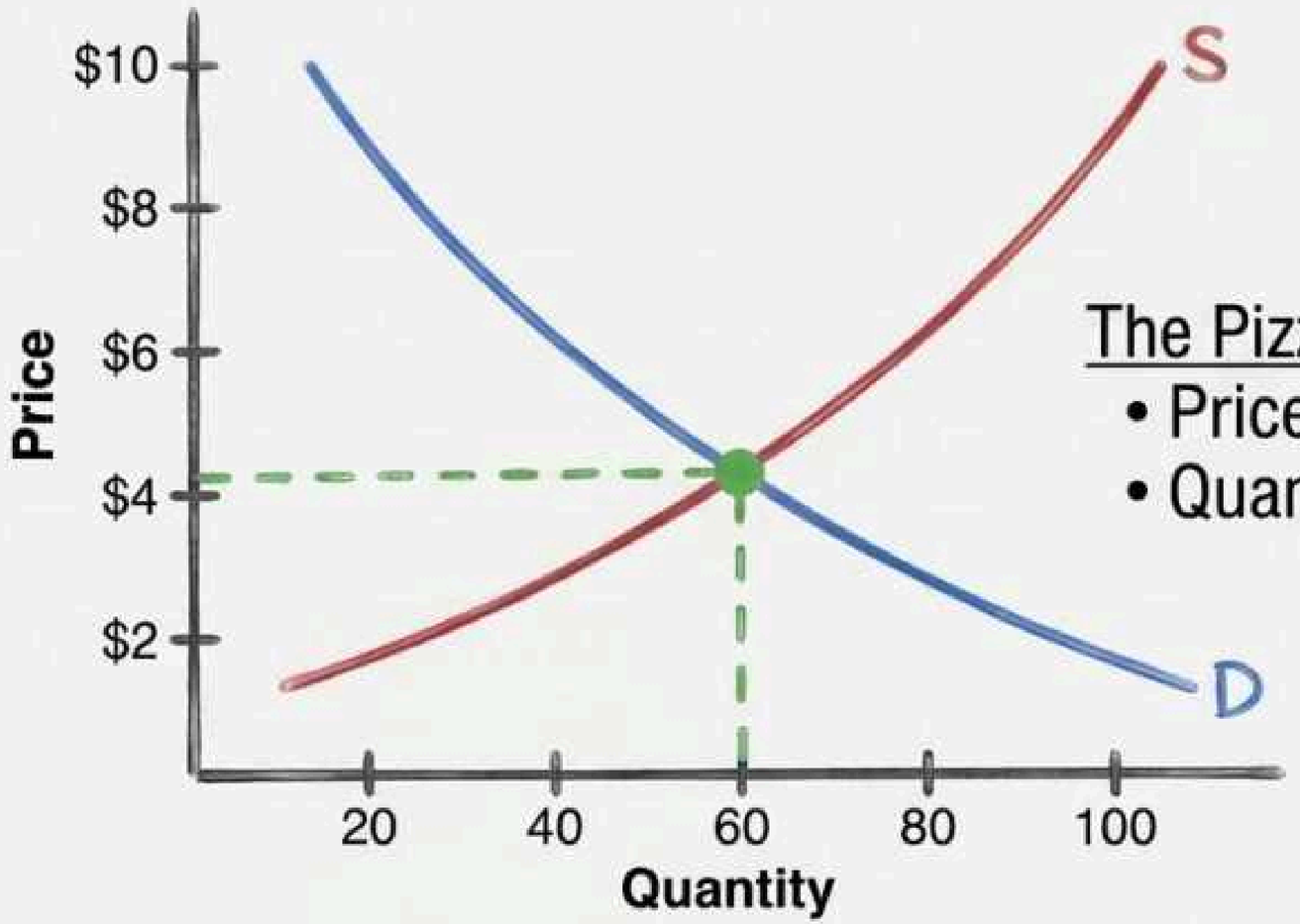




Market Equilibrium

¶ 2.13

$Q_d = Q_S$



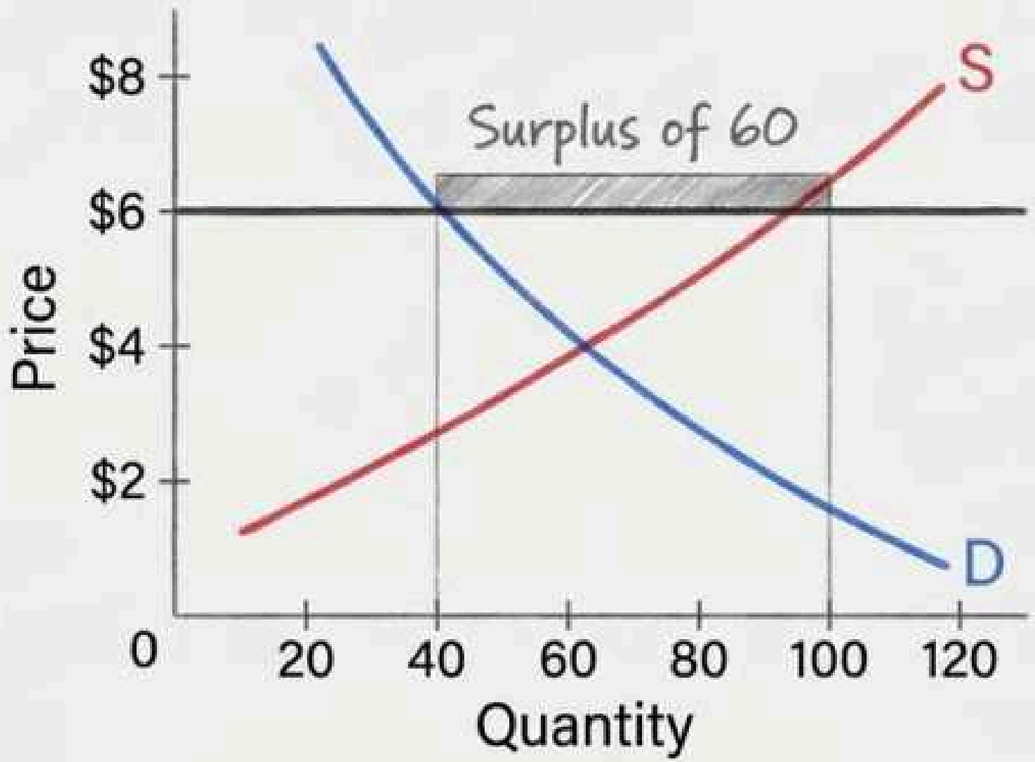
The Pizza Market Equilibrium:

- Price = $4
- Quantity = 60 slices/hour

The Result: Plans fit perfectly. Every buyer who wants a slice at $4 can get one, and every seller can sell exactly what they planned.

Away from Equilibrium

¶ 2.14





Surplus (Price = $6):

- Sellers offer 100, Buyers want 40.
- Result: Sellers cut prices to clear the 60 extra slices.

Shortage (Price = $2):

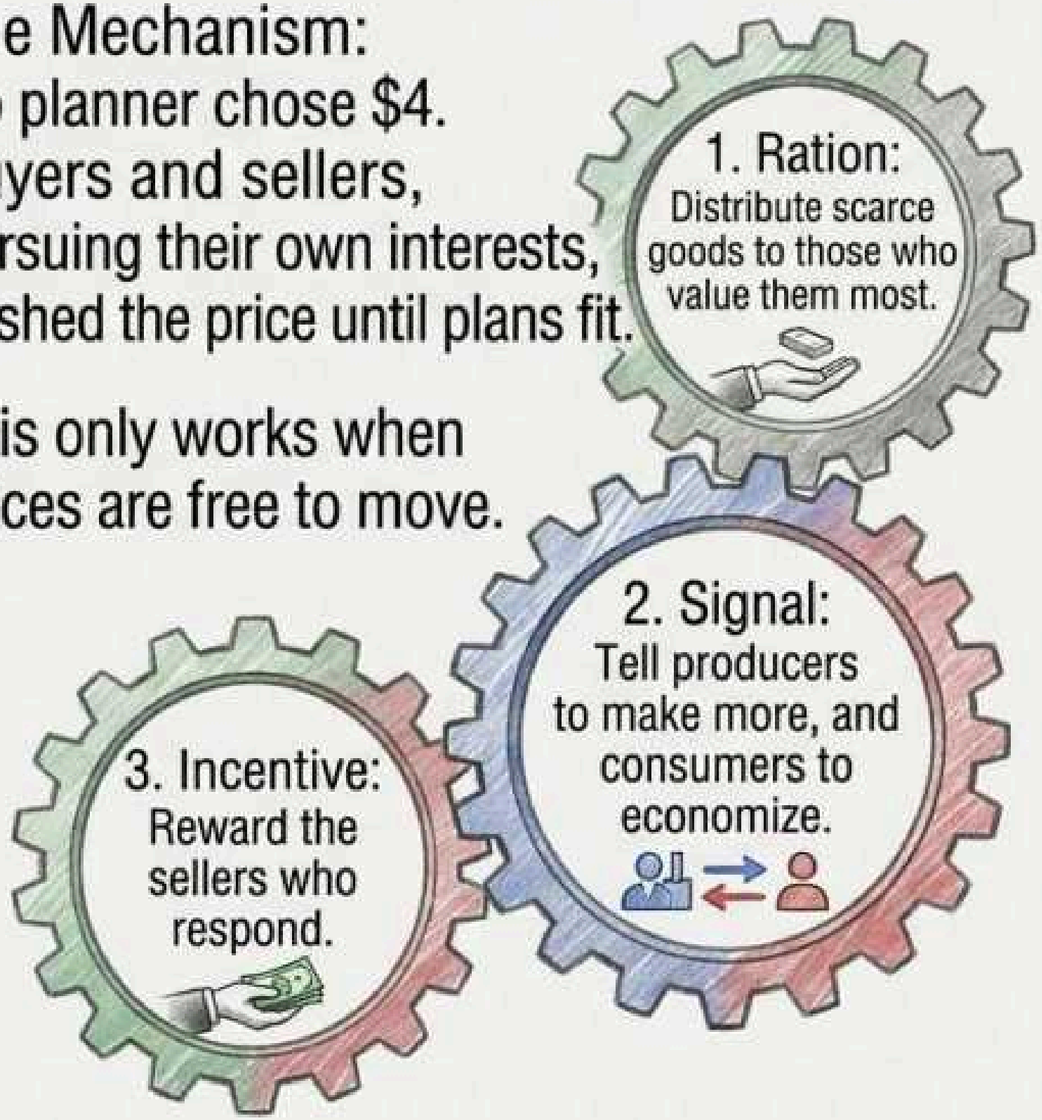
- Buyers want 80, Sellers offer 20.
- Result: Price is bid up for the 60 missing slices.

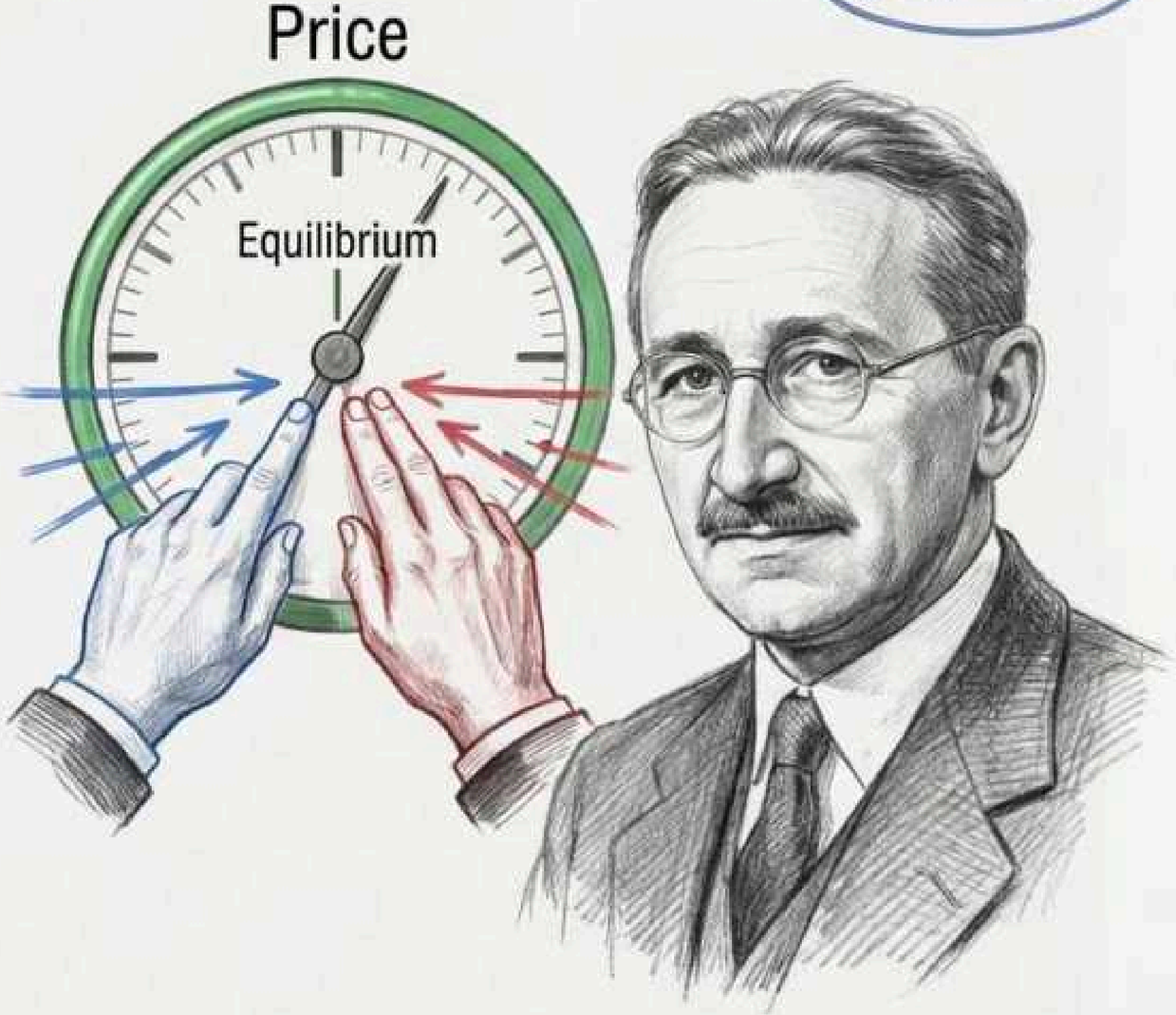
The Self-Correcting Market

¶ 2.15 - 2.16

The Mechanism:
No planner chose $4.
Buyers and sellers,
pursuing their own interests,
pushed the price until plans fit.

This only works when
prices are free to move.



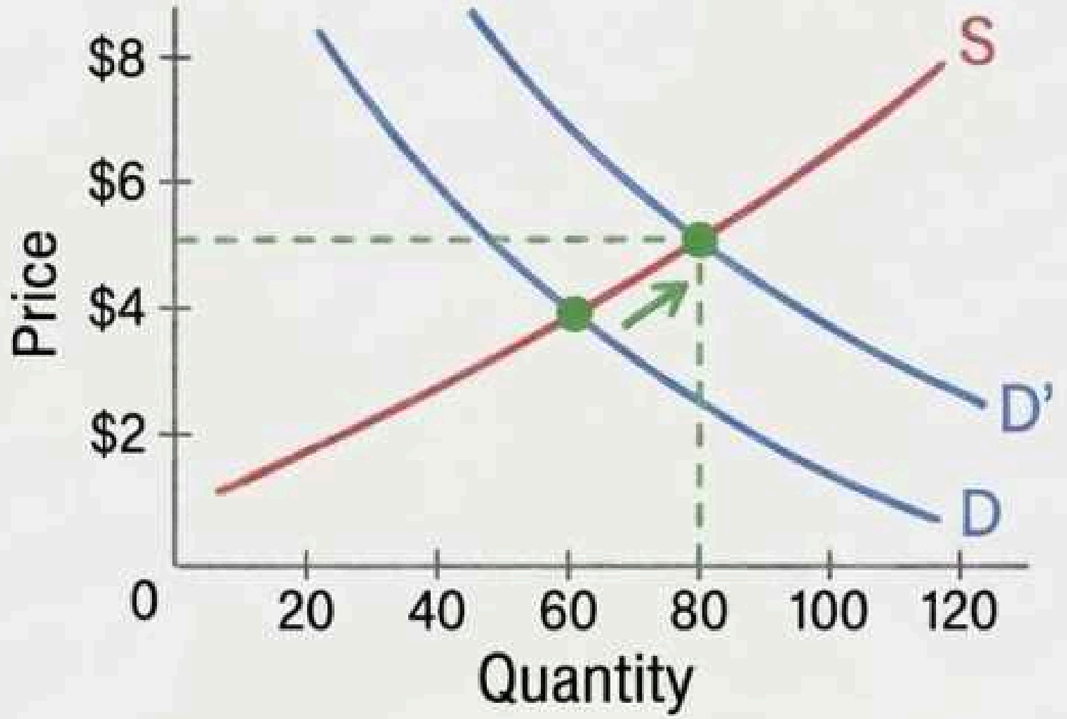


Hayek's Insight: Prices carry information that no single central planner could ever gather.

Moving the Equilibrium

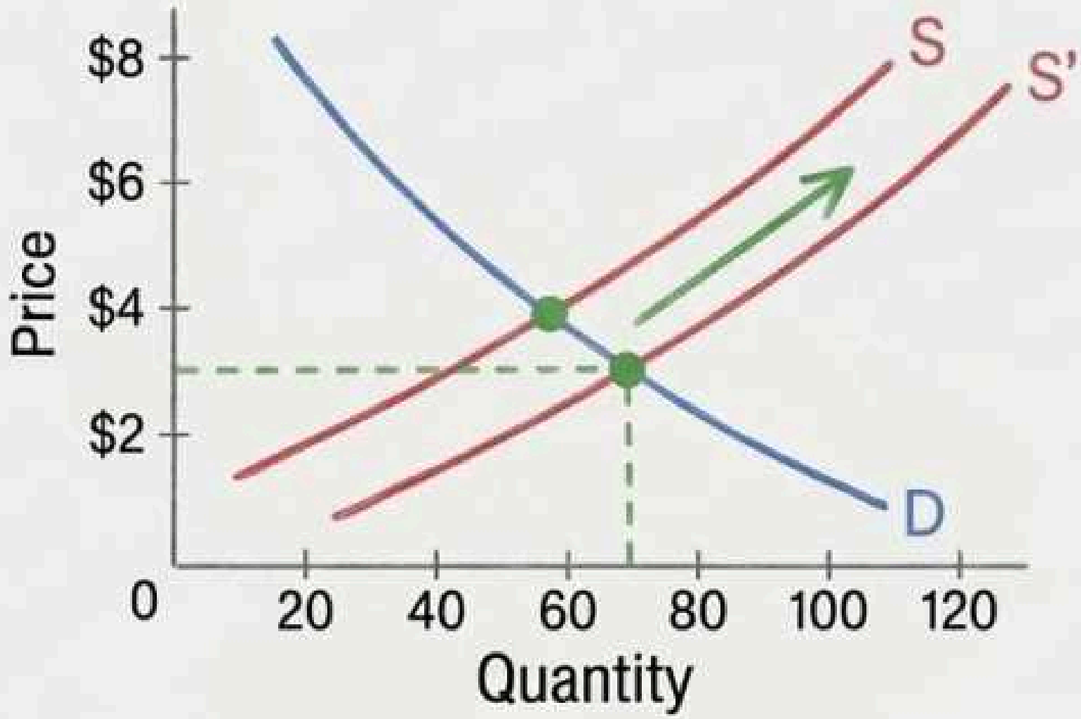
¶ 2.17 - 2.18

Demand Rises (e.g., students get more money):



Demand shifts right
→ Higher demand raises BOTH price ($5) and quantity (80).

Supply Rises (e.g., cheese gets cheaper):



Supply shifts right
→ Higher supply lowers price ($3) and raises quantity (70).

The Four Rules & Simultaneous Shifts

¶ 2.19 - 2.20

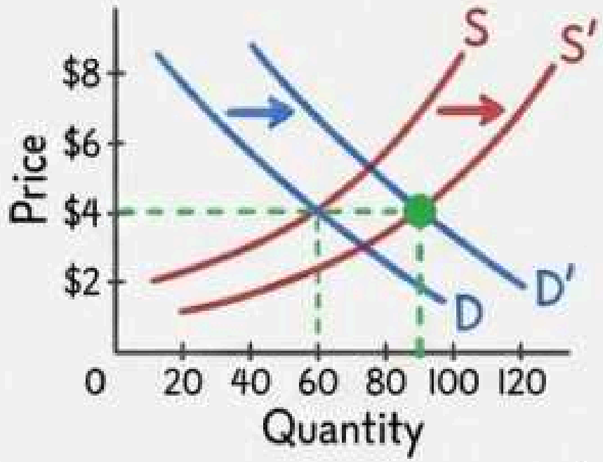
The Four Rules Matrix

Demand Rises:	Supply Rises:
Price ↑	Price ↓
Quantity ↑	Quantity ↑
Demand Falls:	**Supply Falls:**
Price ↓	Price ↑
Quantity ↓	Quantity ↓

Combined Math Case

Demand AND Supply both rise by 30.

- New Demand: $Q_d = 130 - 10P$
- New Supply: $Q_s = 20P + 10$



Set $Q_d = Q_s$:

$130 - 10P = 20P + 10 \rightarrow 120 = 30P \rightarrow P = \$4$

Find Q: $130 - 10(4) = 90$ slices

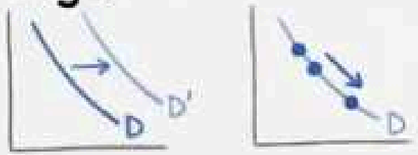
Conclusion: Quantity rises, but Price is unchanged (shifts were equal).

¶ 2.21

Beware of Three Mistakes

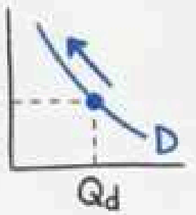
1. Shift vs. Movement

Do not confuse shifting the entire curve (external factor) with moving along an existing curve (price change).



2. Terminology

Do not say "demand fell" when a price rises.

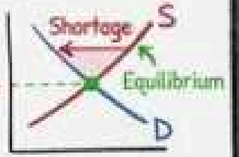


The correct term is that quantity demanded fell.

3. Temporary States

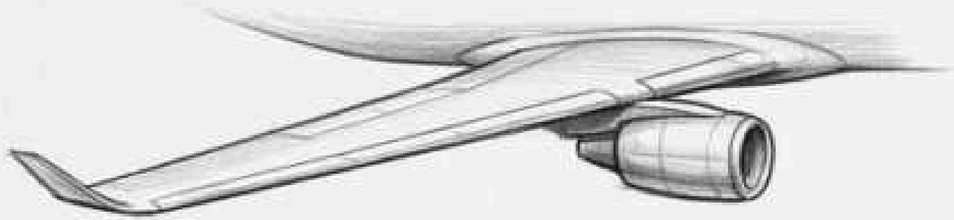
A shortage or surplus is a gap at one specific price, not a permanent state.

Where prices are free to move, markets tend to clear.

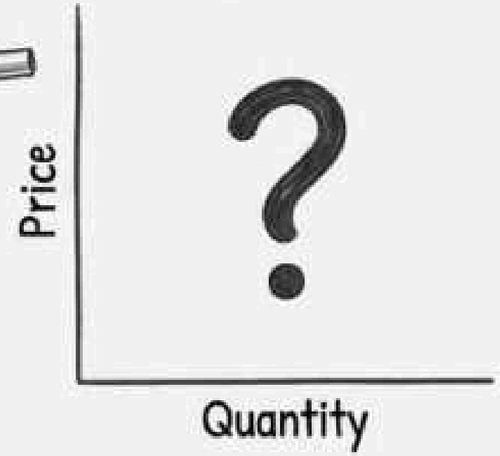


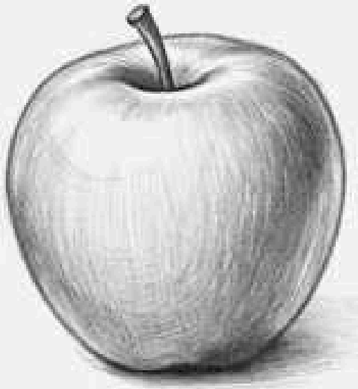
Application & Looking Ahead

¶ 2.22 - 2.23





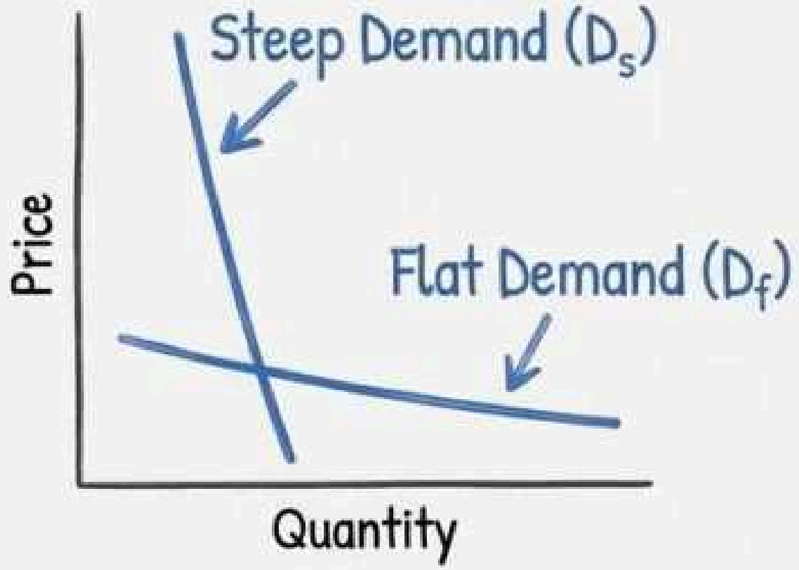




Homework: Think of a price you saw change recently (airfares, fuel, fruit).

1. Was it a shift in Demand, Supply, or both?
2. Draw the two curves and move the one that changed.
3. Does your drawing predict what actually happened?

Looking Ahead



Next Time (Lecture 3):

We know quantities change when prices move. But how strongly do buyers and sellers respond? Next, we measure this responsiveness (Elasticity).