


Individual Markets: *Demand & Supply*

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AP Economics
Montgomery High School*



MARKETS DEFINED



POTENTIAL BUYERS  POTENTIAL SELLERS

MARKETS



LAW OF SUPPLY

A direct relationship exists between price and quantity supplied

As Price Rises...

...Quantity Supplied Rises

As Price Falls...

...Quantity Supplied Falls



LAW OF DEMAND

An inverse relationship exists between price and quantity demanded

□ As Price Falls...

...Quantity Demanded Rises

□ As Price Rises...

...Quantity Demanded Falls



LAW OF DEMAND

Diminishing Marginal Utility



LAW OF DEMAND

- Diminishing Marginal Utility
 - **Income Effect**
-



LAW OF DEMAND

- **Diminishing Marginal Utility**
 - **Income Effect**
 - **Substitution Effect**
-



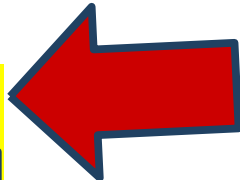
LAW OF DEMAND

- Diminishing Marginal Utility
 - Income Effect
 - Substitution Effect
 - **Demand Curve**
 - **Individual and Market Demand**
-

DEMAND DEFINED

DEMAND SCHEDULE

P	Q _D
\$5	10
4	20
3	30
2	55
1	80



Various Amounts



A Series of Possible Prices

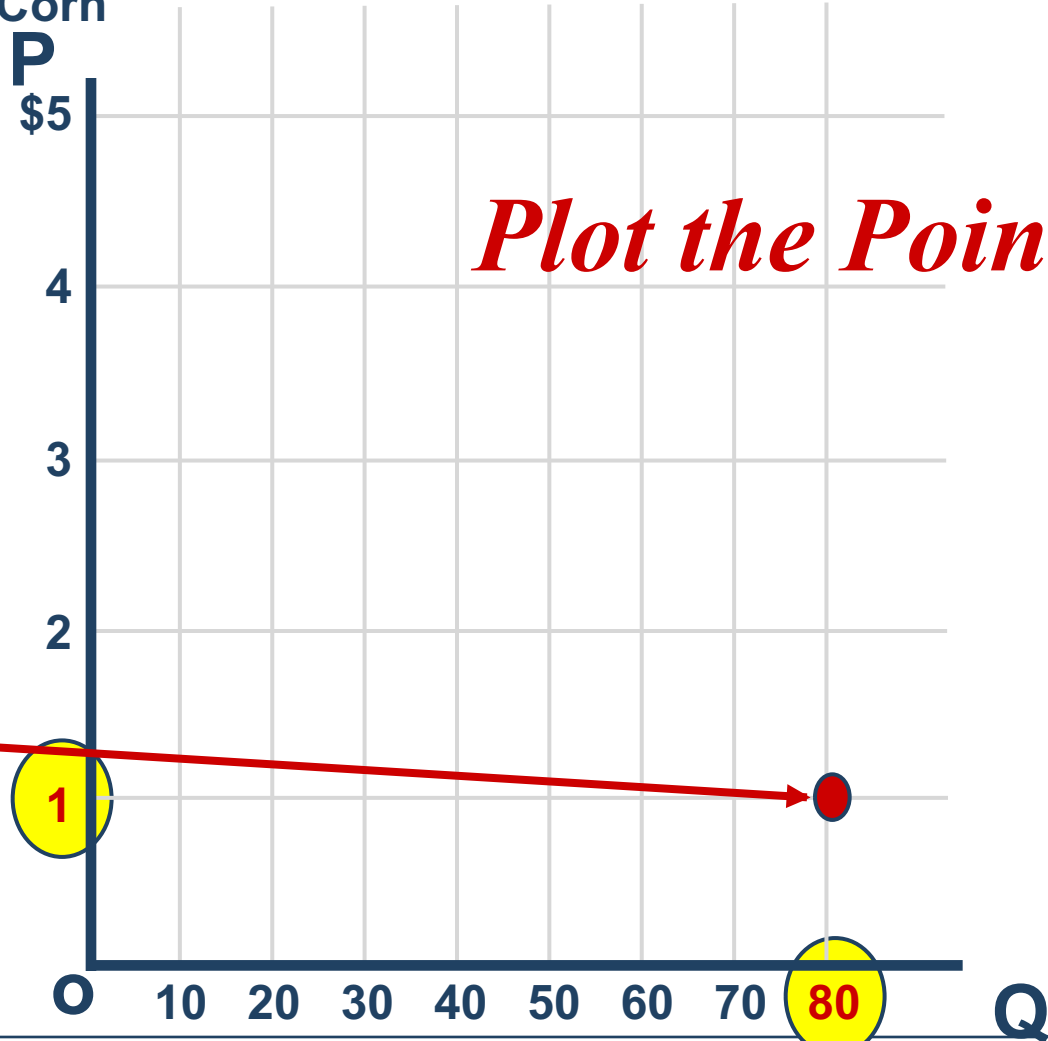
...a specified time period

...other things being equal

GRAPHING DEMAND

Price of Corn

CORN P	Q _D
\$5	10
4	20
3	35
2	55
1	80

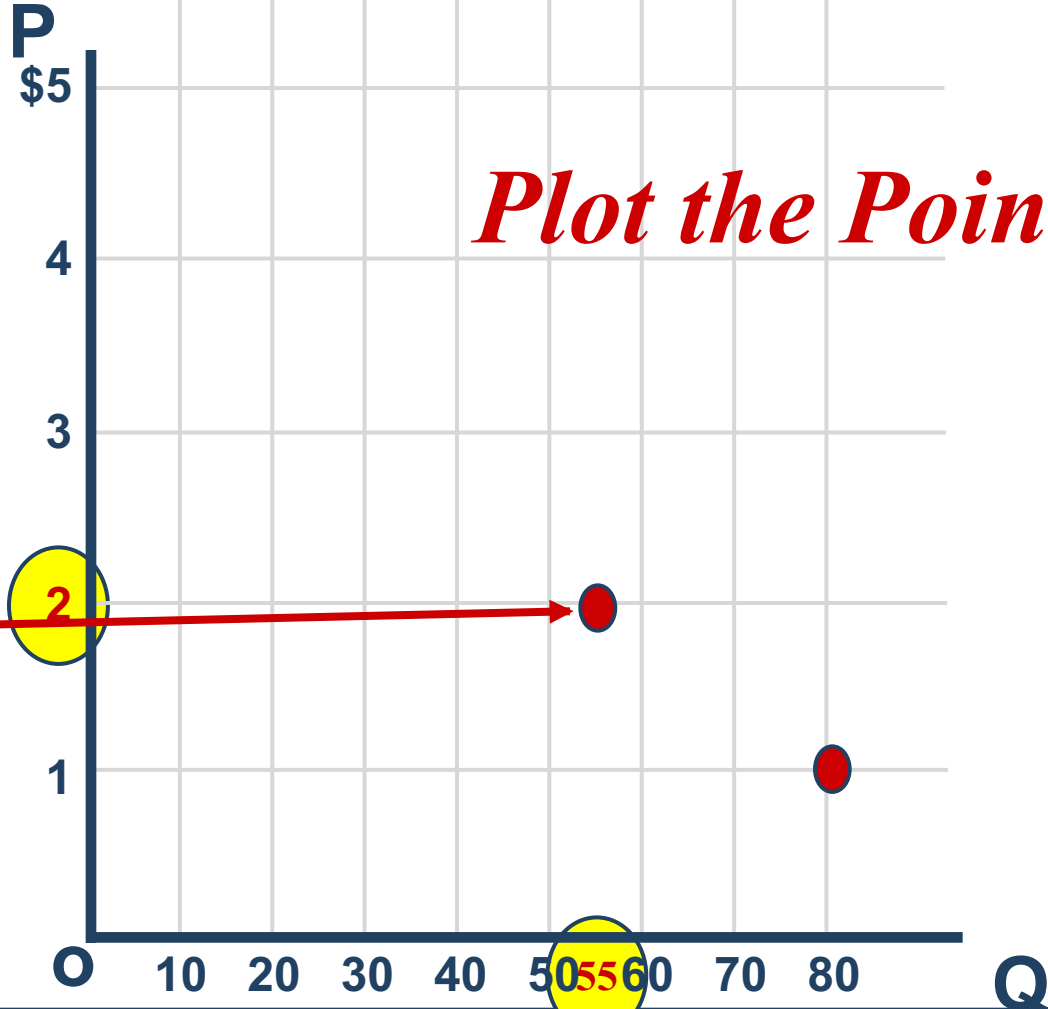


Quantity of Corn

GRAPHING DEMAND

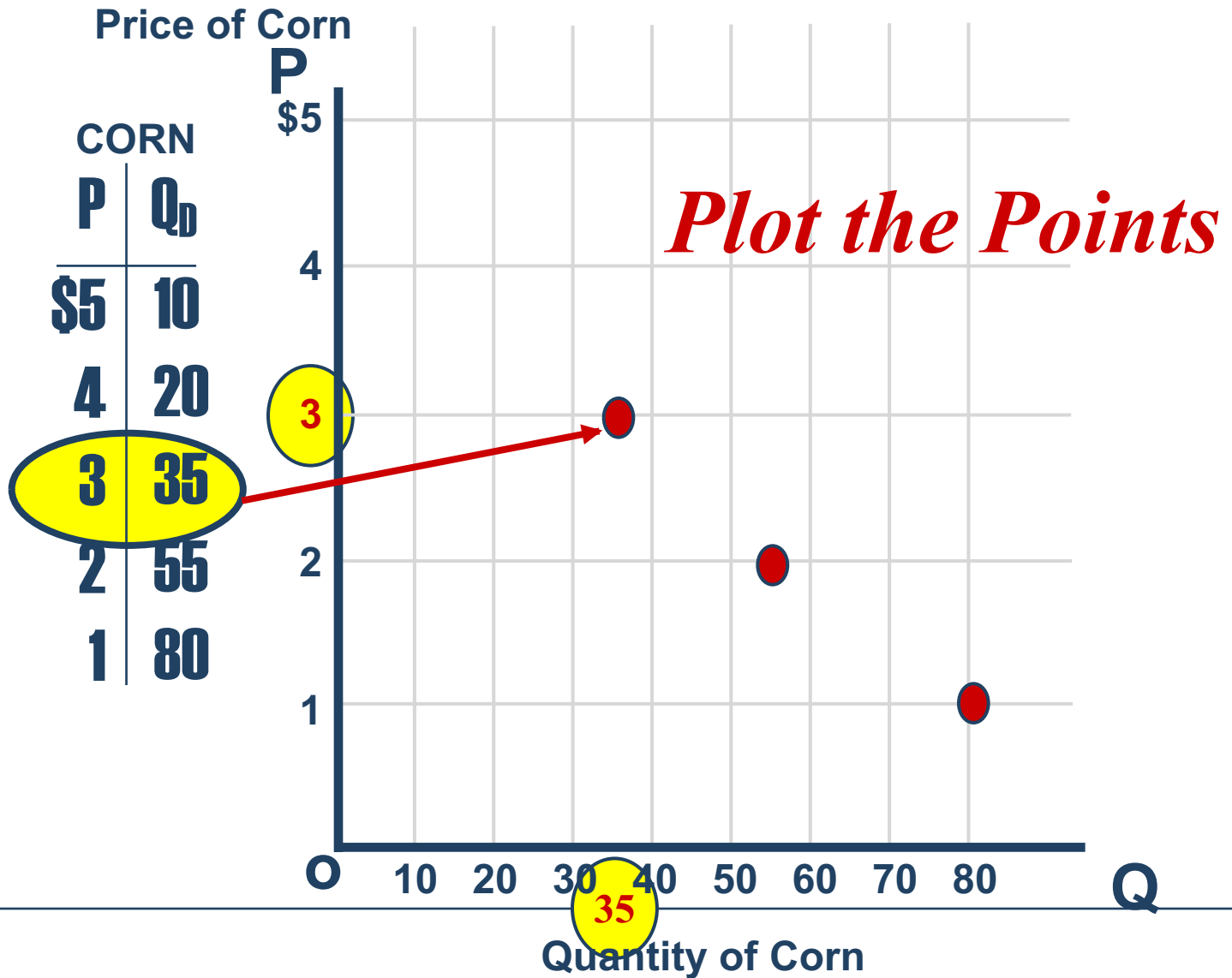
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CORN P	Q _D
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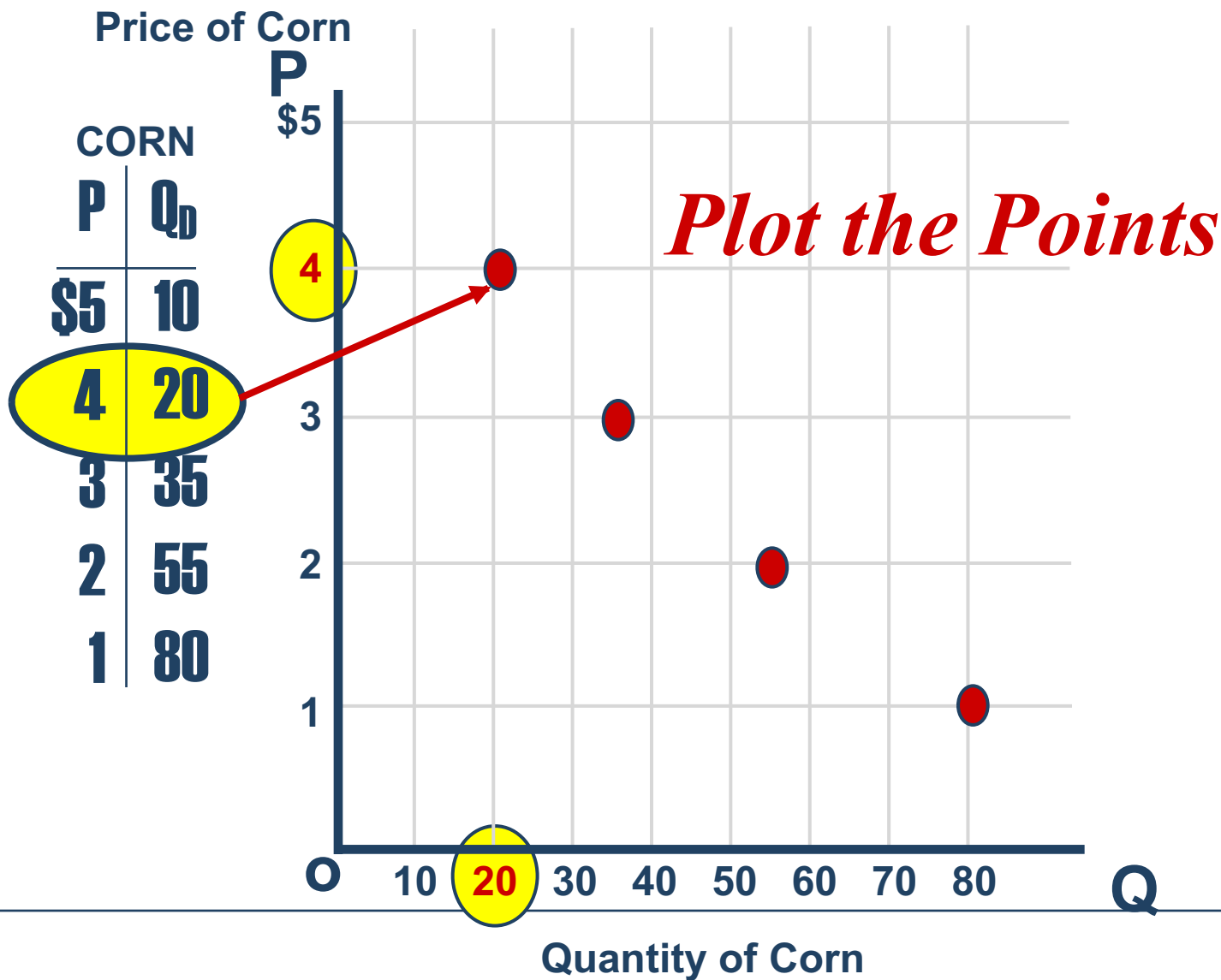


Quantity of Corn

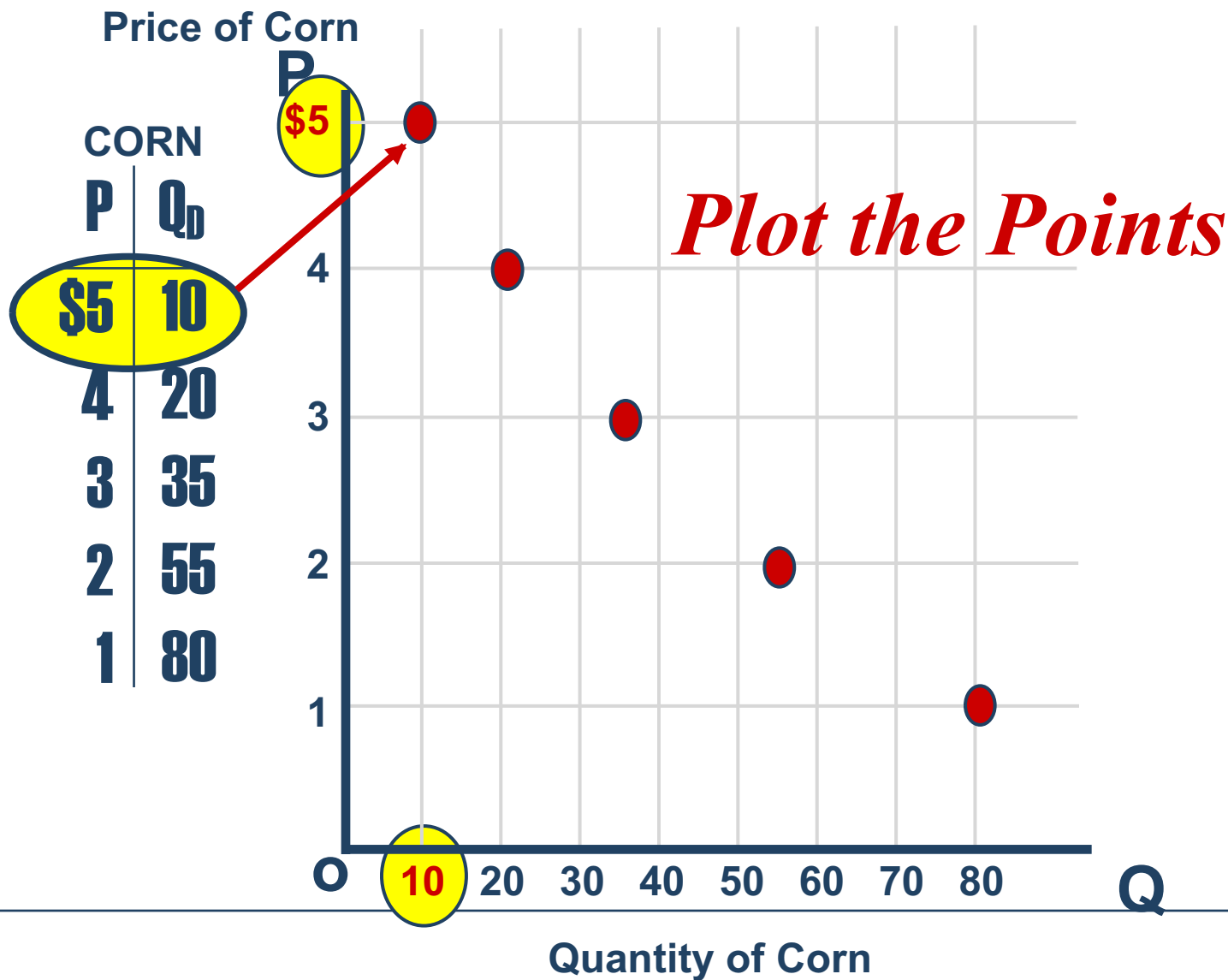
GRAPHING DEMAND



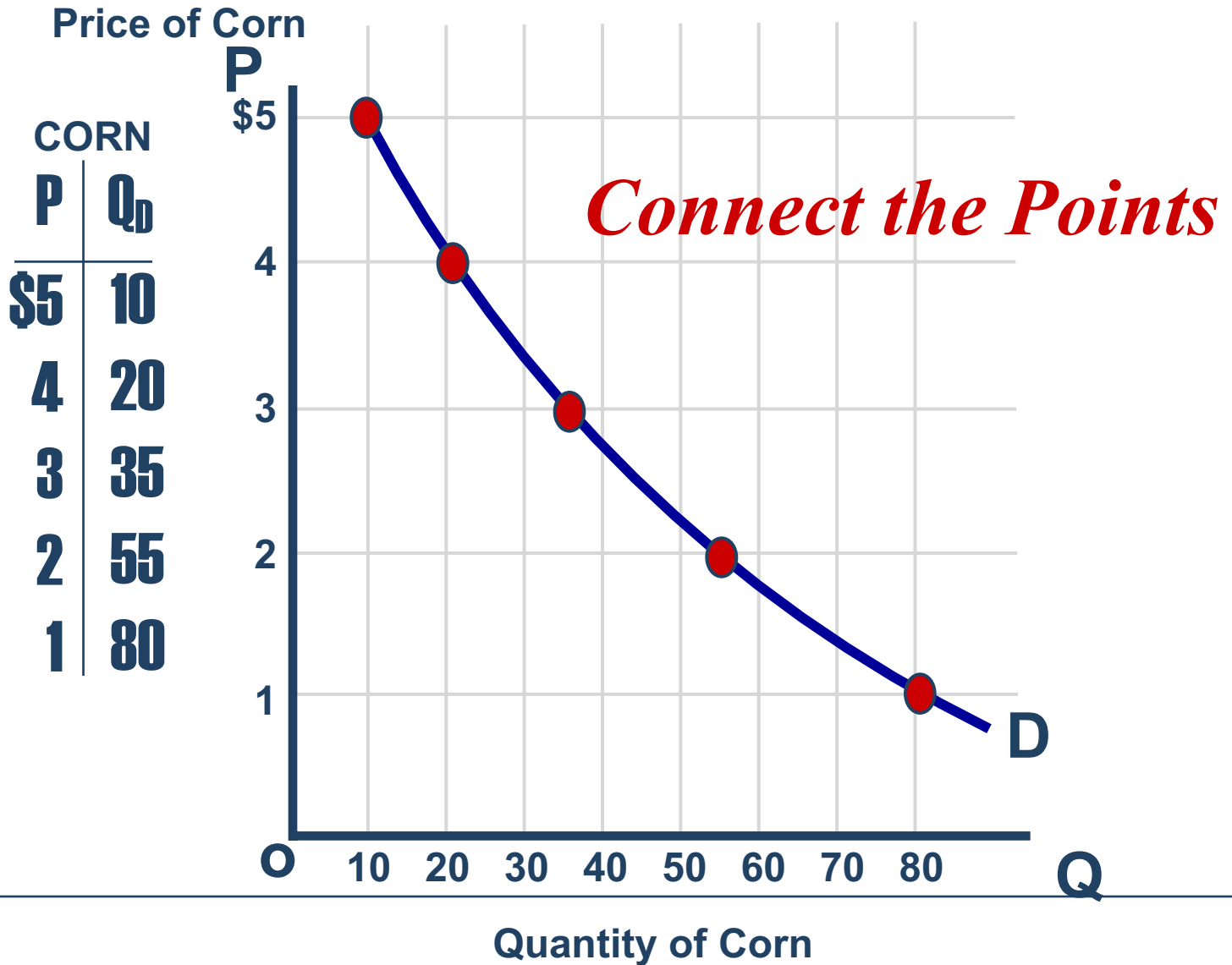
GRAPHING DEMAND



GRAPHING DEMAND



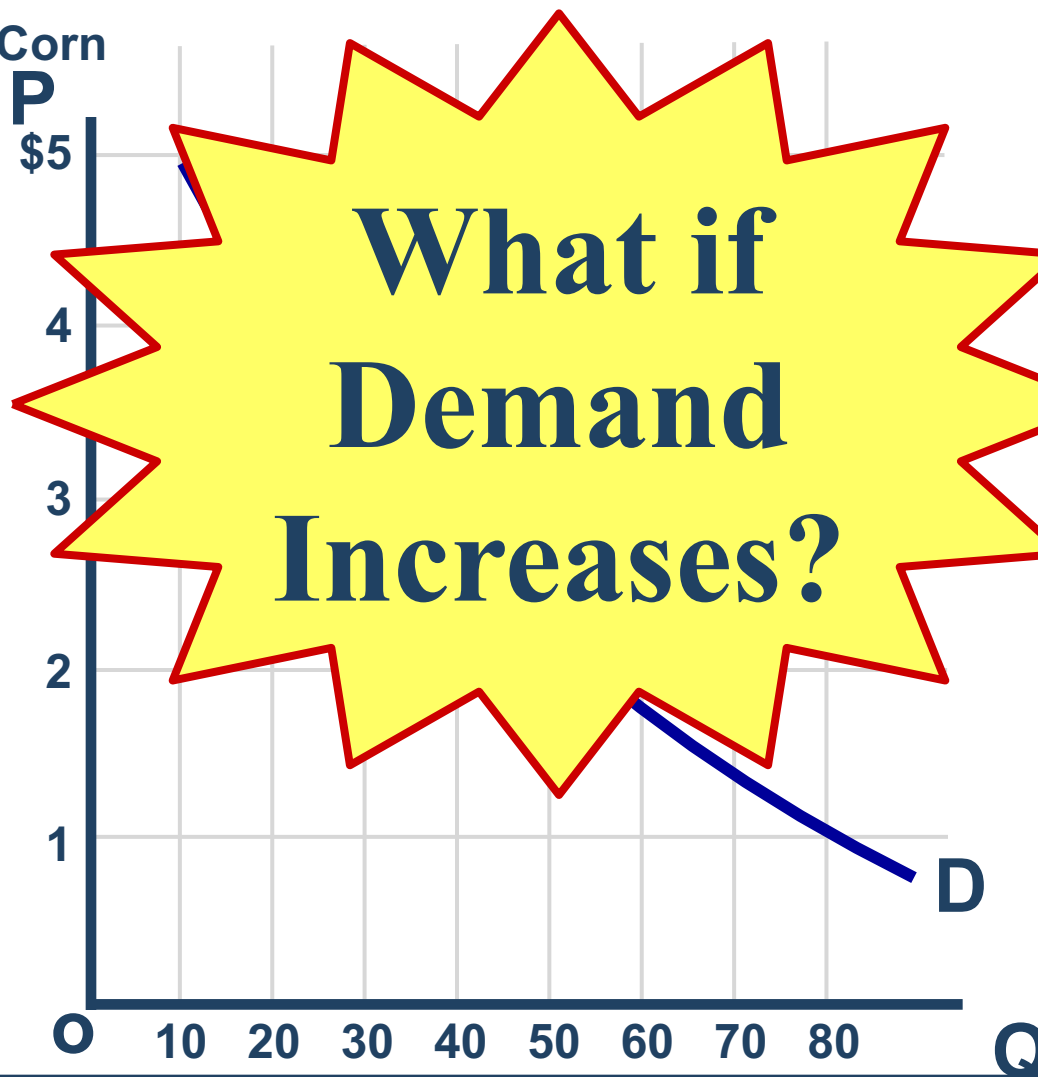
GRAPHING DEMAND



GRAPHING DEMAND

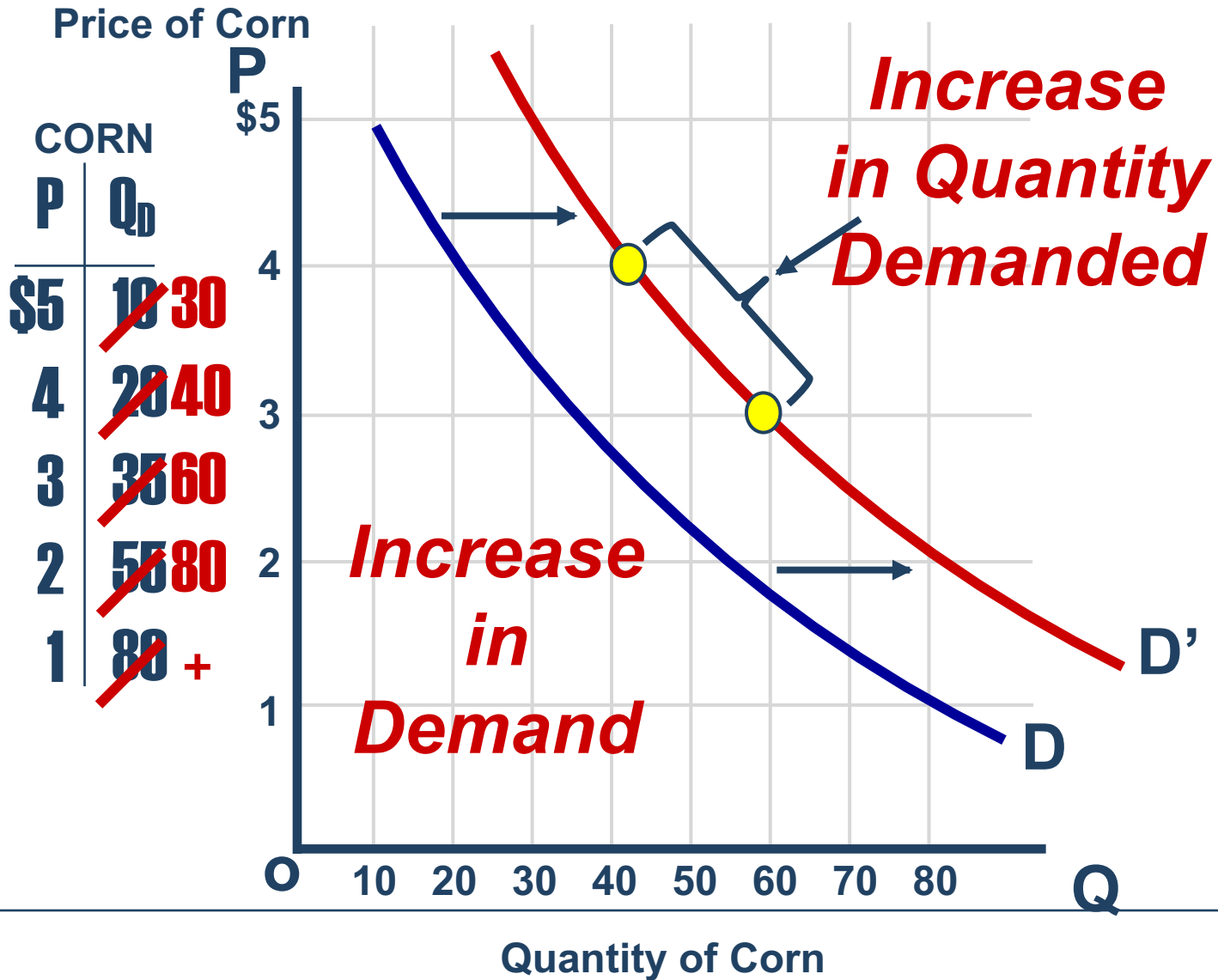
Price of Corn

CORN P	Q _D
\$5	10
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2	55
1	80



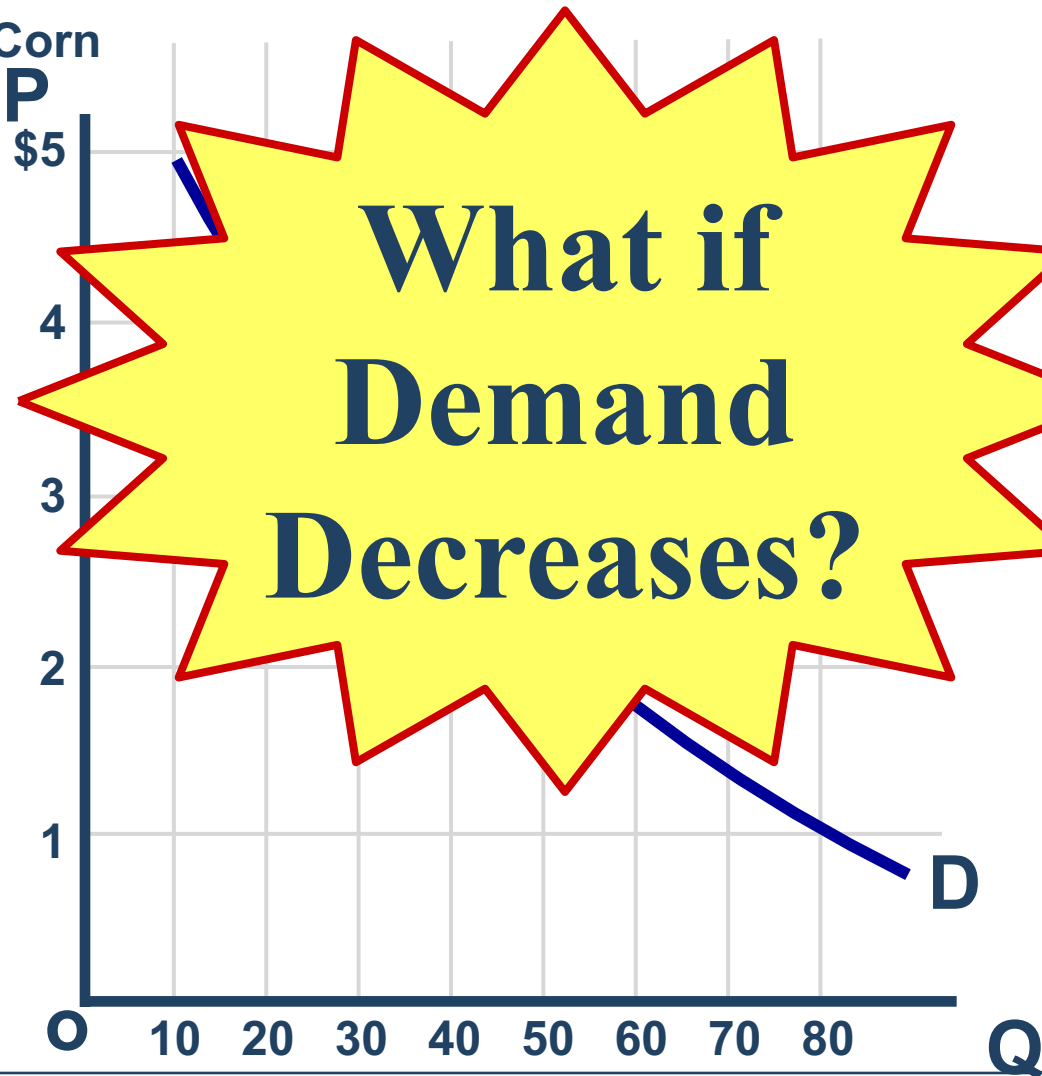
Quantity of Corn

GRAPHING DEMAND



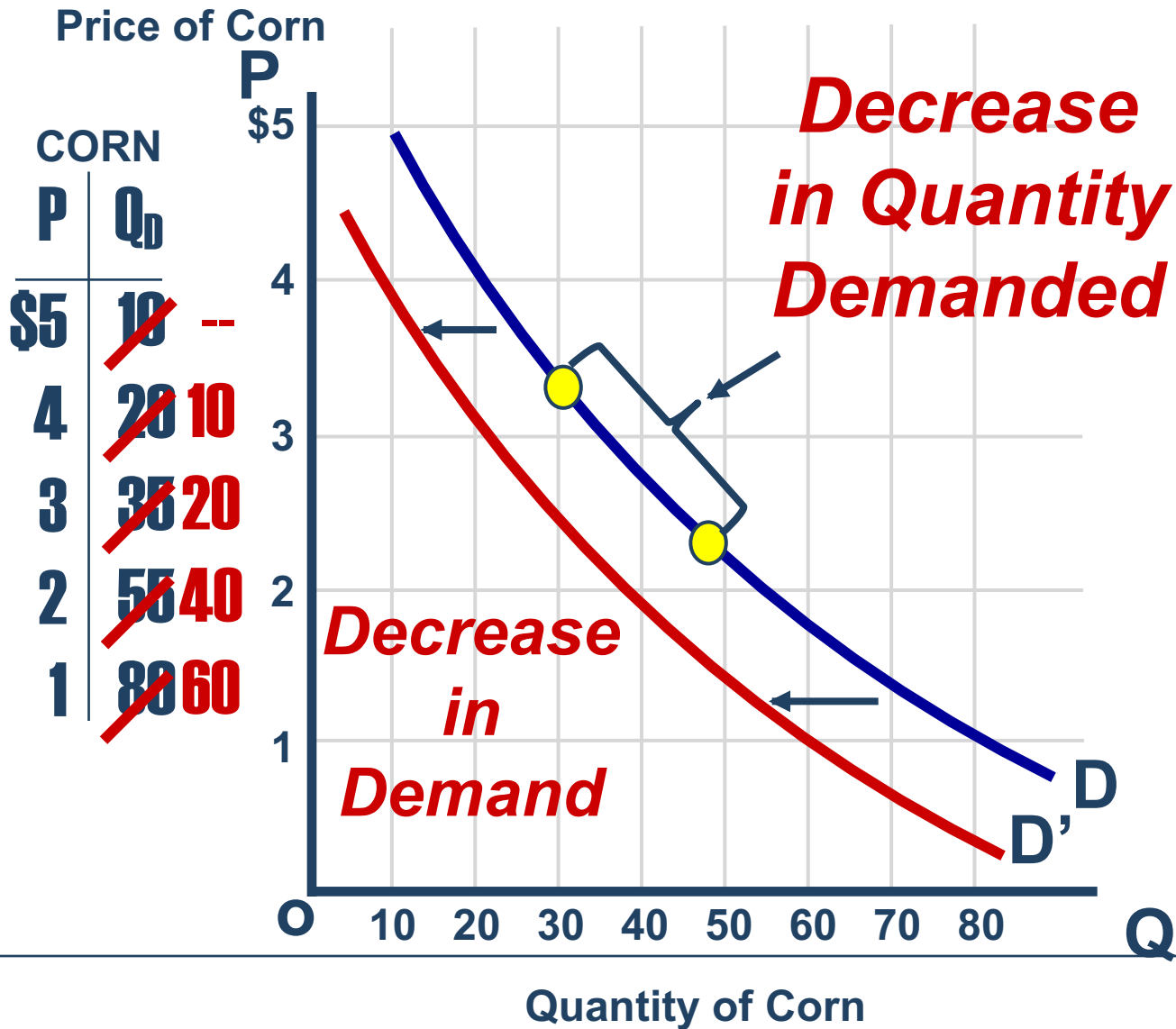
GRAPHING DEMAND

CORN	
P	Q _D
\$5	10
4	20
3	35
2	55
1	80



Quantity of Corn

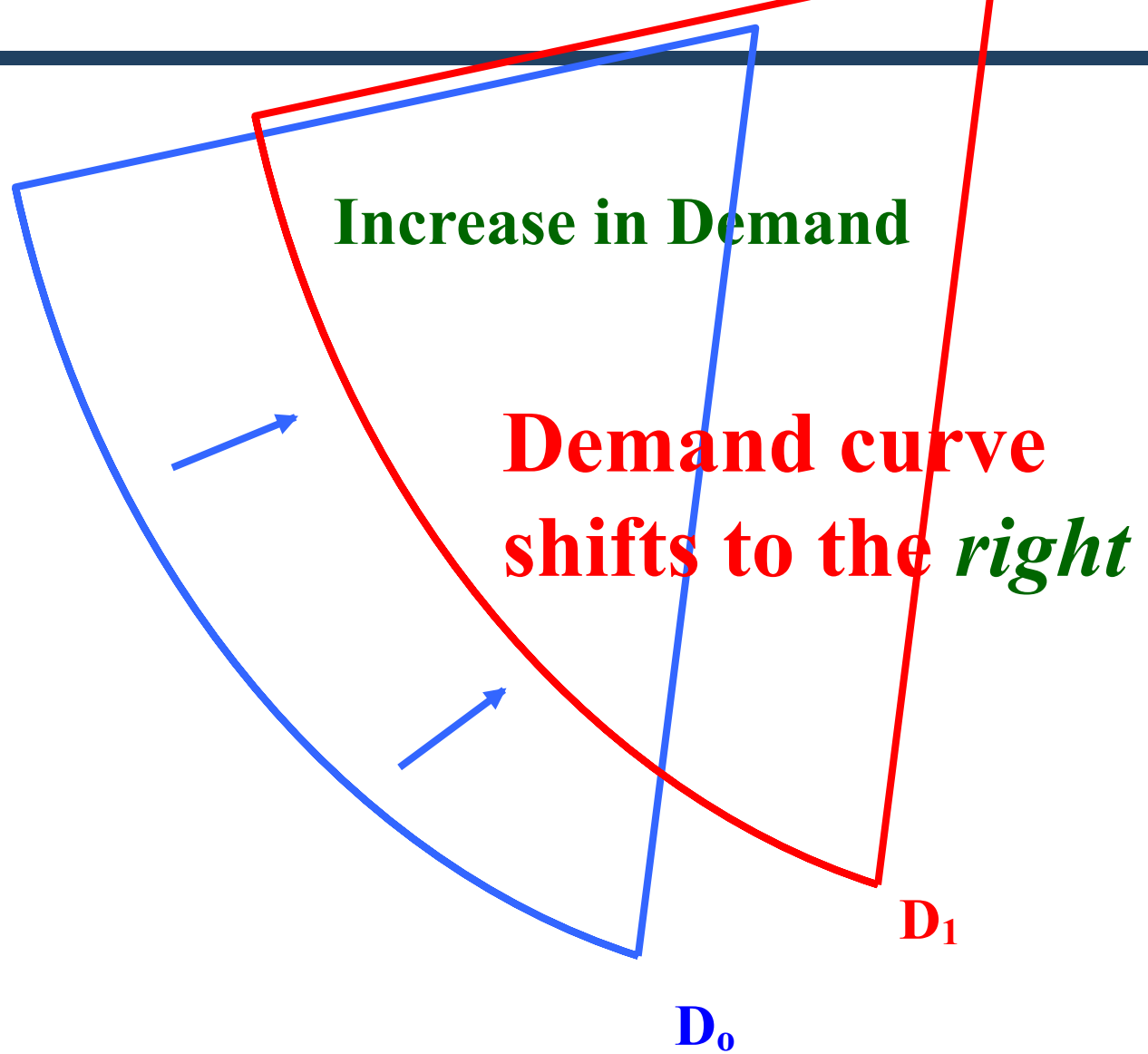
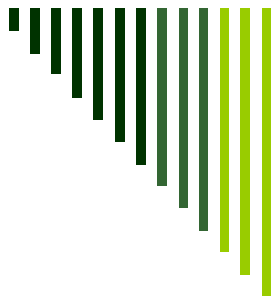
GRAPHING DEMAND

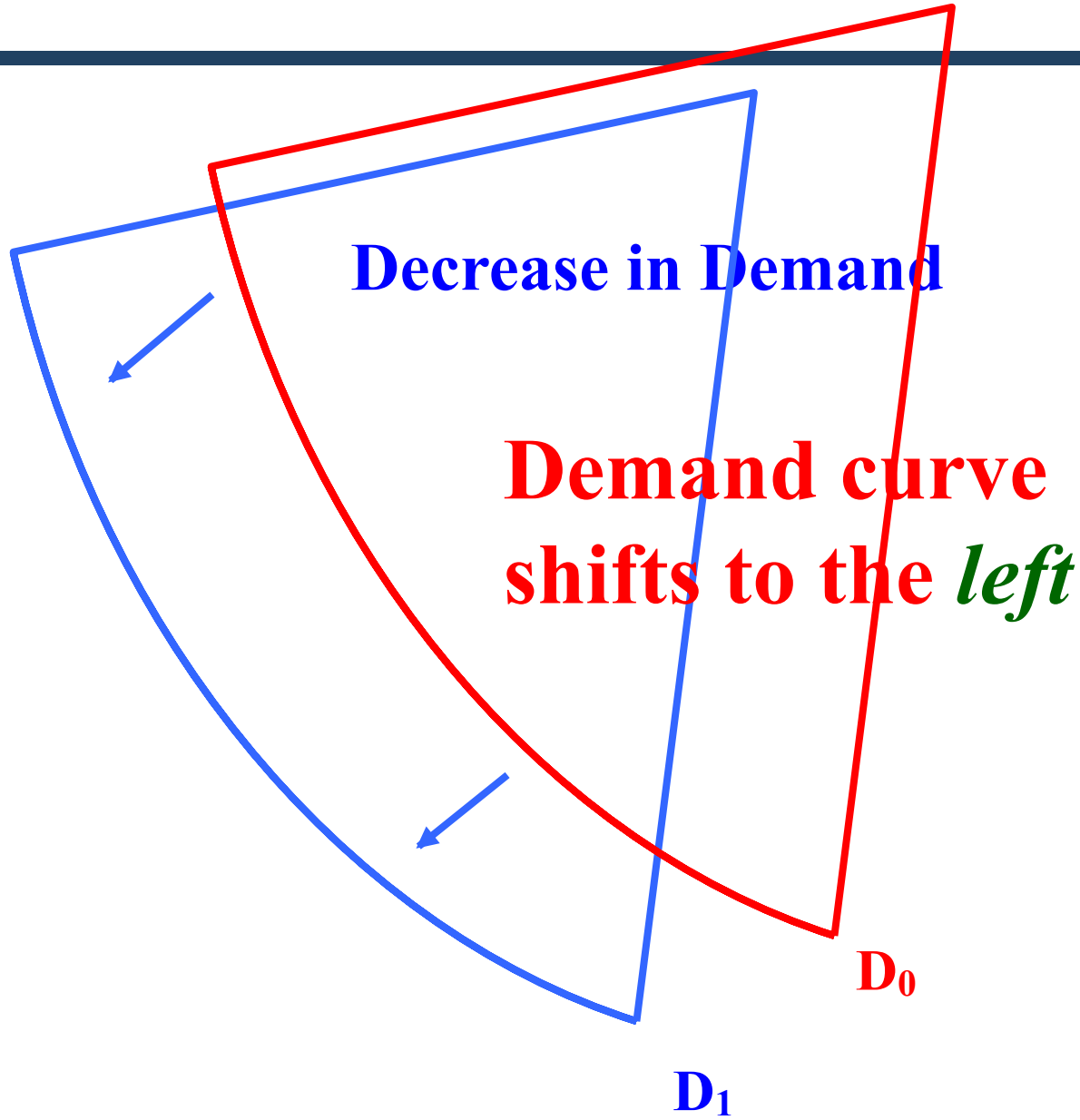
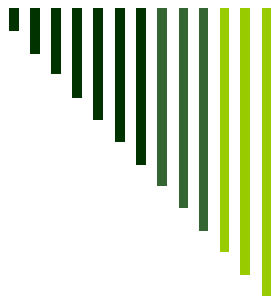




Change in Demand

- **Changes in Demand...shift in the curve**
 - Increase in demand - demand curve shifts to the *right*
 - Decrease in demand - demand curve shifts to the *left*
-

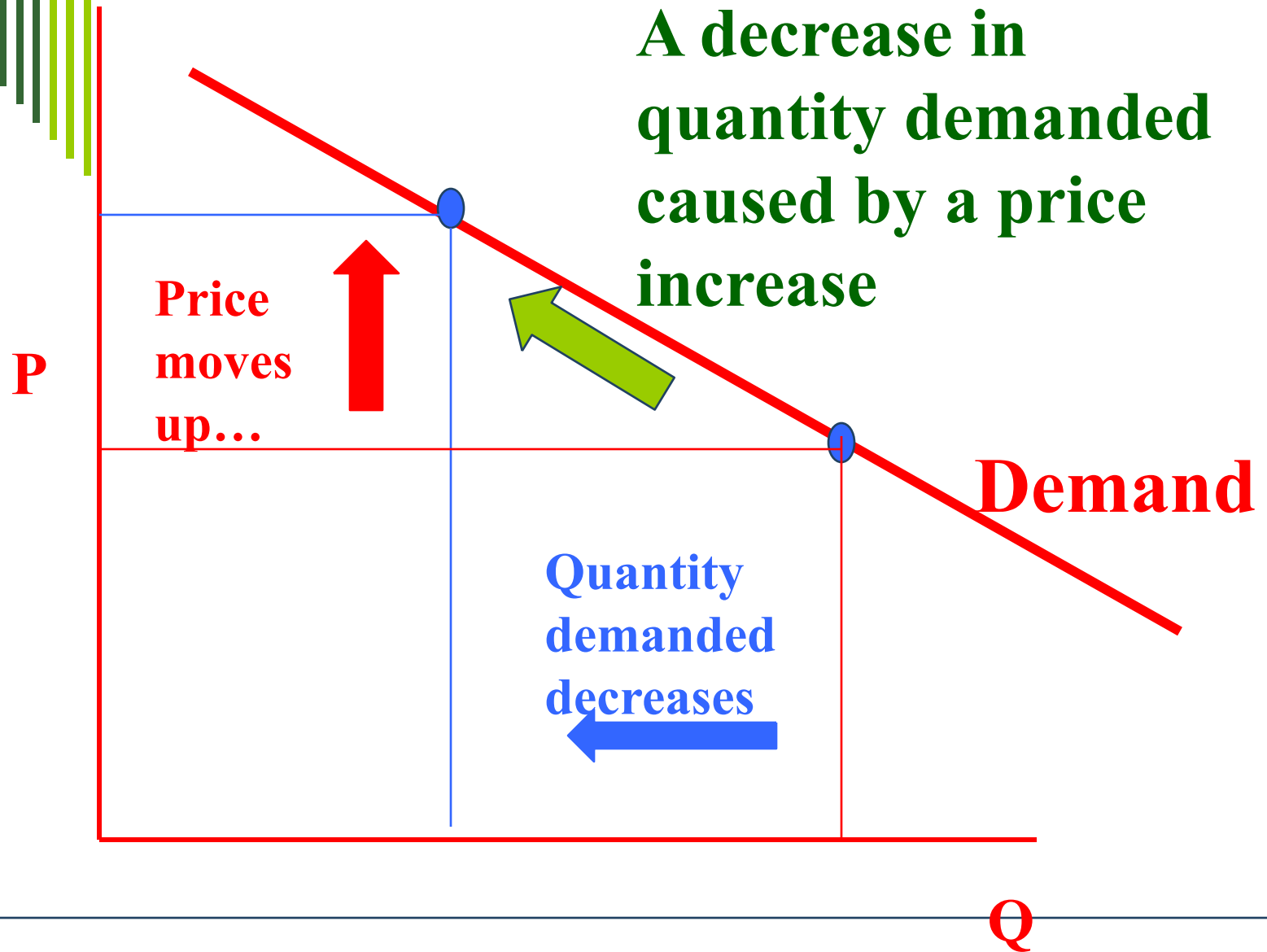
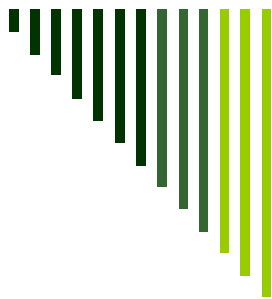


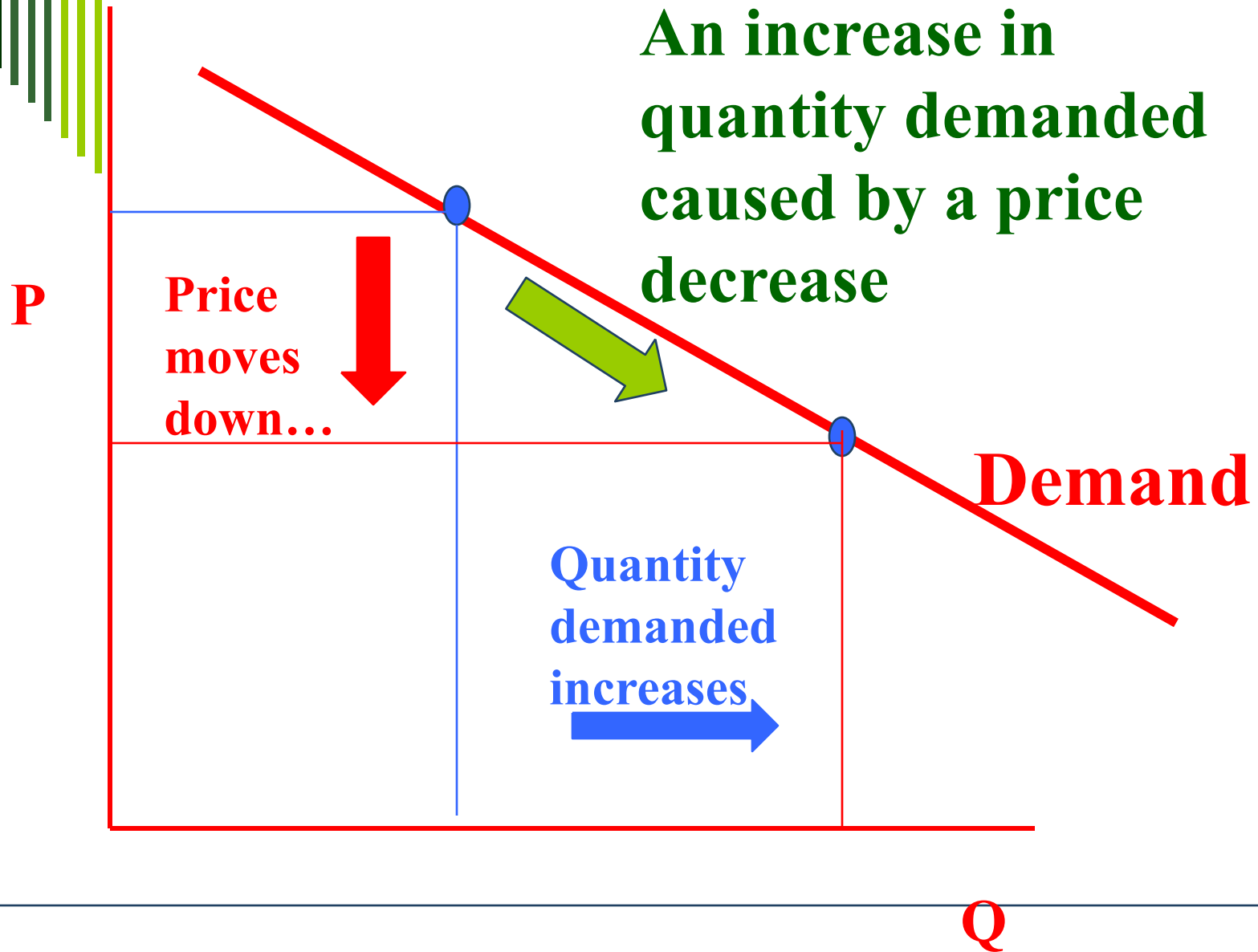
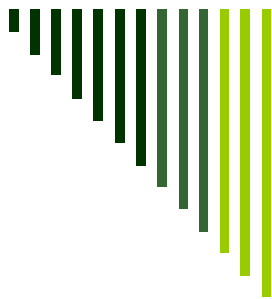




Change in Quantity Demanded

- Change in Quantity Demanded (ΔQ_d) - is *movement* along a demand curve
 - Changes in quantity demanded can *only* be caused by a change in the price of the good.
 - ⑩ Increase in Q_d - a movement to the right along a demand curve
 - ⑩ Decrease in Q_d - a movement to the left along a demand curve
-







DETERMINANTS OF DEMAND

- **Tastes**

- **Number of Buyers**

- **Income**

 - *Normal (Superior) & Inferior Goods*

- **Prices of Related Goods**

 - *Substitutes & Complements*

 - *Unrelated Goods*

- **Expectations**



Exceptions to the Law of Demand

- Giffen Goods
 - Goods whose quality is judged by price
 - Goods with snob appeal
-



Determinants of Demand: Factors That Shift the Demand Curve

Determinant	Examples
Change in buyer tastes	Physical fitness rises in popularity, increasing the demand for jogging shoes and bicycles; patriotism rises, increasing the demand for flags.
Change in number of buyers	A decline in the birthrate reduces the demand for children's toys.
Change in income	A rise in incomes increases the demand for normal goods such as donuts, sports tickets, and necklaces while reducing the demand for inferior goods such as cabbage, turnips, and inexpensive wine.
Change in the prices of related goods	A reduction in airfares reduces the demand for bus transportation (substitute goods); a decline in the price of DVD players increases the demand for DVD movies (complementary goods).
Change in expectations	Inclement weather in South America creates an expectation of higher future prices of coffee beans, thereby increasing the demand for coffee beans.



DO NOW w/ whiteboards and a Partner

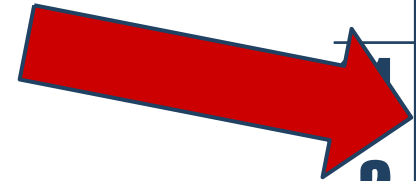
- Demonstrate a properly labeled S/D graph.
 - Demonstrate a decrease in Q_d
 - Demonstrate an increase in Demand
-

SUPPLY DEFINED

SUPPLY SCHEDULE

Various Amounts

CORN	
P	Q _s
1	5
2	20
3	35
4	50
5	60



SUPPLY DEFINED

SUPPLY SCHEDULE

Various Amounts

A Series of Possible Prices

CORN	
P	Q _s
\$1	5
2	20
3	35
4	50
5	60



...a specified time period

...other things being equal



LAW OF SUPPLY

A direct relationship exists between price and quantity supplied

As Price Rises...

...Quantity Supplied Rises

As Price Falls...

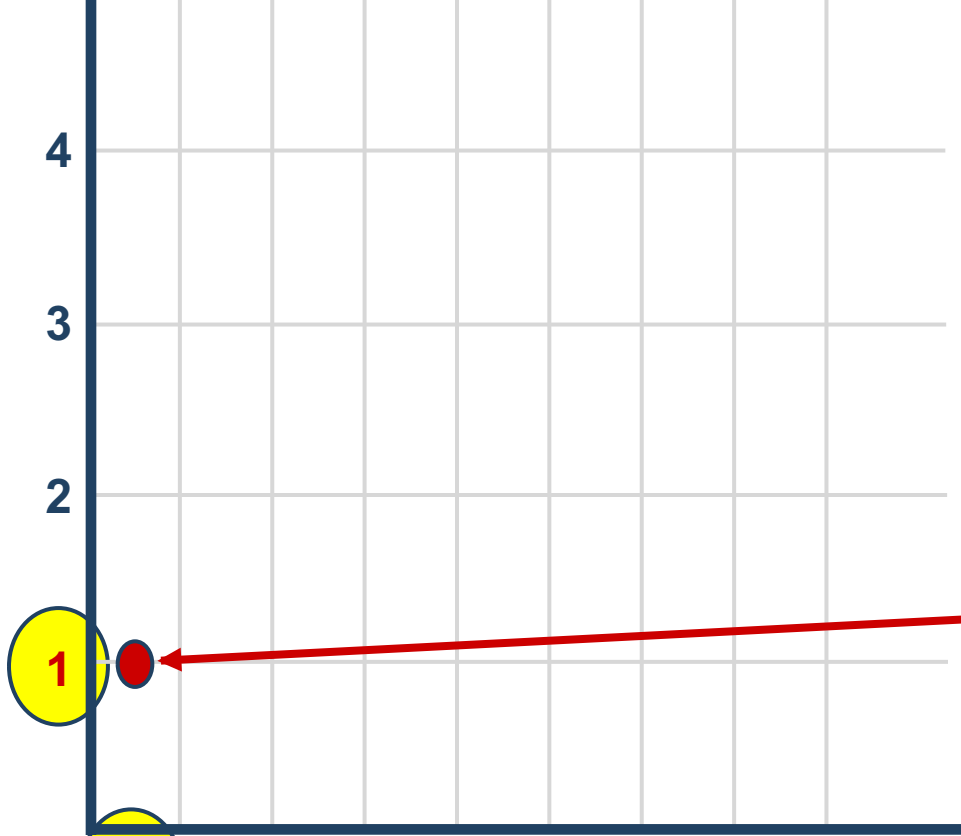
...Quantity Supplied Falls

GRAPHING SUPPLY

Price of Corn

P
\$5

Plot the Points



CORN	
P	Q _s
\$5	60
4	50
3	35
2	20
1	5

1

5

Q

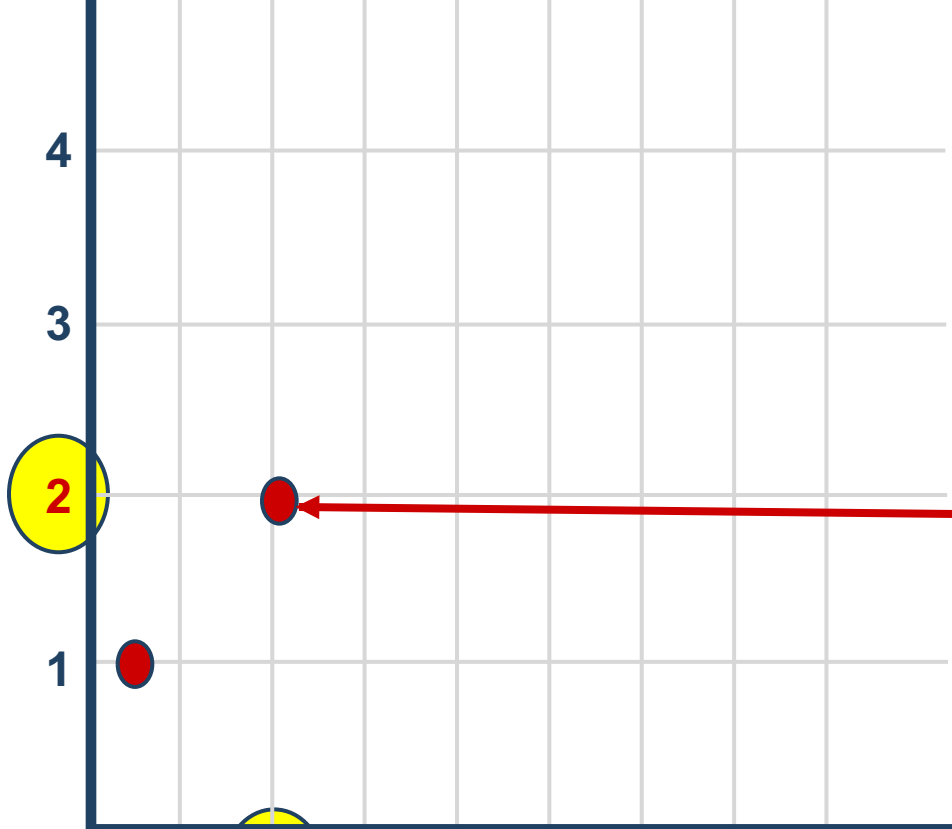
Quantity of Corn

GRAPHING SUPPLY

Price of Corn

P
\$5

Plot the Points



CORN

P	Q _s
---	----------------

\$5	60
-----	----

4	50
---	----

3	35
---	----

2	20
---	----

1	5
---	---

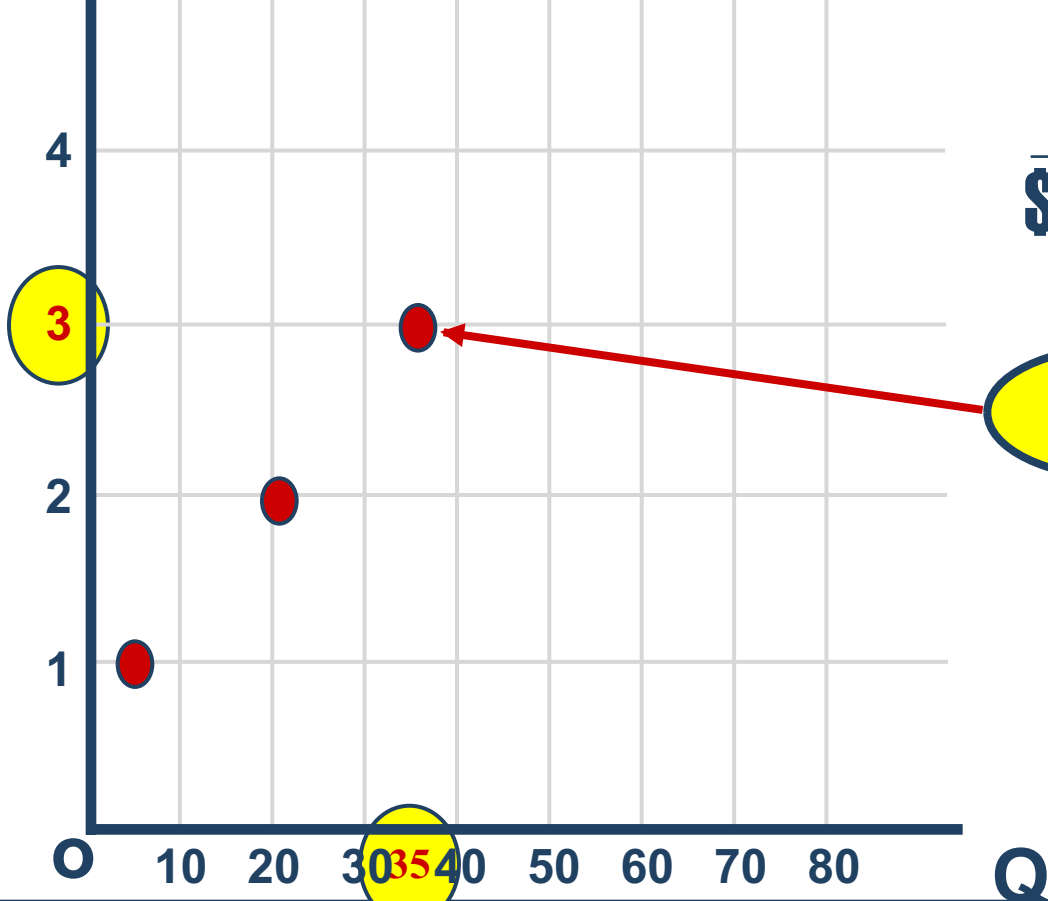
Quantity of Corn

GRAPHING SUPPLY

Price of Corn

P
\$5

Plot the Points



CORN

P | Q_s

\$5 | 60

4 | 50

3 | 35

2 | 20

1 | 5

O

10

20

30

40

50

60

70

80

Q

Quantity of Corn

GRAPHING SUPPLY

Price of Corn

P
\$5

Plot the Points

4

3

2

1

O

10

20

30

40

50

60

70

80

Q

CORN
P | Q_s

\$5 | 60

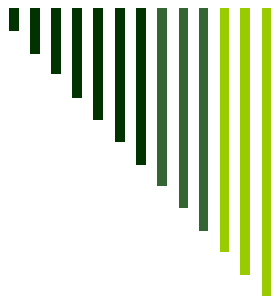
4 | 50

3 | 35

2 | 20

1 | 5

Quantity of Corn



4

4 | 50

GRAPHING SUPPLY

Price of Corn

P
\$5

Plot the Points

4

3

2

1

O

10

20

30

40

50

60

70

80

Q

CORN

P | **Q_s**

\$5 | **60**

4 | 50

3 | 35

2 | 20

1 | 5

Quantity of Corn



GRAPHING SUPPLY

Price of Corn

P

\$5

4

3

2

1

O

10

20

30

40

50

60

70

80

Q

S

CORN

P	Q _s
---	----------------

\$5	60
-----	----

4	50
---	----

3	35
---	----

2	20
---	----

1	5
---	---

Connect the Points

Quantity of Corn

GRAPHING SUPPLY

Price of Corn

P
\$5

CORN
P Q_s

60

50

35

20

10

**What if
Supply
Increases?**

O

10

20

30

40

50

60

70

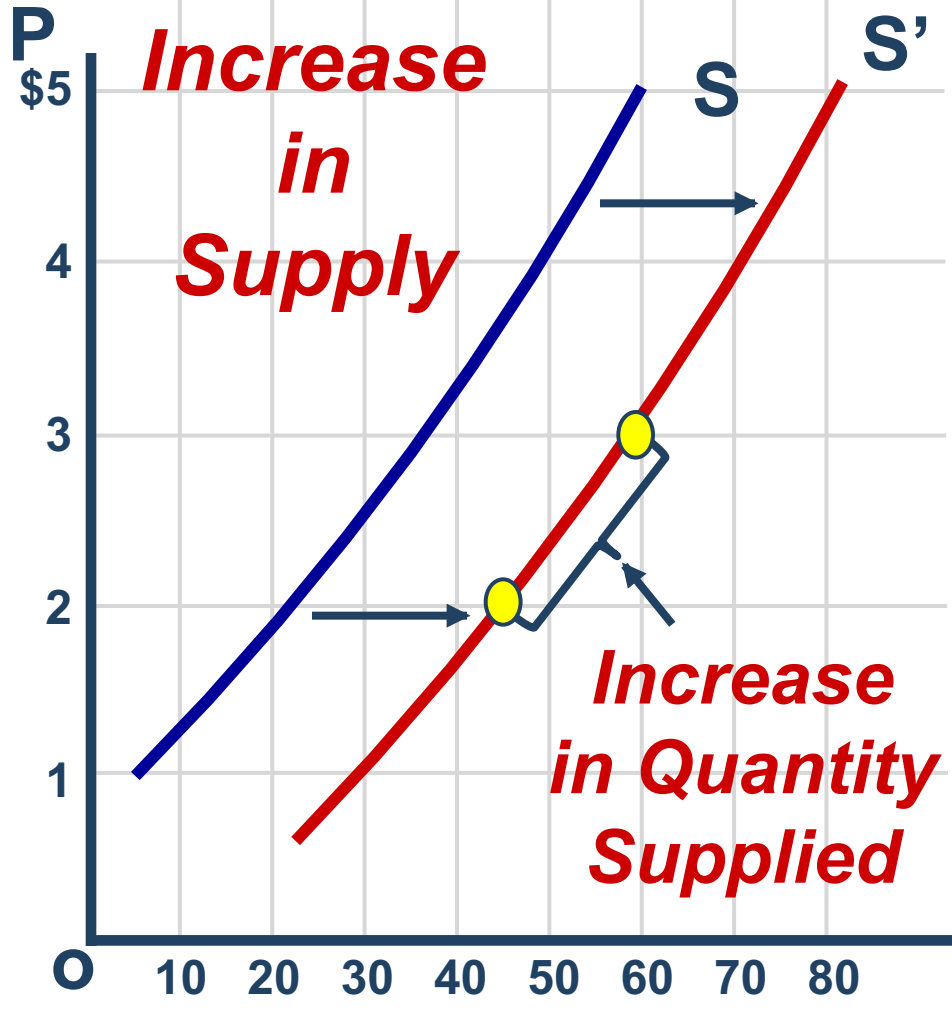
80

Q

Quantity of Corn

GRAPHING SUPPLY

Price of Corn



**Increase
in
Supply**

**Increase
in Quantity
Supplied**

CORN P	Q _s
\$5	60 80
4	50 70
3	35 60
2	20 45
1	5 30

Quantity of Corn

GRAPHING SUPPLY

Price of Corn

P
\$5

CORN
P Q_s

60

50

35

20

5

**What if
Supply
Decreases?**

O

10

20

30

40

50

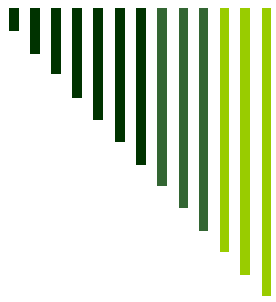
60

70

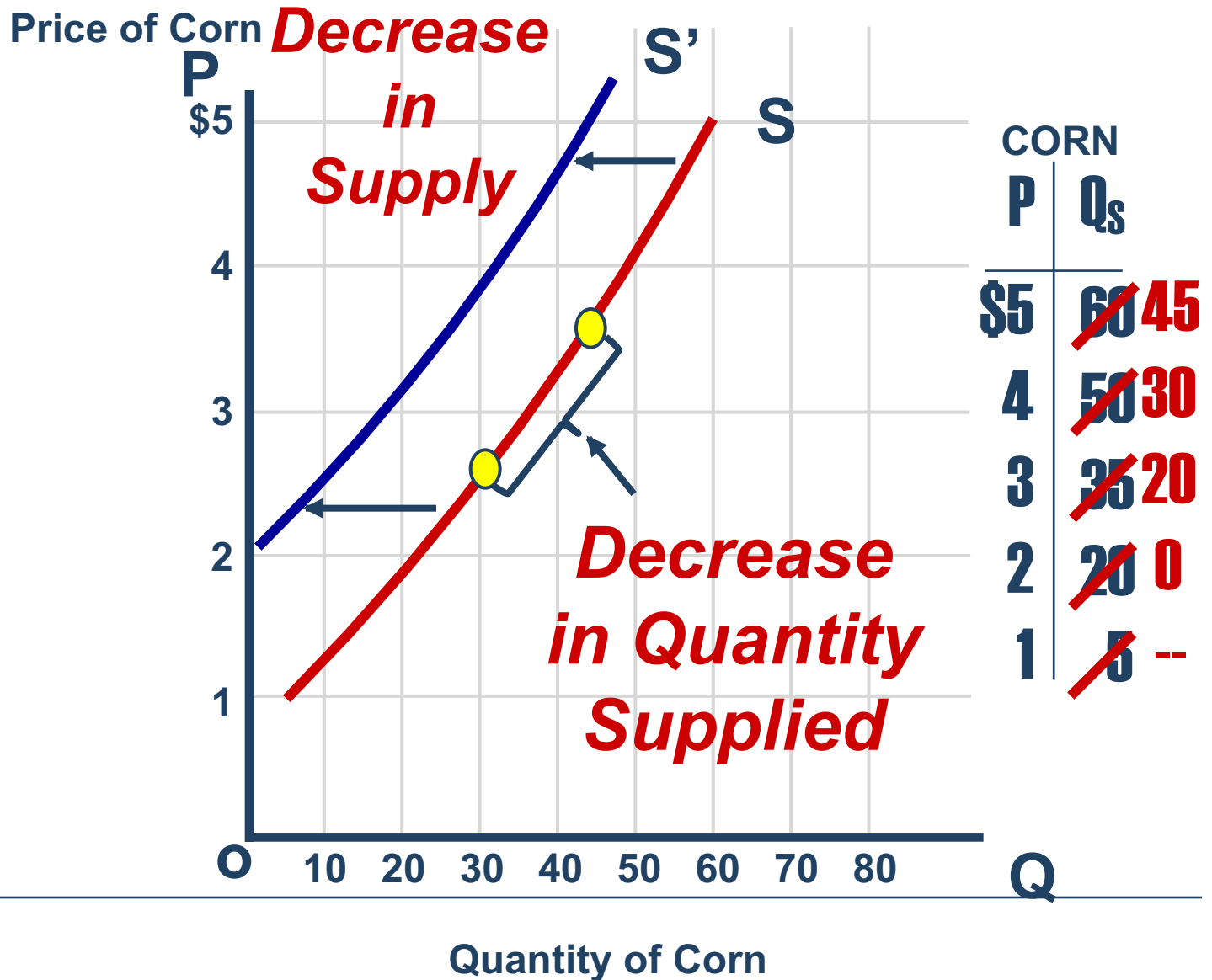
80

Q

Quantity of Corn



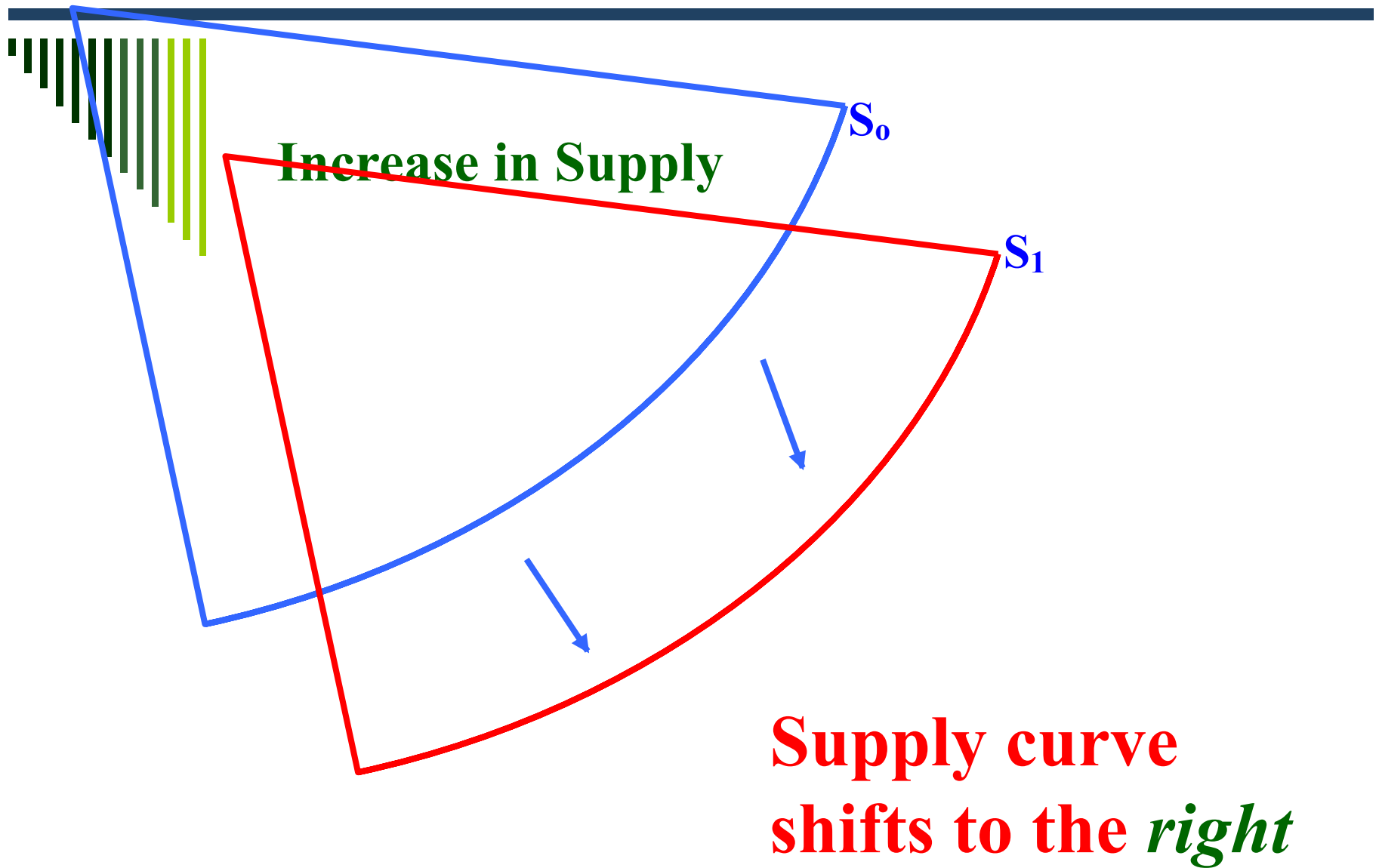
GRAPHING SUPPLY

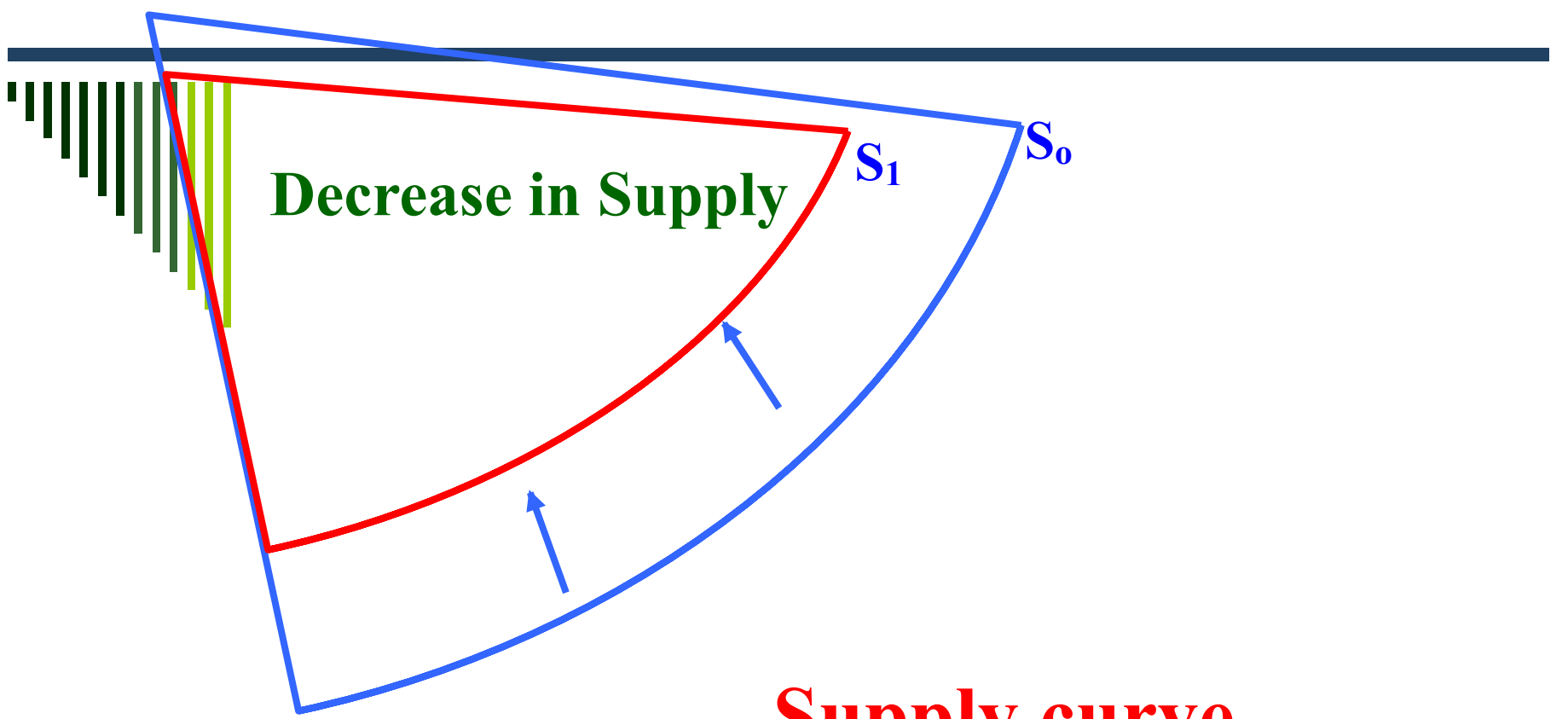




Change in Supply

- **Changes in Supply...shift in the curve**
 - **Increase in supply - supply curve shifts to the *right***
 - **Decrease in supply - supply curve shifts to the *left***
-





**Supply curve
shifts to the *left***



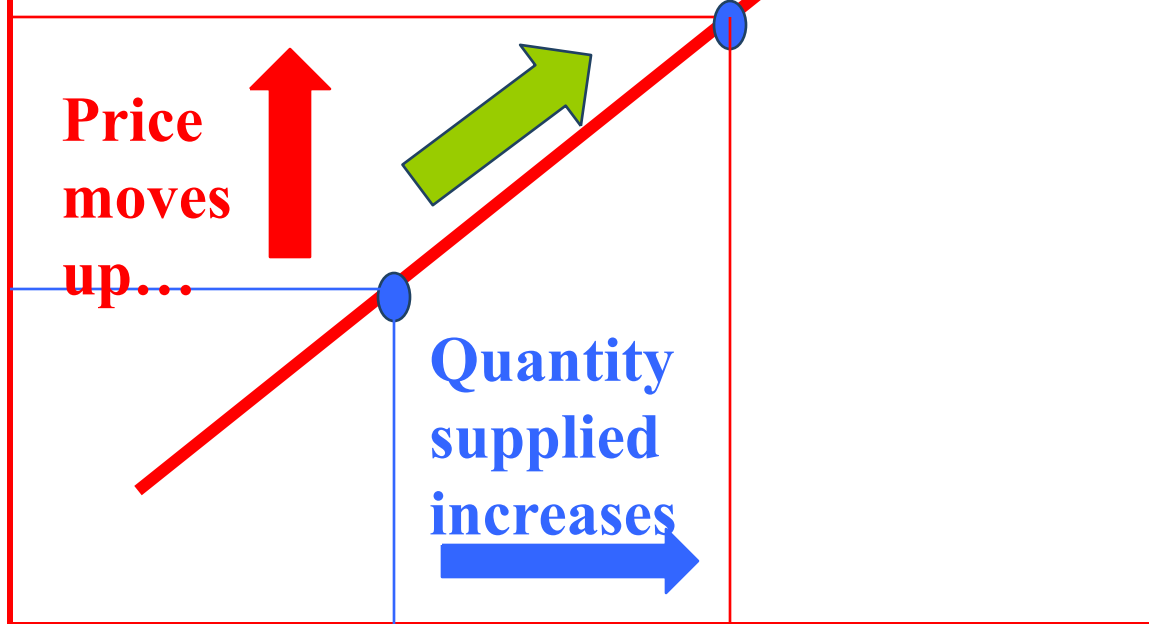
Change in Quantity Supplied

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 - ⑩ Decrease in Q_s - a movement to the left along a supply curve
-

**An increase in
Quantity Supplied
Caused by a price
increase**

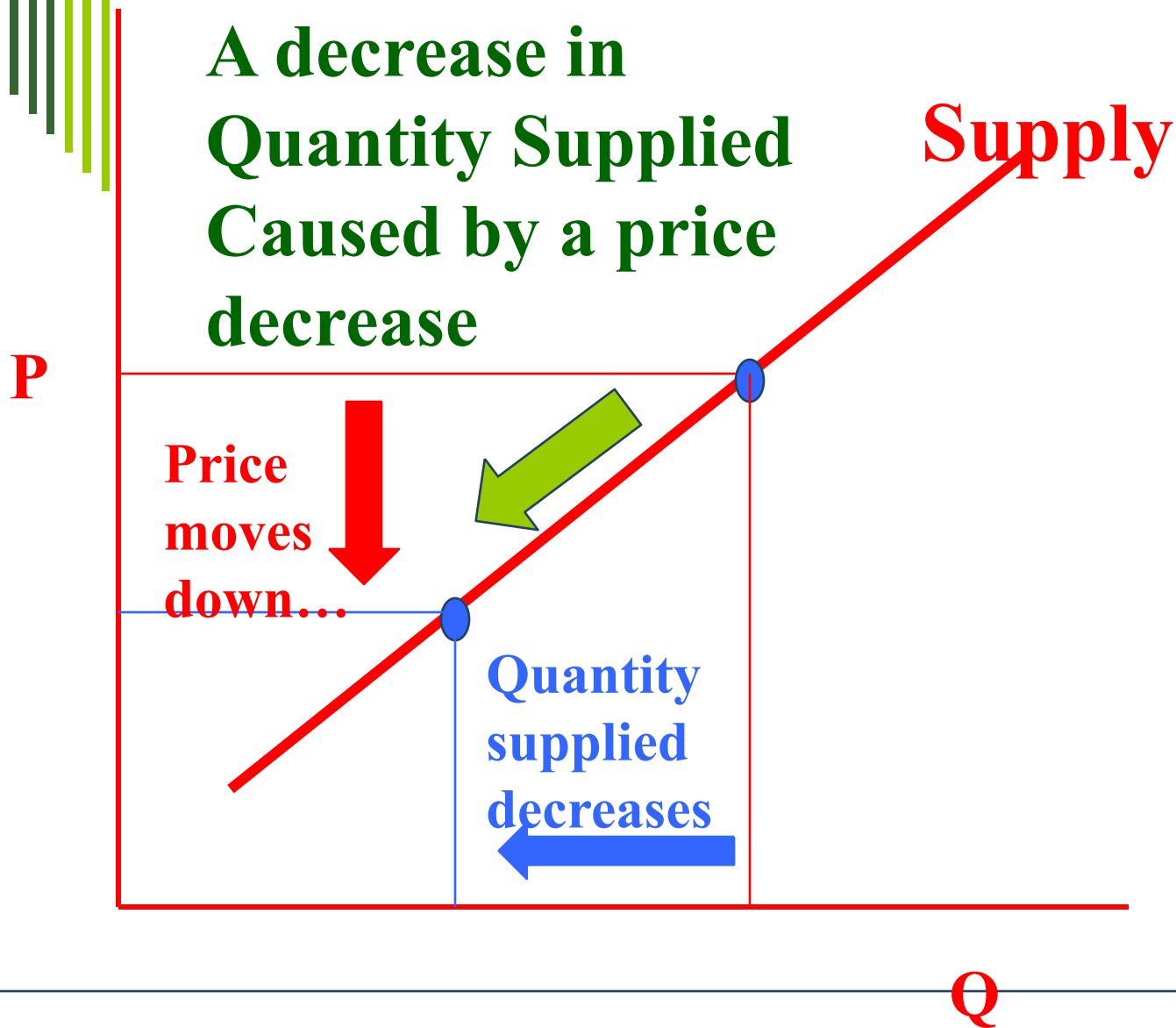
Supply

P



Q

**A decrease in
Quantity Supplied
Caused by a price
decrease**





DETERMINANTS OF SUPPLY

- Resource Prices**
 - Technology**
 - Taxes & Subsidies**
 - Prices of Other Goods**
 - Price Expectations**
 - Number of Sellers**
-



Determinants of Supply: Factors That Shift the Supply Curve

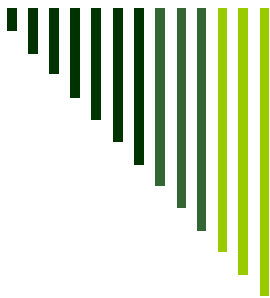
Determinant	Examples
Change in resource prices	A decrease in the price of microchips increases the supply of computers; an increase in the price of crude oil reduces the supply of gasoline.
Change in technology	The development of more effective wireless technology increases the supply of cell phones.
Changes in taxes and subsidies	An increase in the excise tax on cigarettes reduces the supply of cigarettes; a decline in subsidies to state universities reduces the supply of higher education.
Change in prices of other goods	An increase in the price of cucumbers decreases the supply of watermelons.
Change in expectations	An expectation of a substantial rise in future log prices decreases the supply of logs today.
Change in number of suppliers	An increase in the number of tattoo parlors increases the supply of tattoos; the formation of women's professional basketball leagues increases the supply of women's professional basketball games.



DO NOW

w/ whiteboards and a Partner

- Demonstrate a properly labeled S/D graph.
 - Demonstrate a decrease in Q_s
 - Demonstrate an increase in Supply
-



*Combining
Supply
with
Demand*

MARKET DEMAND & SUPPLY

BUSHELS OF CORN

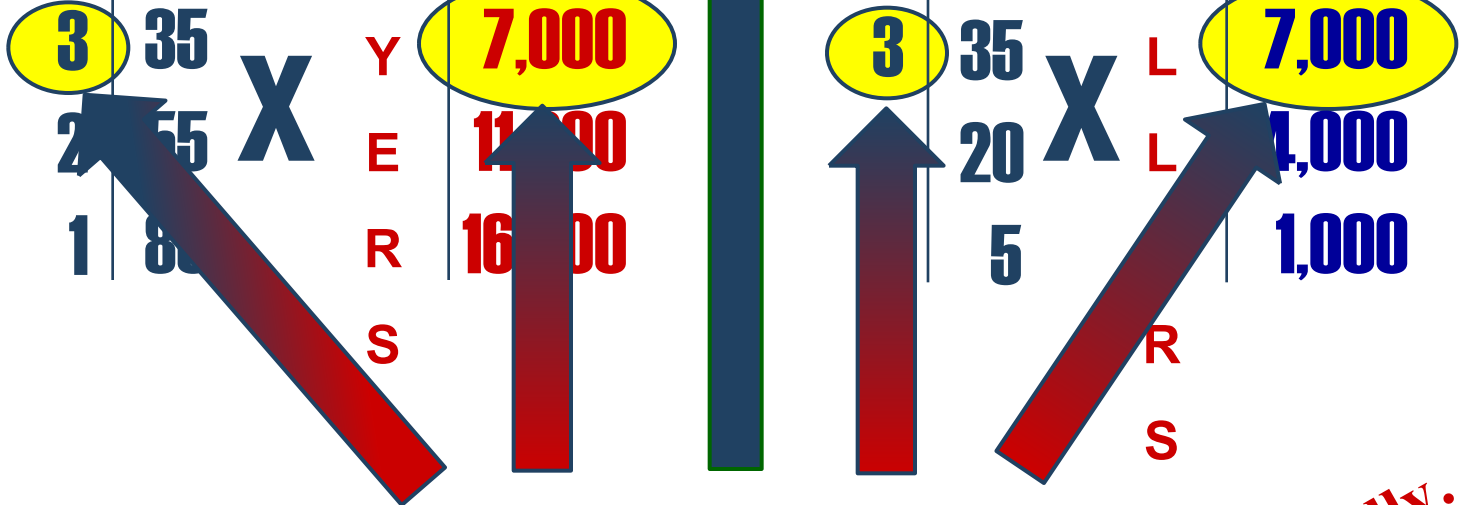
P	Q _D		MARKET DEMAND
\$5	10	200 BUYERS	2,000
4	20		4,000
3	35		7,000
2	55		11,000
1	80		16,000

BUSHELS OF CORN

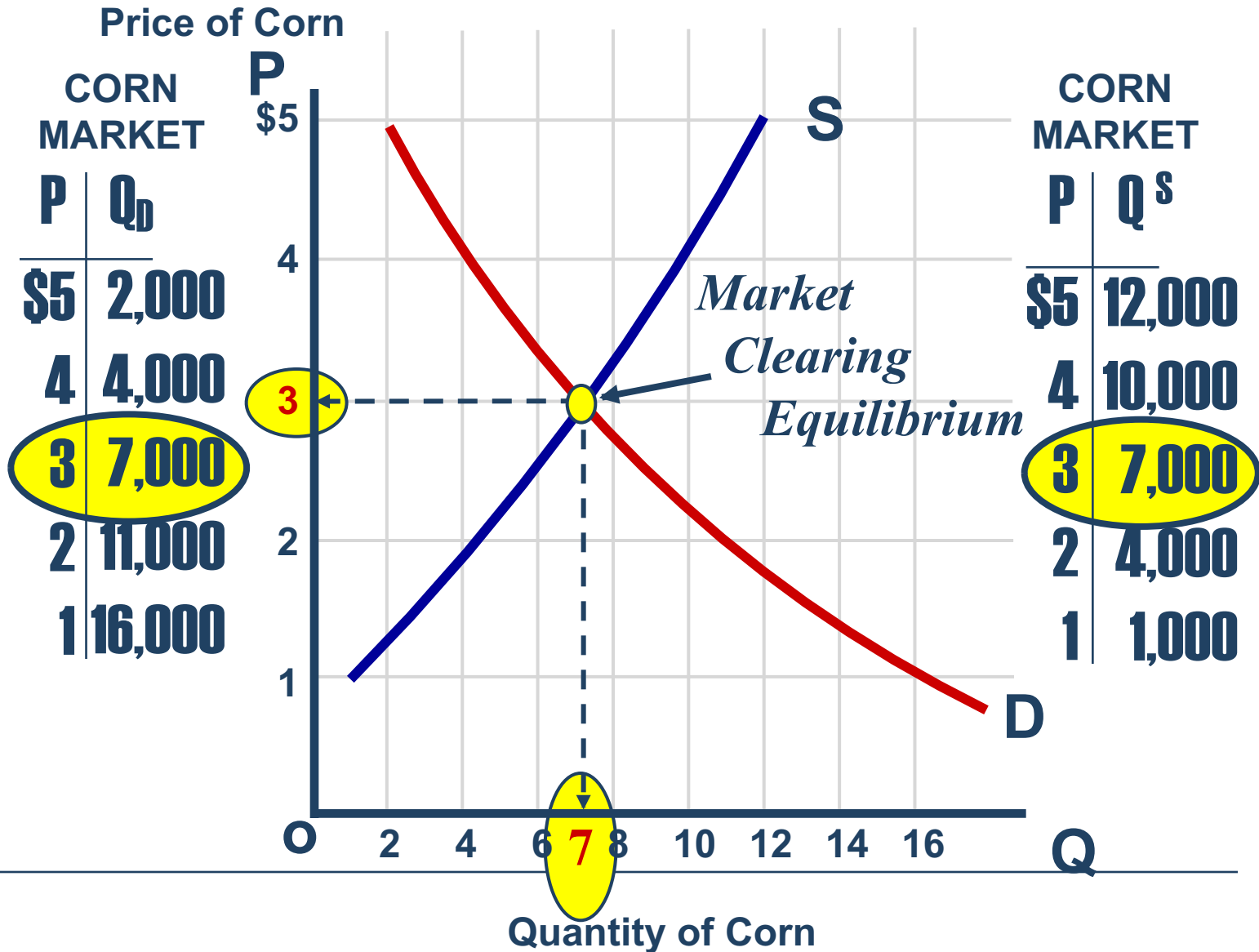
P	Q _S		MARKET SUPPLY
\$5	60	200 SELLERS	12,000
4	50		10,000
3	35		7,000
2	20		4,000
1	5		1,000

EQUILIBRIUM

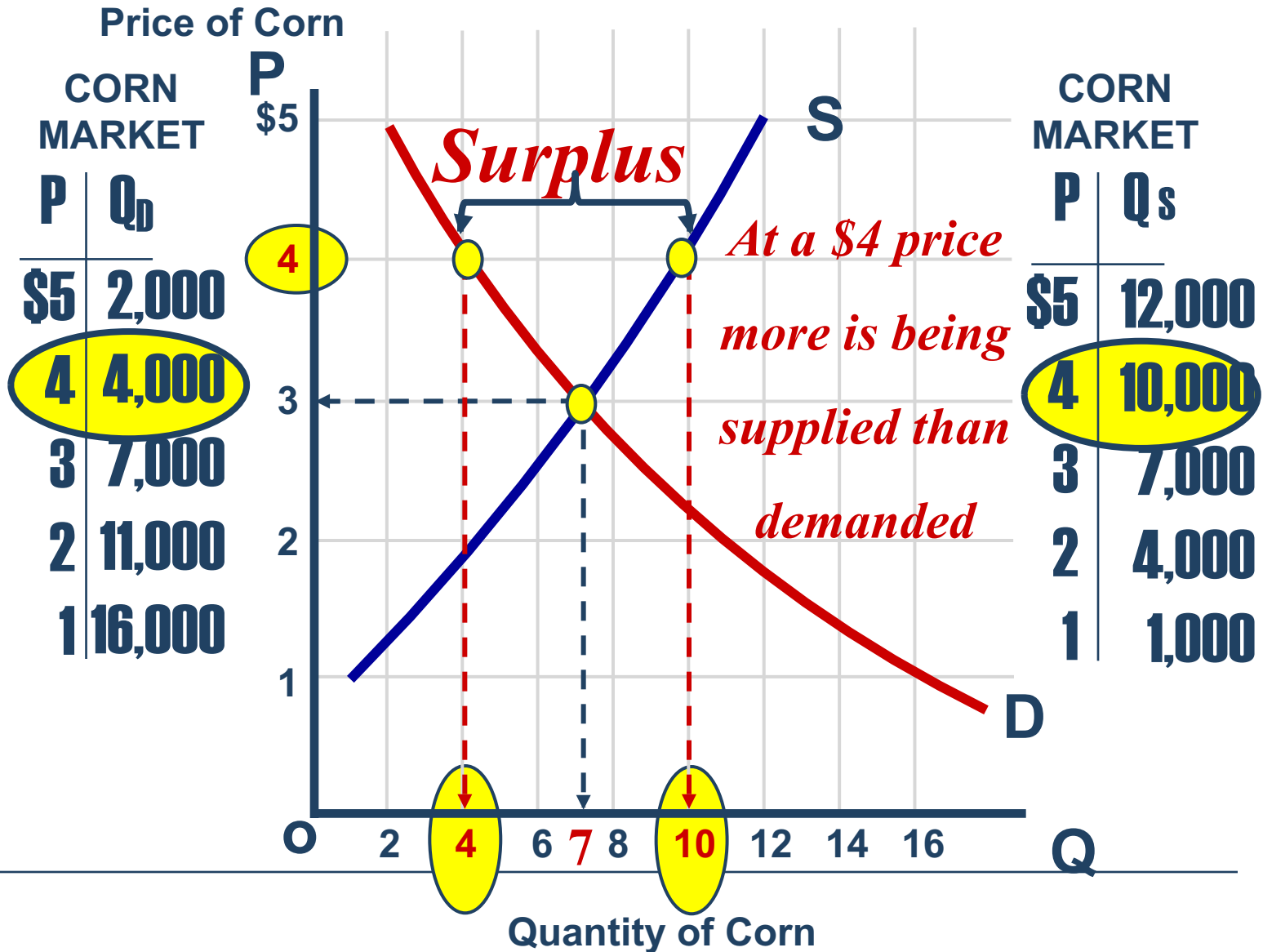
Graphically...



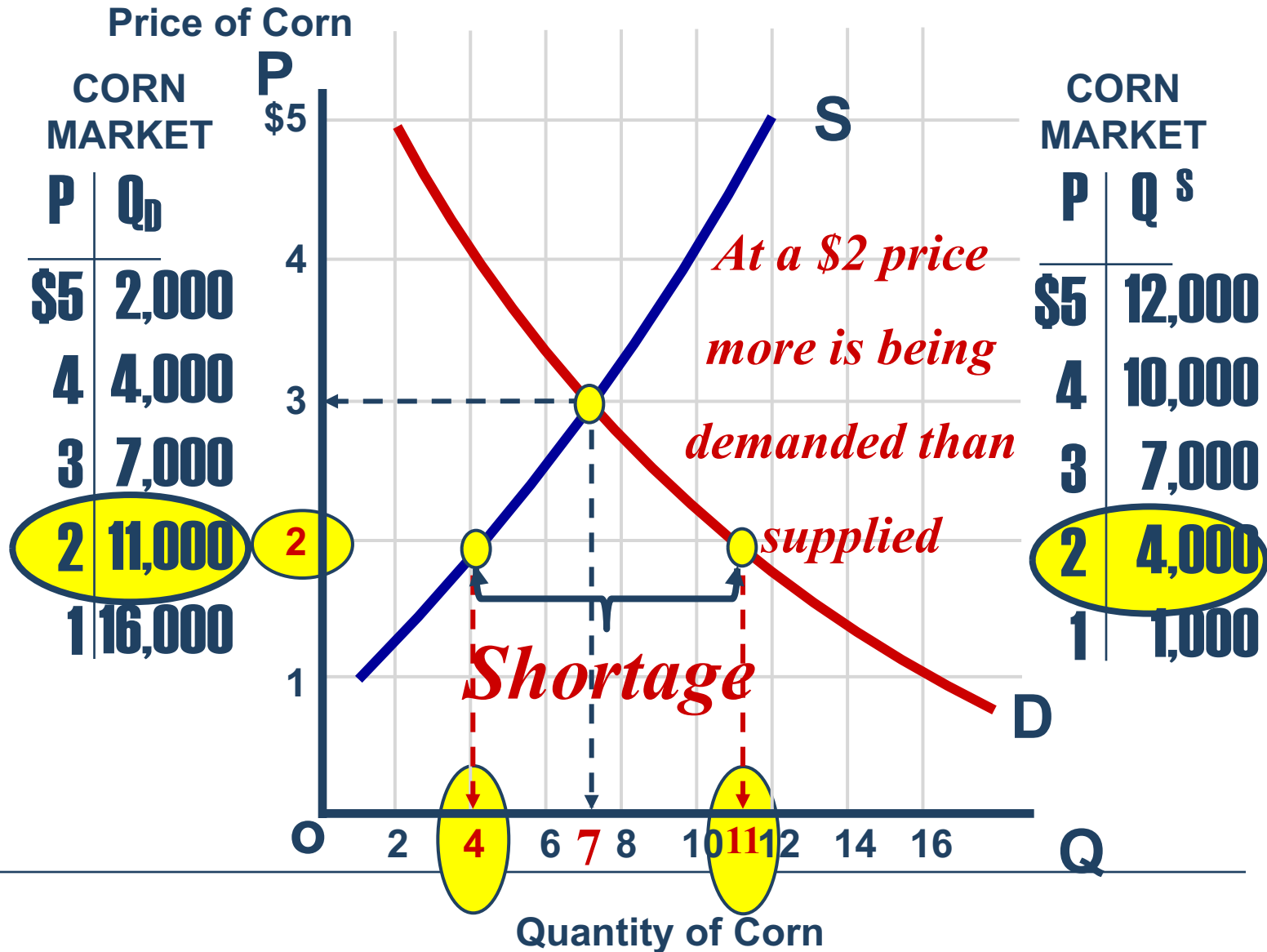
MARKET DEMAND & SUPPLY



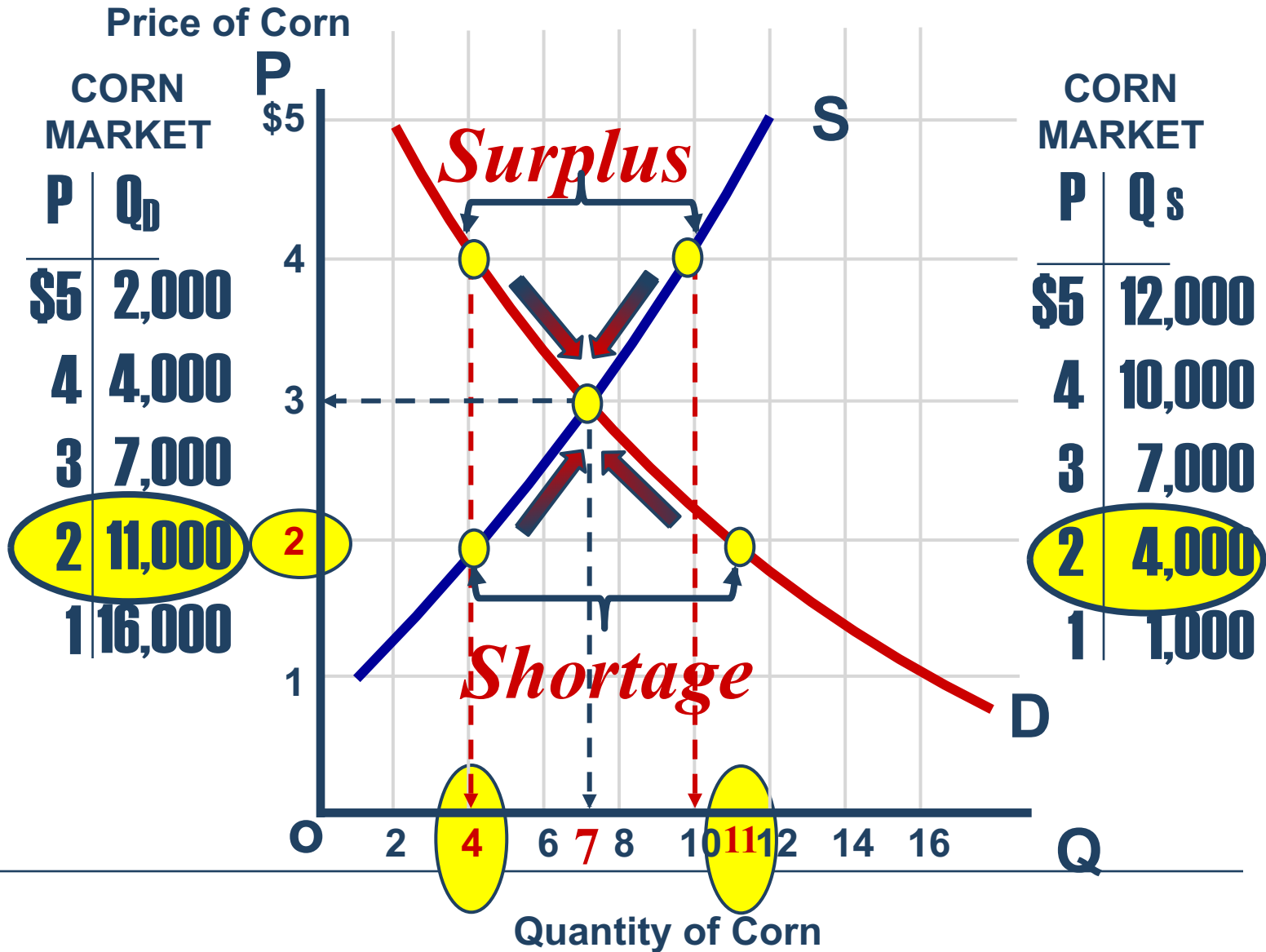
MARKET DEMAND & SUPPLY



MARKET DEMAND & SUPPLY



MARKET DEMAND & SUPPLY





MARKET EQUILIBRIUM

- Equilibrium Price & Quantity
 - Rationing Function of Prices
 - Changes in Demand
 - Changes in Quantity Demanded
 - Changes in Supply
 - Changes in Quantity Supplied
-



Complex Cases

Multiple Shifts...

Supply Increases;
Demand Decreases

■ Prices Decrease

■ Quantity Indeterminate

Supply Decreases;
Demand Increases

■ Price Increases

■ Quantity Indeterminate



Complex Cases

Multiple Shifts...

Supply Increases;

Demand Increases

■ Prices Indeterminate

■ Quantity Increases

Supply Decreases;

Demand Decreases

■ Price Indeterminate

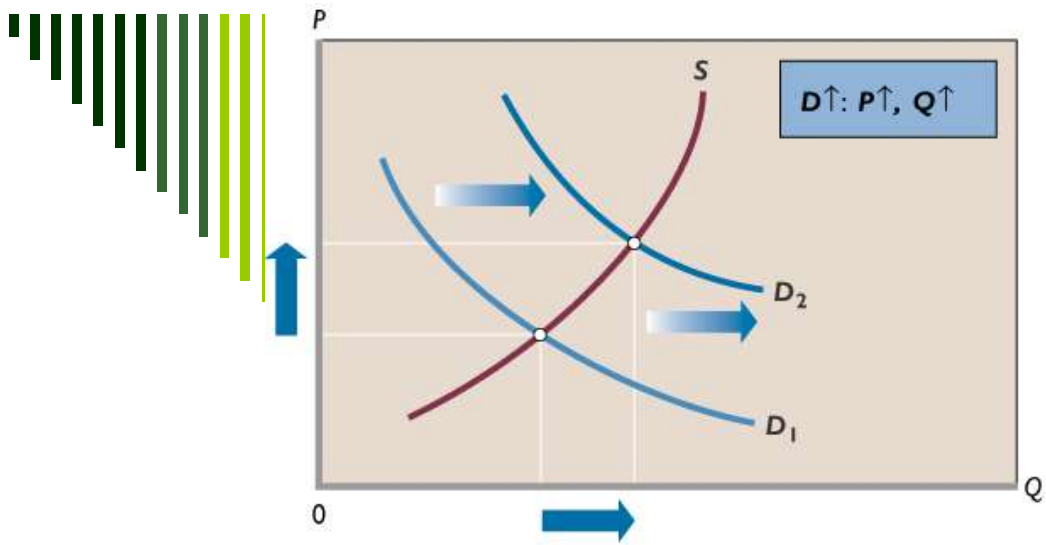
■ Quantity Decreases



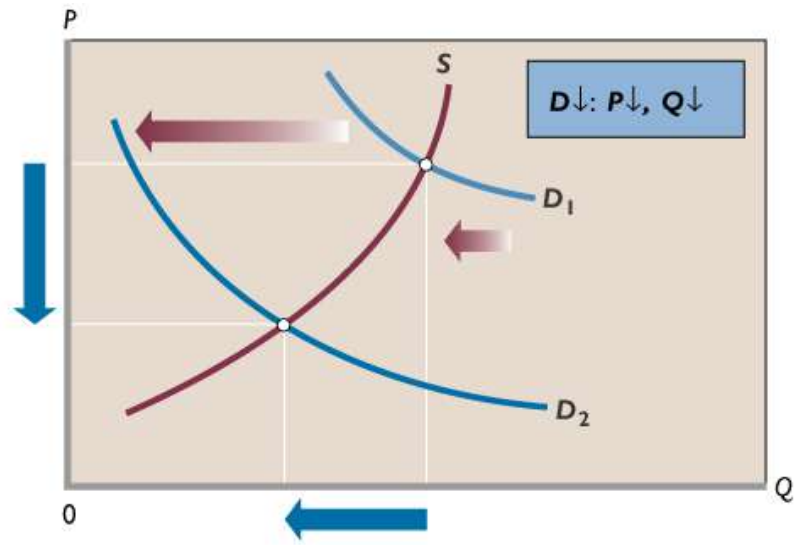
Know This Chart!

Effects of Changes in Both Supply and Demand

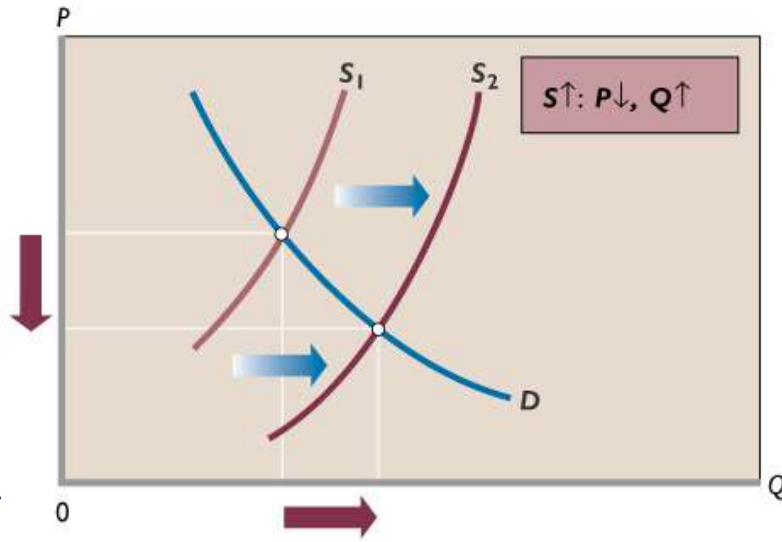
Change in Supply	Change in Demand	Effect on Equilibrium Price	Effect on Equilibrium Quantity
1. Increase	Decrease	Decrease	Indeterminate
2. Decrease	Increase	Increase	Indeterminate
3. Increase	Increase	Indeterminate	Increase
4. Decrease	Decrease	Indeterminate	Decrease



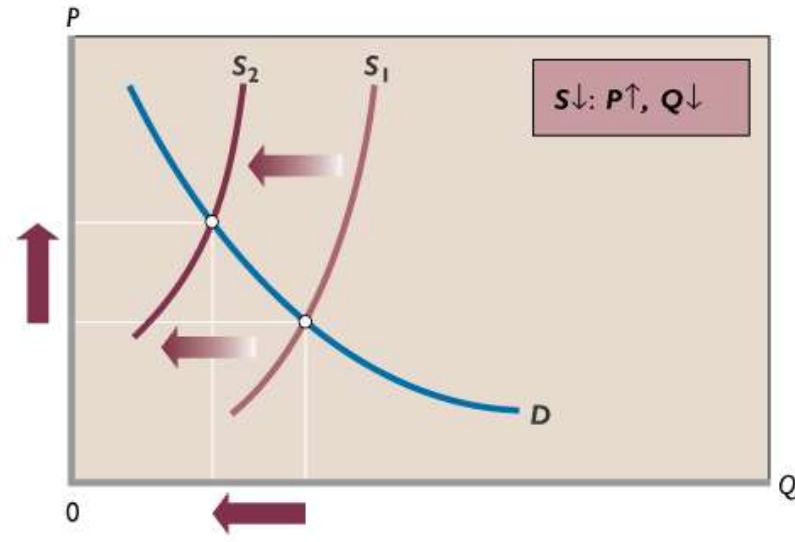
(a)
Increase in demand



(b)
Decrease in demand



(c)
Increase in supply



(d)
Decrease in supply



Government Set Prices

Price Ceilings

- Shortages

- Rationing Problem

- Black Markets

- Rent Controls

Price Floors

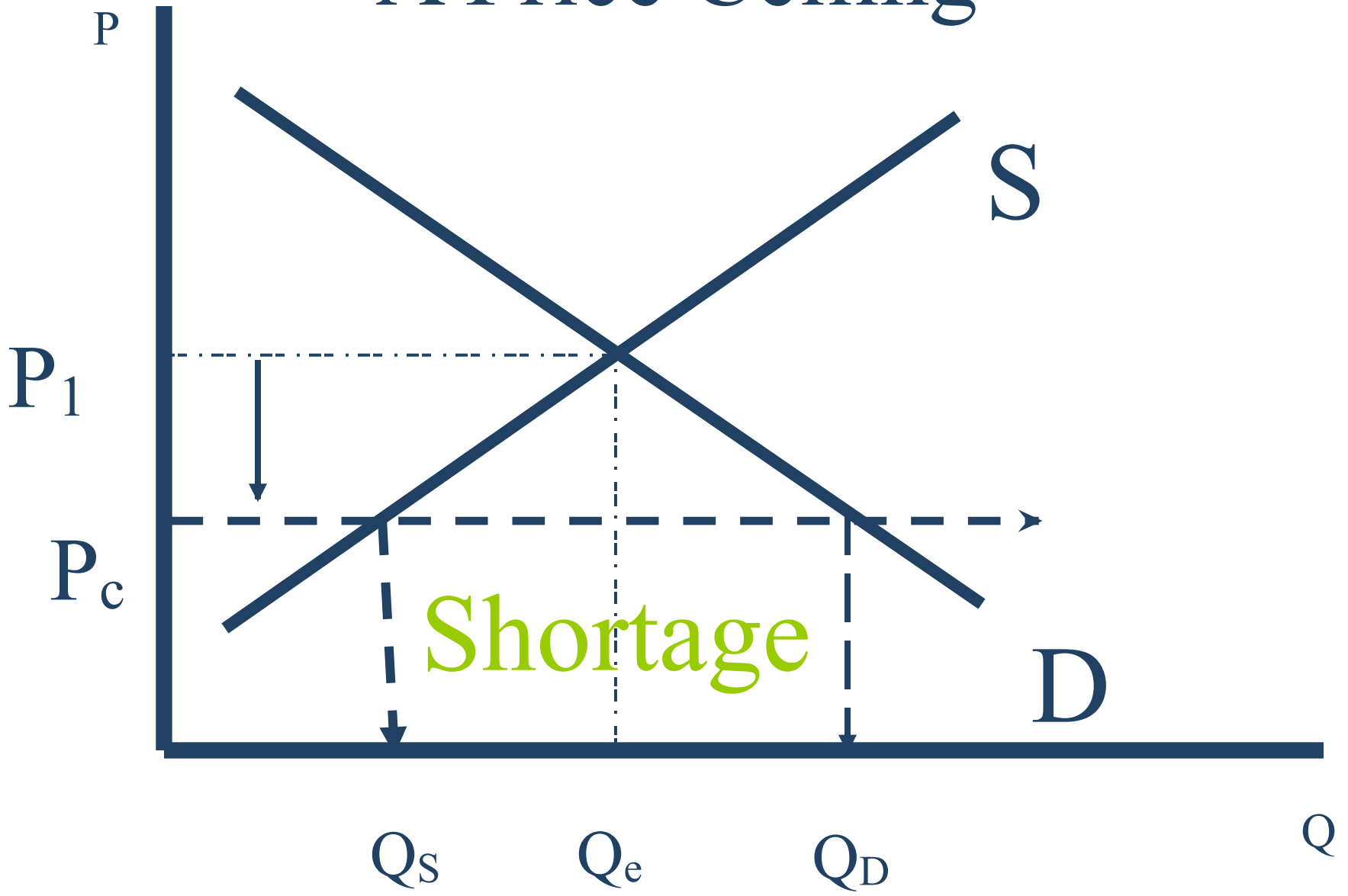
- Surpluses



□ Price Ceiling

- A maximum price set by government **below the market** generated equilibrium price

A Price Ceiling





What are the economic affects of a price ceiling?

■ Lowers price, lowers quantity supplied

• The ceiling creates a

shortage

• $Q_d > Q_s$



□ Who gets the product?

■ Queuing and line tickets

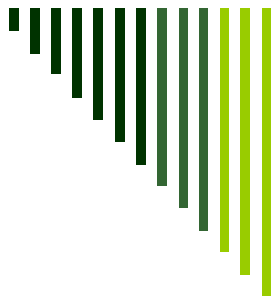
• Rationing, such as coupons

• Favoritism

• ~~Special groupings~~



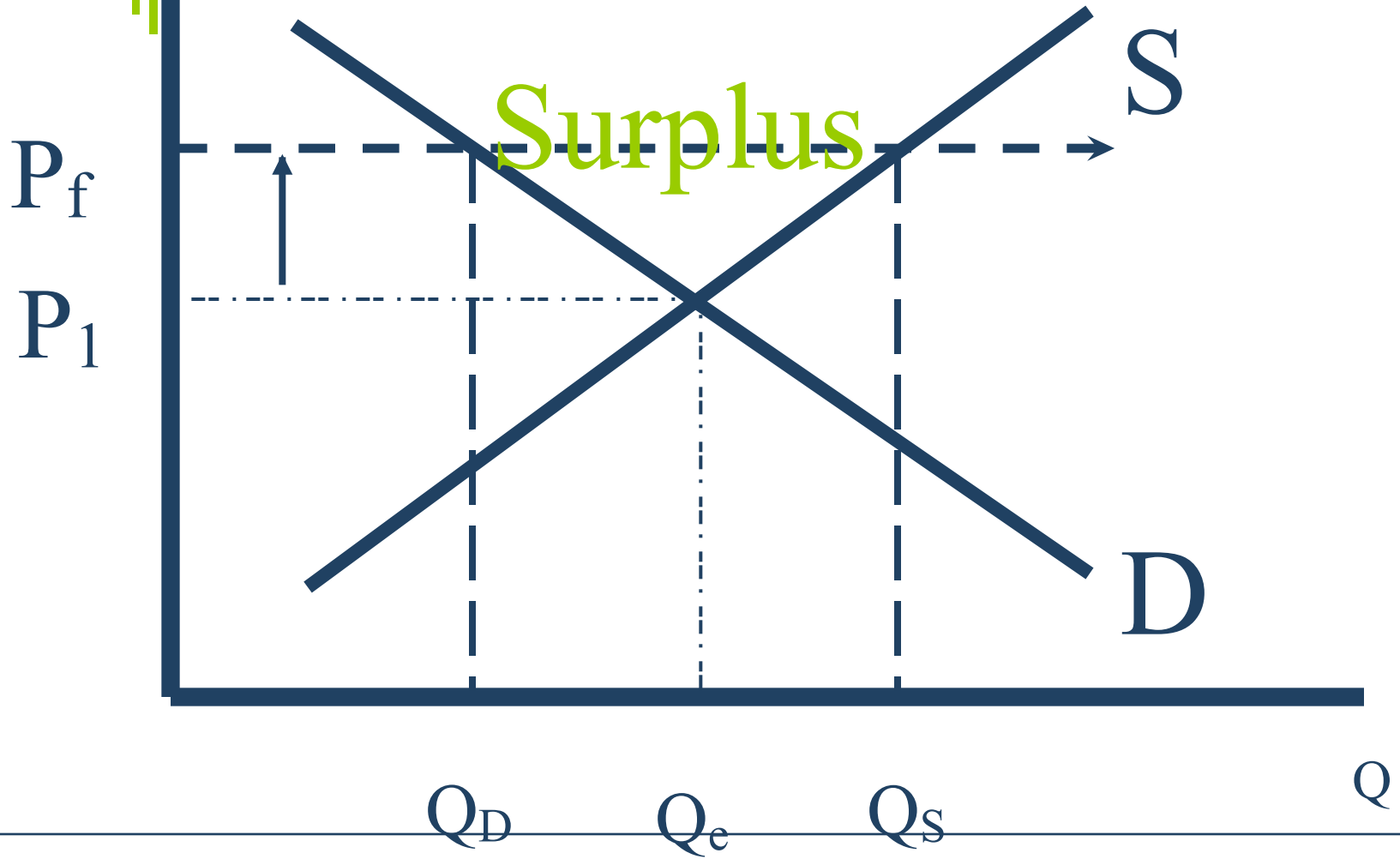
-
- Examples of Price Ceilings
 - World War II rationing
 - Rent Controls
 - Gas in the 1970's
-



□ Price Floor

- A minimum price set by government above the market equilibrium price

A Price Floor



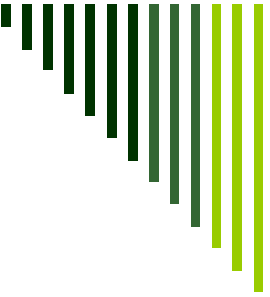


■ Reasons for a Price Floor

- To help suppliers of a specific good to get a higher price than otherwise would be the case



- What could reduce prices thus justifying a price floor?
 - Supply factors: push the supply curve rightward, reducing price
 - Technology
 - Too many sellers
 - Increase in inventory



What are the economic effects of a price floor?

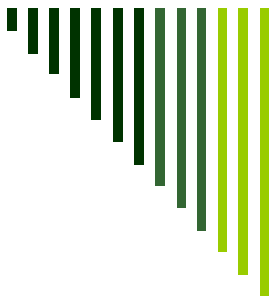
□ Raises price, lowers quantity demanded

- The floor creates a surplus

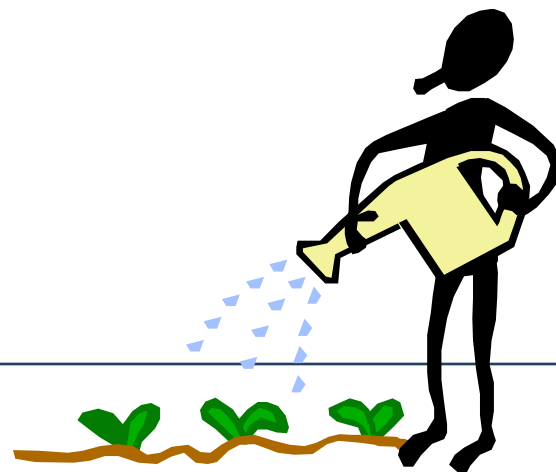
- $Q_s > Q_d$



- Problems with price floors:
 - What to do with the surplus?



- Price Floor Examples
 - American agriculture
 - The minimum wage law





Key Terms

market

demand

demand schedule

law of demand

diminishing marginal utility

income effect

substitution effect

demand curve

determinants of demand

normal goods

inferior goods

substitute good

complementary good

change in demand

change in quantity demanded

supply

supply schedule

law of supply

supply curve

determinants of supply

change in supply

change in quantity supplied

surplus

shortage

equilibrium price

equilibrium quantity

rationing function of prices

price ceiling and floor
