CHAPTER 4

The Market Forces of Supply and Demand

PRINCIPLES OF Economics

N. Gregory Mankiw

Premium PowerPoint Slides
by Ron Cronovich

Supply

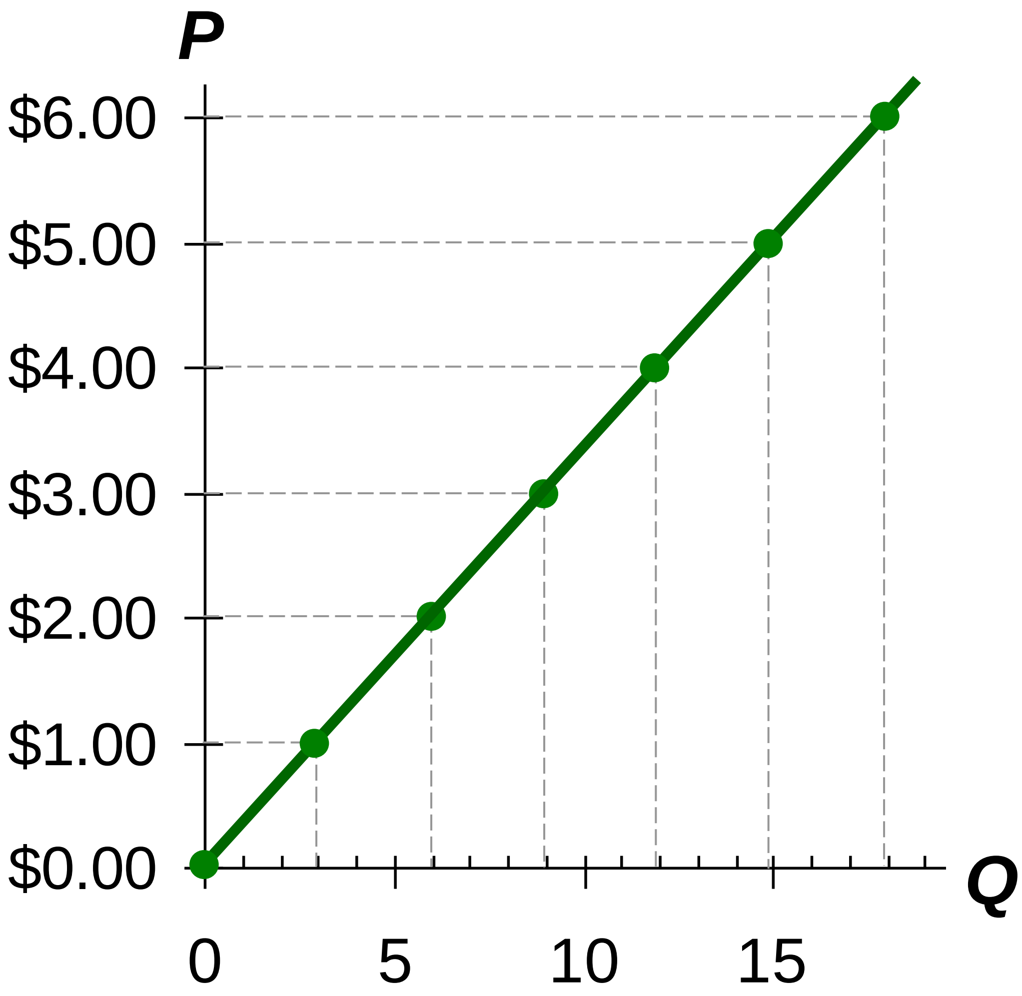
- The **quantity supplied** of any good is the amount that sellers are willing and able to sell.
- **Law of supply**: the claim that the quantity supplied of a good rises when the price of the good rises, other things equal

The Supply Schedule

- **Supply schedule**:
  A table that shows the relationship between the price of a good and the quantity supplied.
- Example:
  Starbucks' supply of lattes.
- Notice that Starbucks' supply schedule obeys the Law of Supply.

Price of lattes	Quantity of lattes supplied
$0.00	0
1.00	3
2.00	6
3.00	9
4.00	12
5.00	15
6.00	18

Starbucks' Supply Schedule & Curve



Price of lattes	Quantity of lattes supplied
$0.00	0
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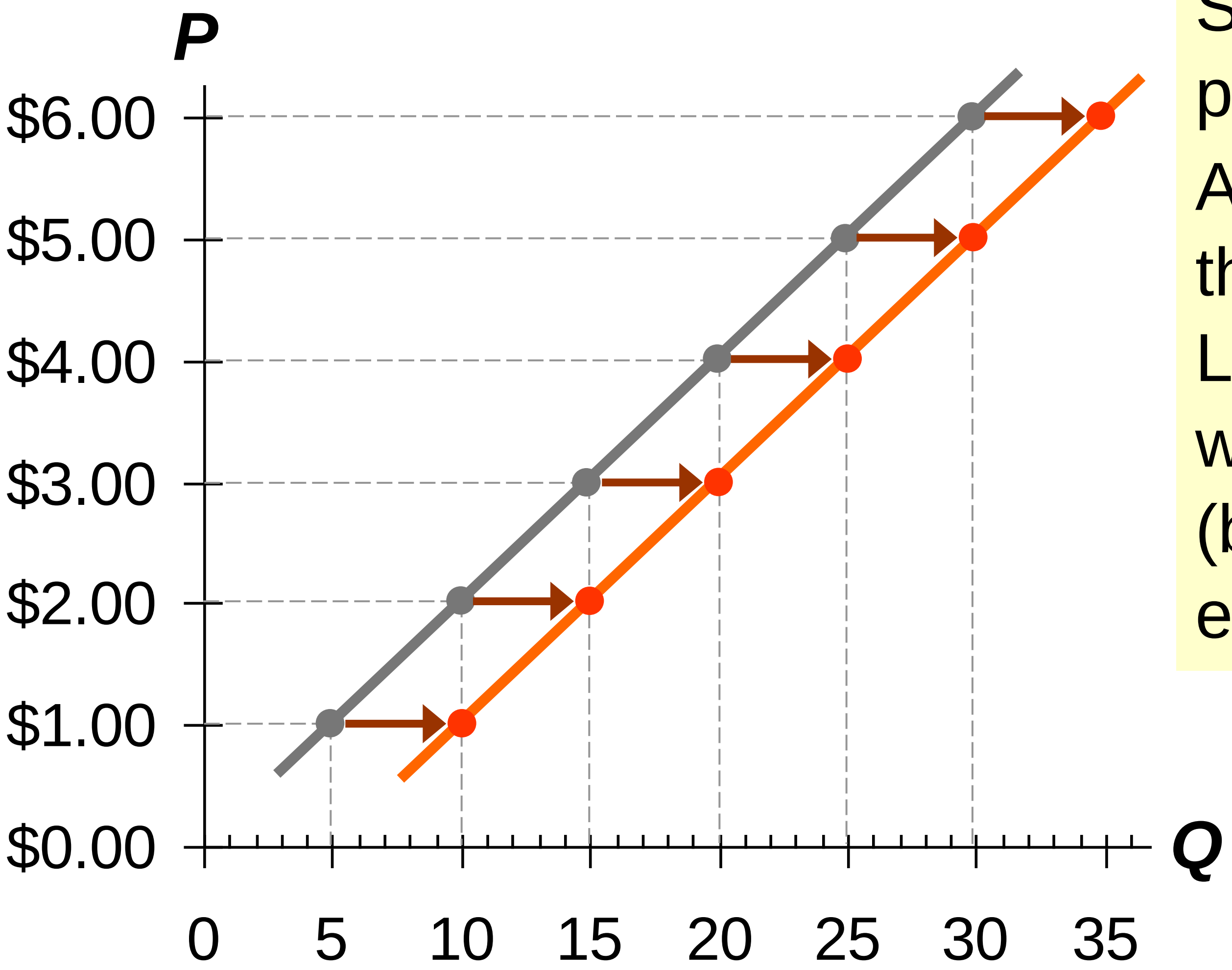
Supply Curve Shifters

- The supply curve shows how price affects quantity supplied, *other things being equal*.
- These "other things" are non-price determinants of supply.
- Changes in them shift the ***S*** curve…

Supply Curve Shifters: Input Prices

- Examples of input prices:
  wages, prices of raw materials.
- A fall in input prices makes production
  more profitable at each output price,
  so firms supply a larger quantity at each price,
  and the ***S*** curve shifts to the right.

Supply Curve Shifters: Input Prices



Suppose the price of milk falls.

At each price, the quantity of Lattes supplied will increase (by 5 in this example).

Supply Curve Shifters: Technology

- Technology determines how much inputs are required to produce a unit of output.
- A cost-saving technological improvement has the same effect as a fall in input prices, shifts ***S*** curve to the right.

Supply Curve Shifters: # of Sellers

- An increase in the number of sellers increases the quantity supplied at each price,

  shifts ***S*** curve to the right.

Supply Curve Shifters: Expectations

Example:

- Events in the Middle East lead to expectations of higher oil prices.
- In response, owners of Texas oilfields reduce supply now, save some inventory to sell later at the higher price.
- ***S*** curve shifts left.

In general, sellers may adjust supply* when their expectations of future prices change.
(**If good not perishable*)

Summary: Variables that Influence Sellers

Variable	A change in this variable…
Price	…causes a movement along the ***S*** curve
Input Prices	…shifts the ***S*** curve
Technology	…shifts the ***S*** curve
# of Sellers	…shifts the ***S*** curve
Expectations	…shifts the ***S*** curve

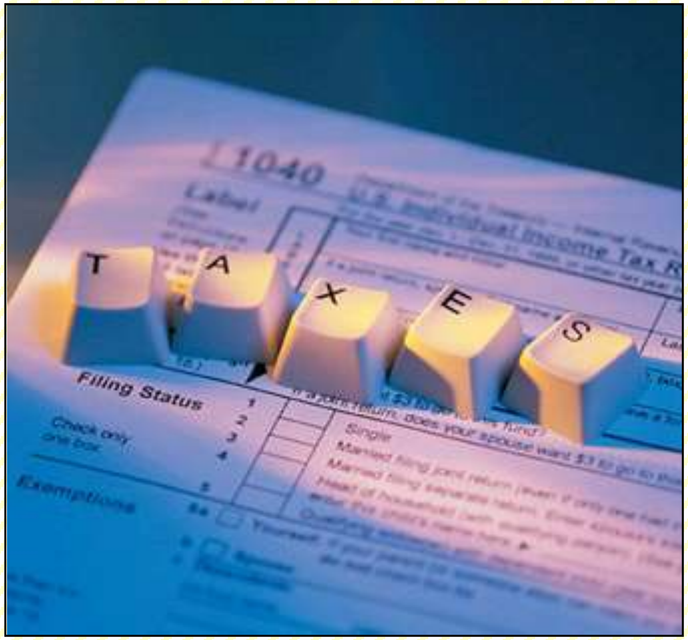
ACTIVE LEARNING 2
Supply Curve

Draw a supply curve for tax return preparation software. What happens to it in each of the following scenarios?

A. Retailers cut the price of the software.

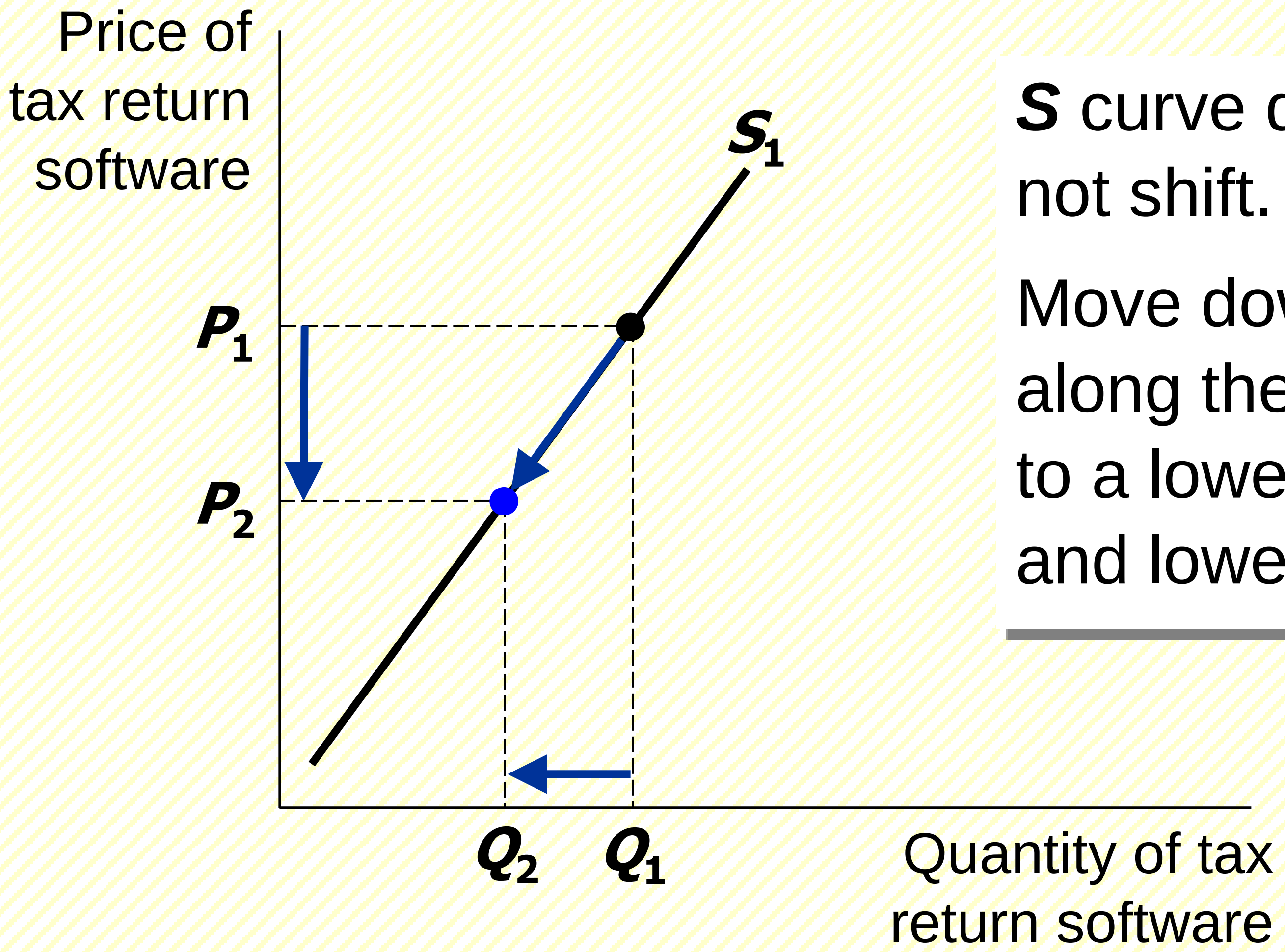
B. A technological advance allows the software to be produced at lower cost.

C. Professional tax return preparers raise the price of the services they provide.



ACTIVE LEARNING **2**

A. Fall in price of tax return software

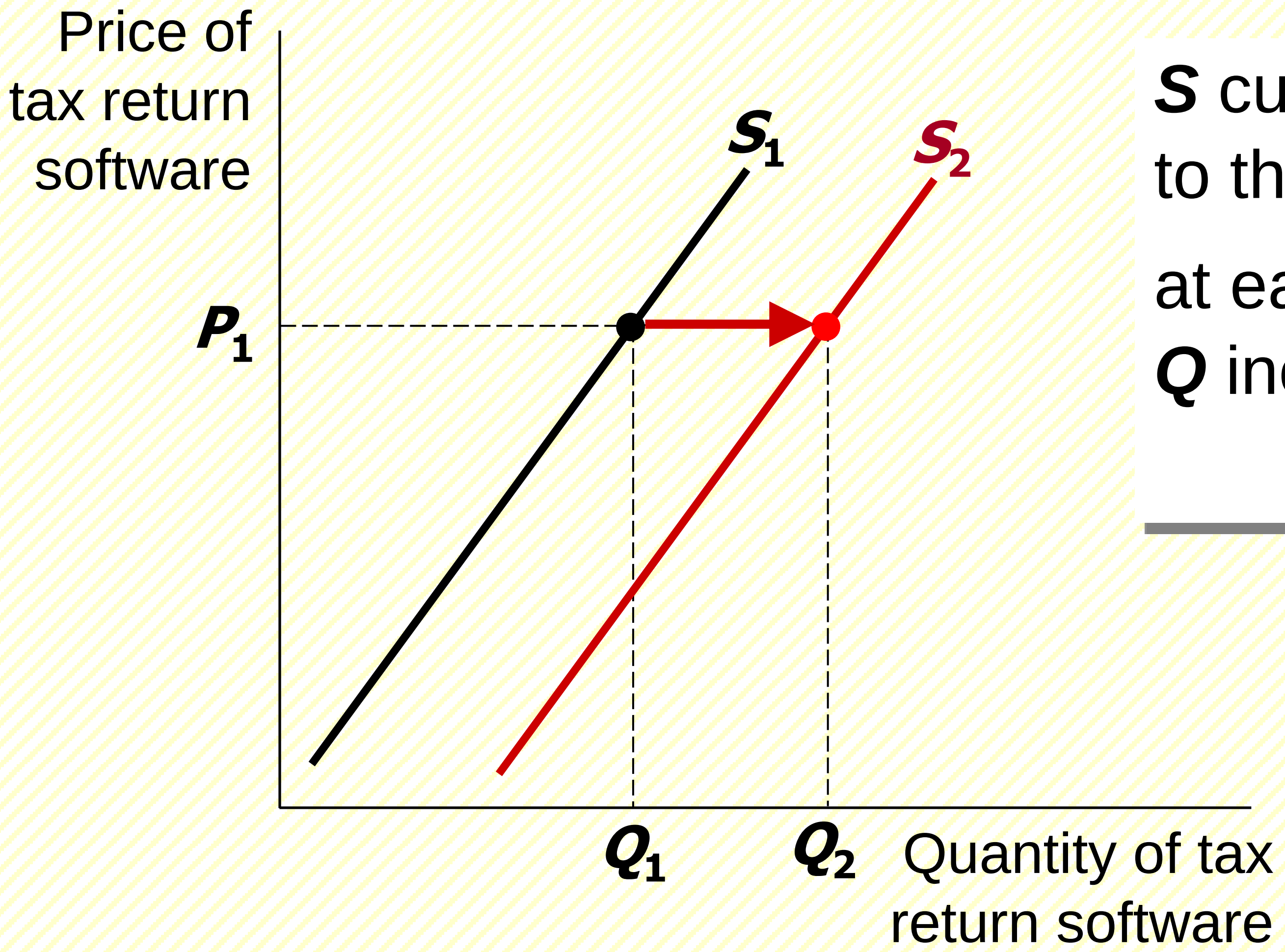


S curve does not shift.

Move down along the curve to a lower ***P*** and lower ***Q***.

A C T I V E L E A R N I N G **2**

B. Fall in cost of producing the software

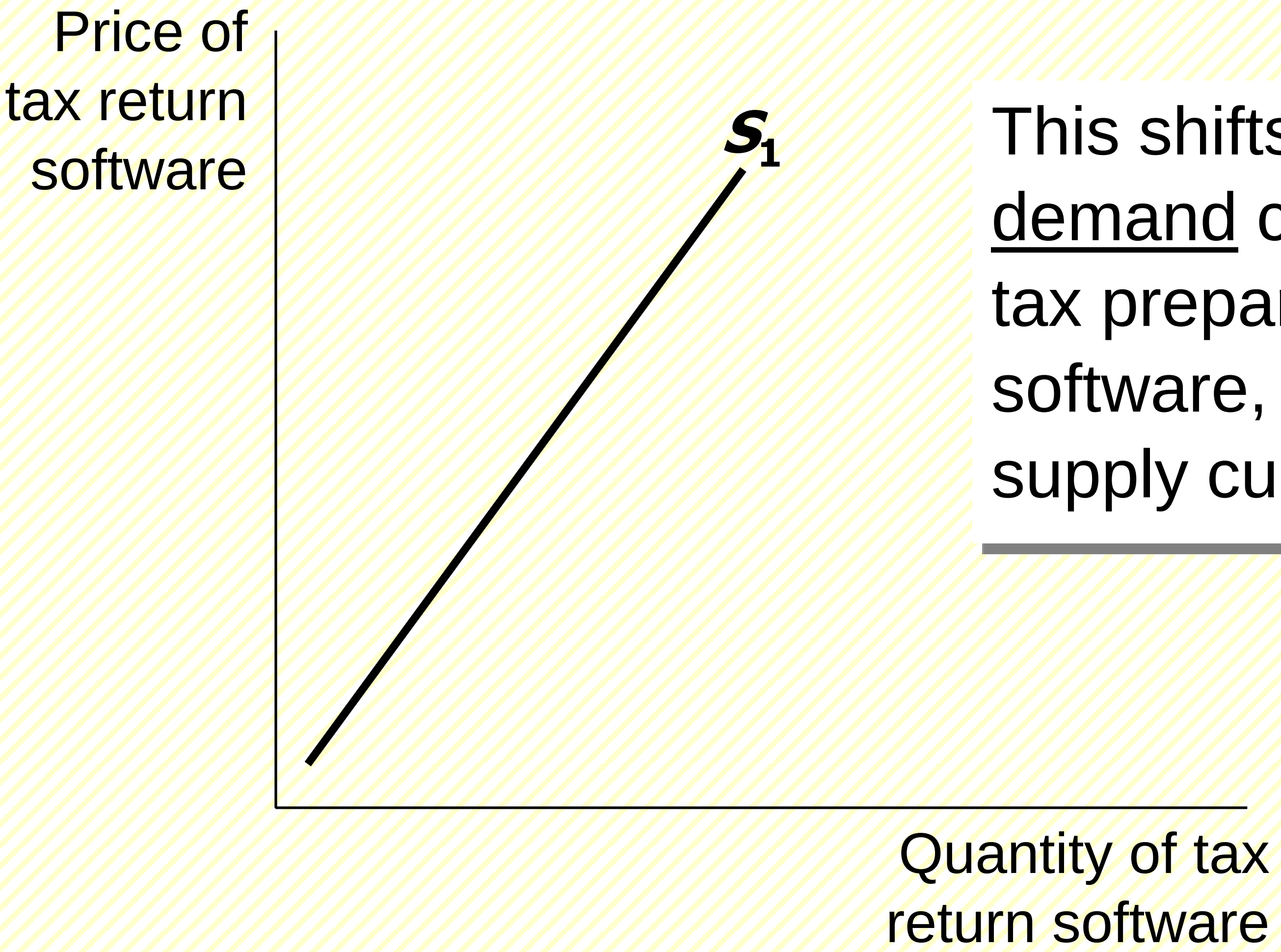


S curve shifts to the right:

at each price, ***Q*** increases.

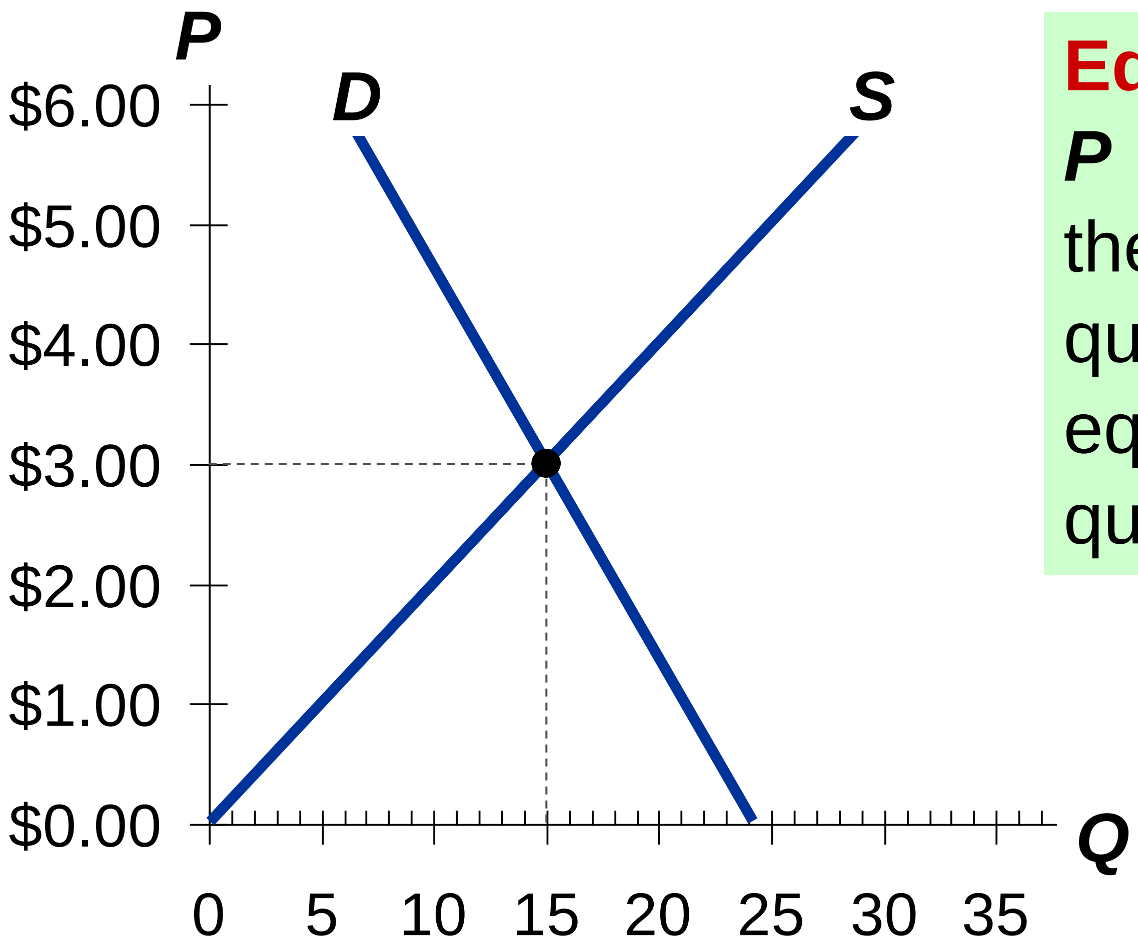
ACTIVE LEARNING **3**

C. Professional preparers raise their price



This shifts the demand curve for tax preparation software, not the supply curve.

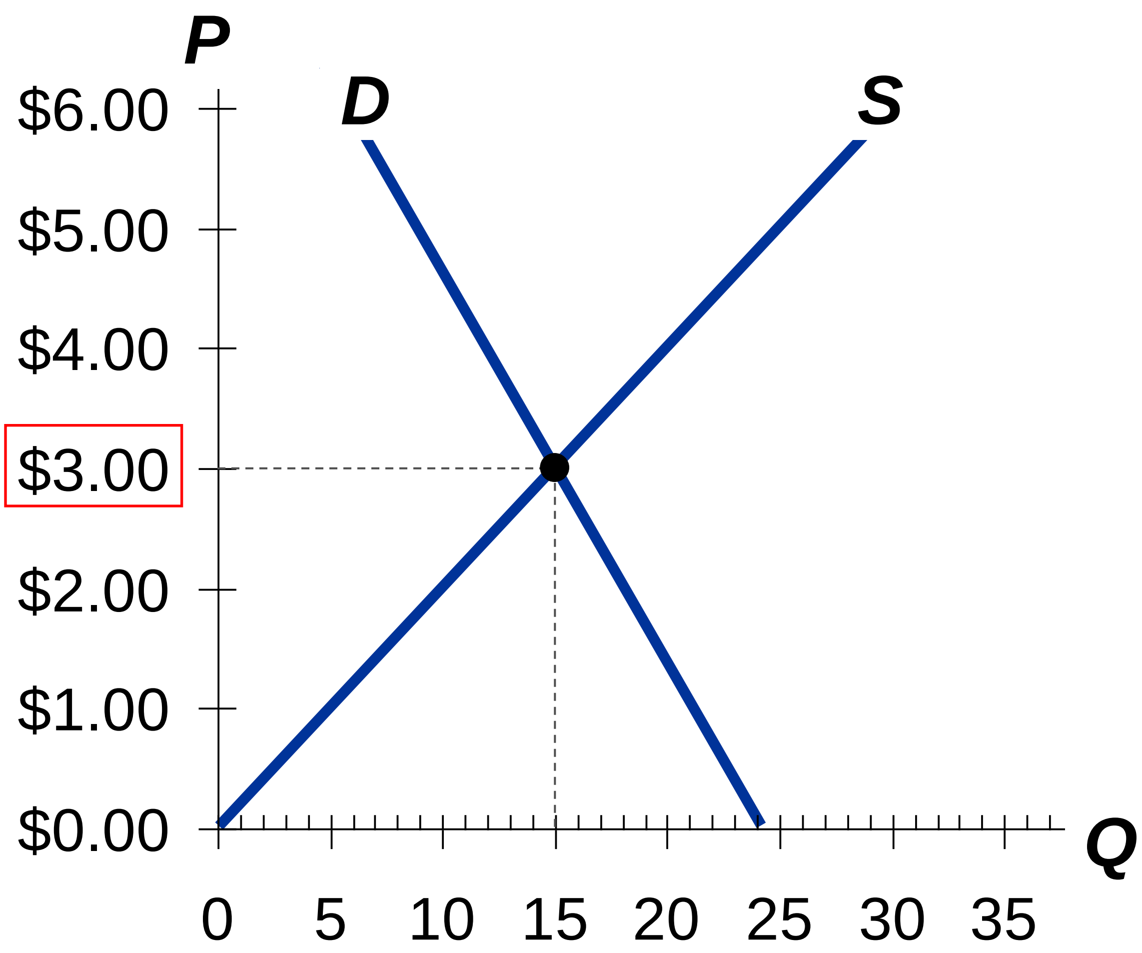
Supply and Demand Together



Equilibrium:
P has reached the level where quantity supplied equals quantity demanded

Equilibrium price:

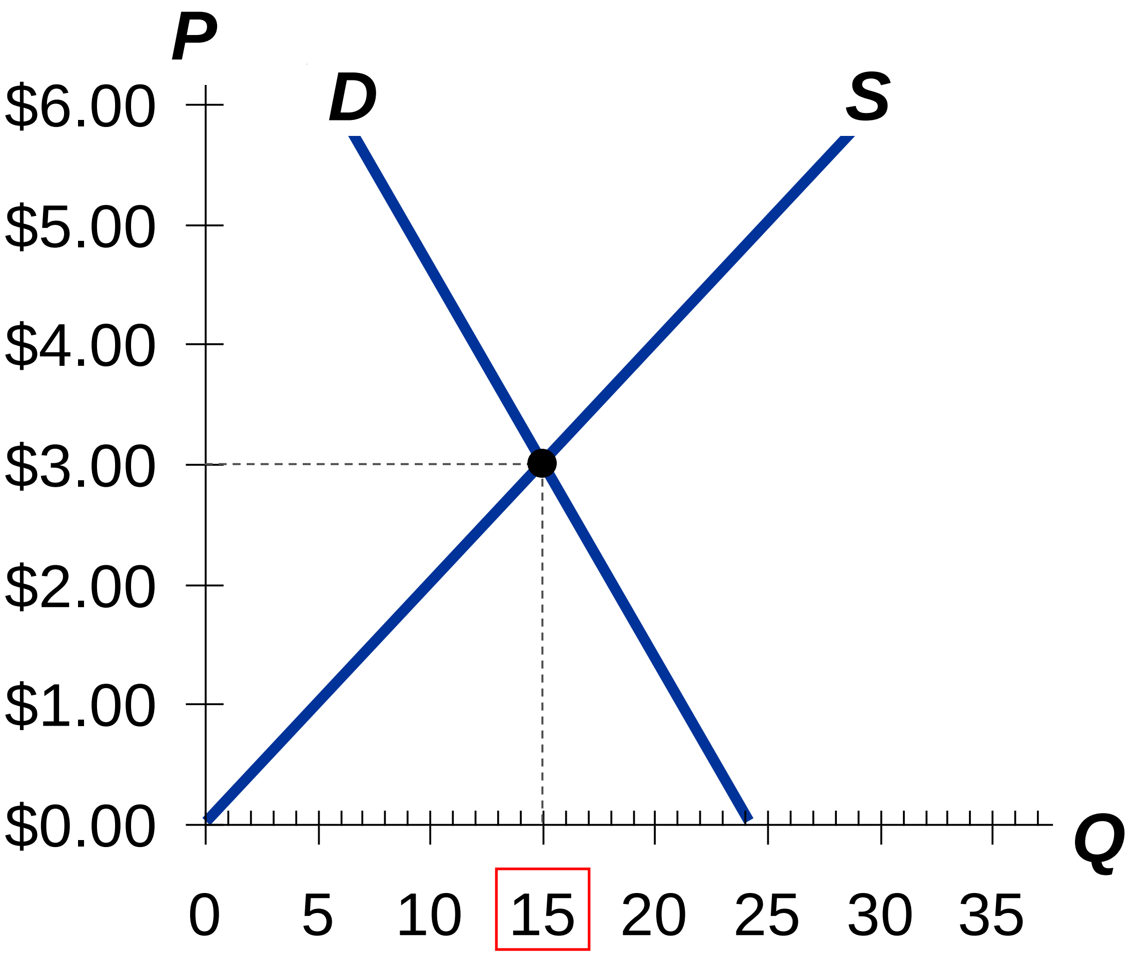
the price that equates quantity supplied with quantity demanded



P	Q^D	Q^S
$0	24	0
1	21	5
2	18	10
3	15	15
4	12	20
5	9	25
6	6	30

Equilibrium quantity:

the quantity supplied and quantity demanded at the equilibrium price



P	Q^D	Q^S
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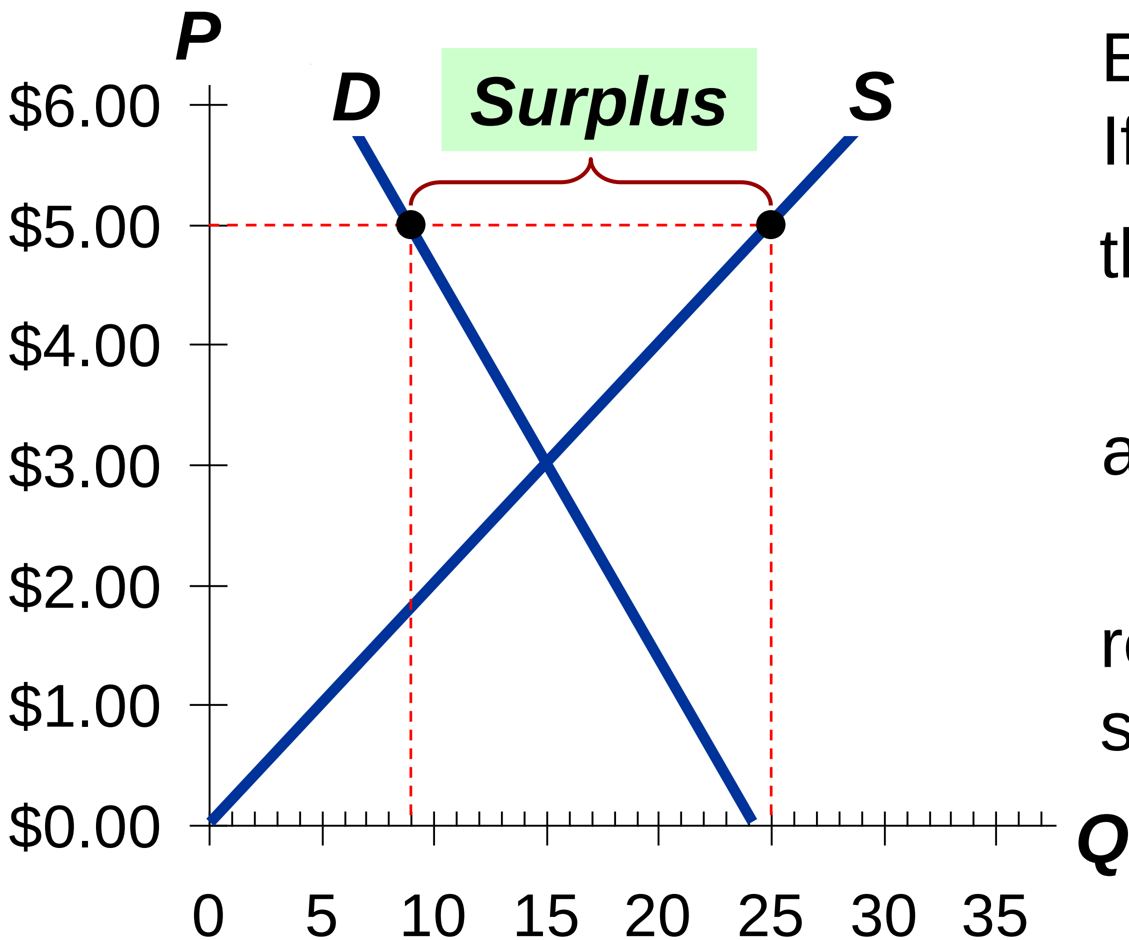
Surplus (a.k.a. excess supply):

when quantity supplied is greater than quantity demanded



Example:
If P = $5,

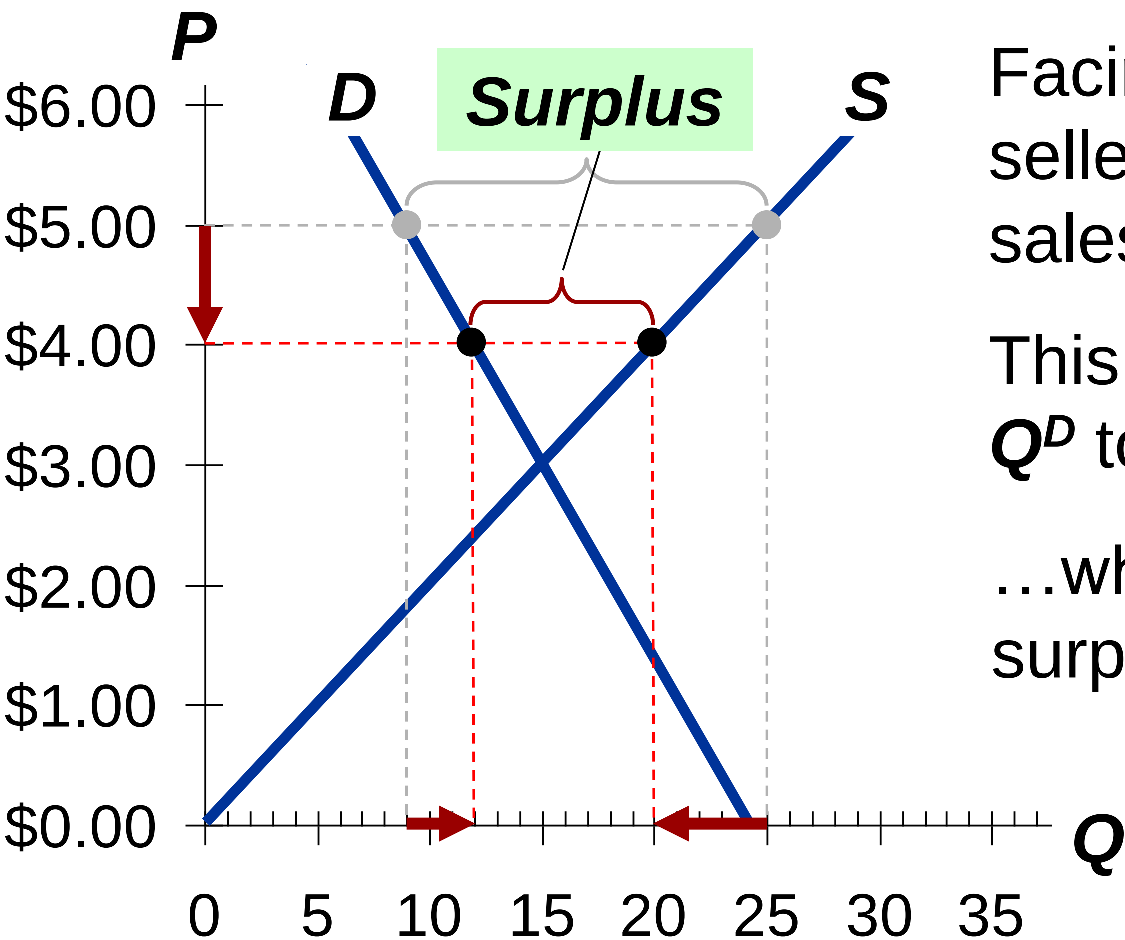
then
Q^D = 9 lattes

and
Q^S = 25 lattes

resulting in a surplus of 16 lattes

Surplus (a.k.a. excess supply):

when quantity supplied is greater than quantity demanded

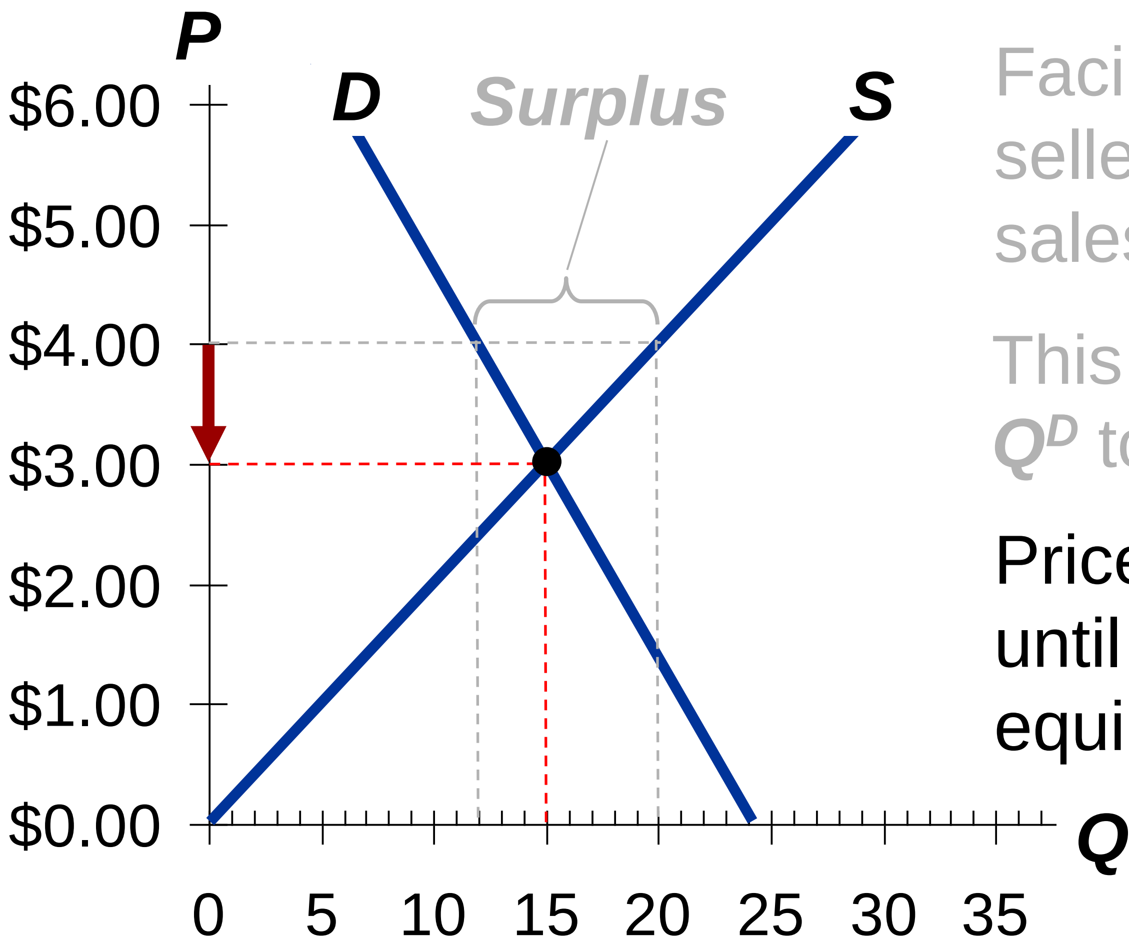


Facing a surplus, sellers try to increase sales by cutting price.

This causes
Q^D to rise and Q^S to fall…

…which reduces the surplus.

Surplus (a.k.a. excess supply): when quantity supplied is greater than quantity demanded



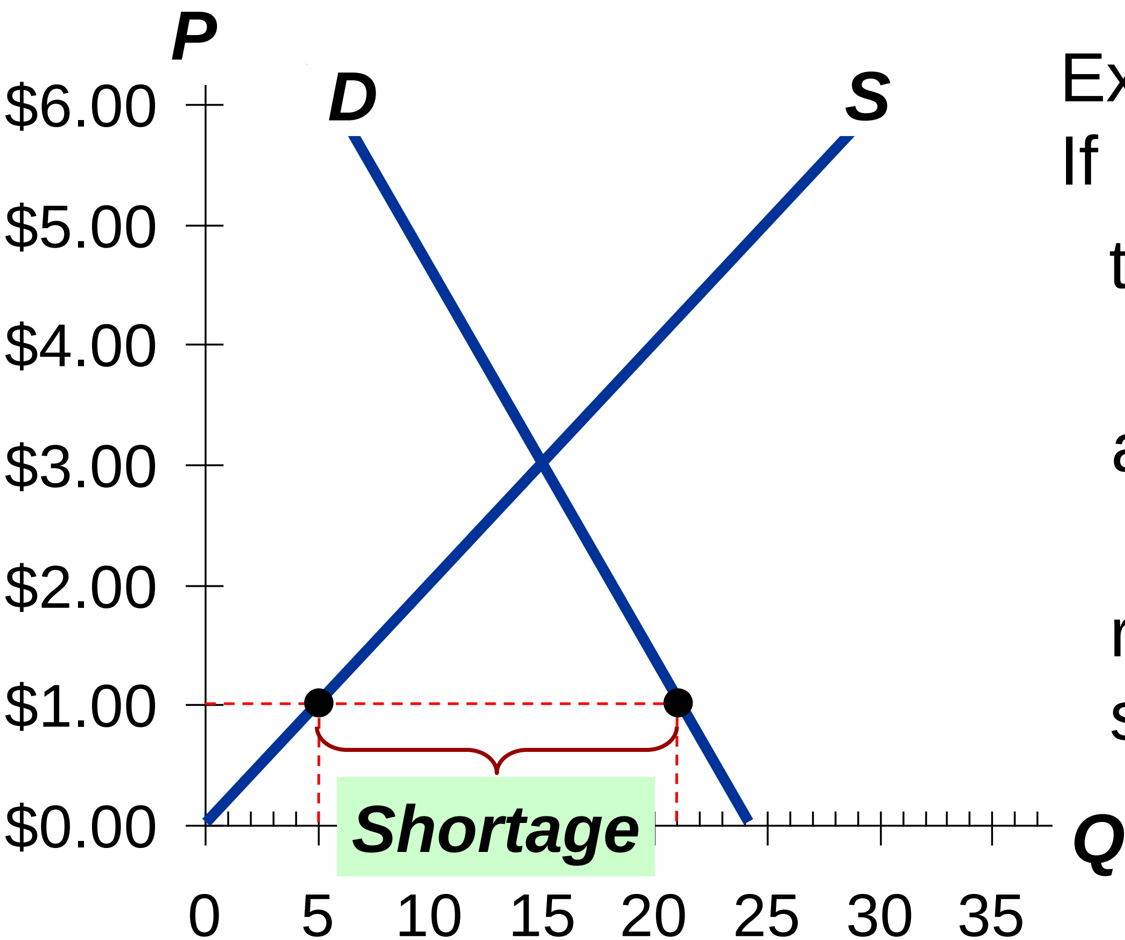
Facing a surplus, sellers try to increase sales by cutting price.

This causes Q^D to rise and Q^S to fall.

Prices continue to fall until market reaches equilibrium.

Shortage (a.k.a. excess demand):

when quantity demanded is greater than quantity supplied



Example:

If $P = \$1$,

then

$Q^D = 21$ lattes

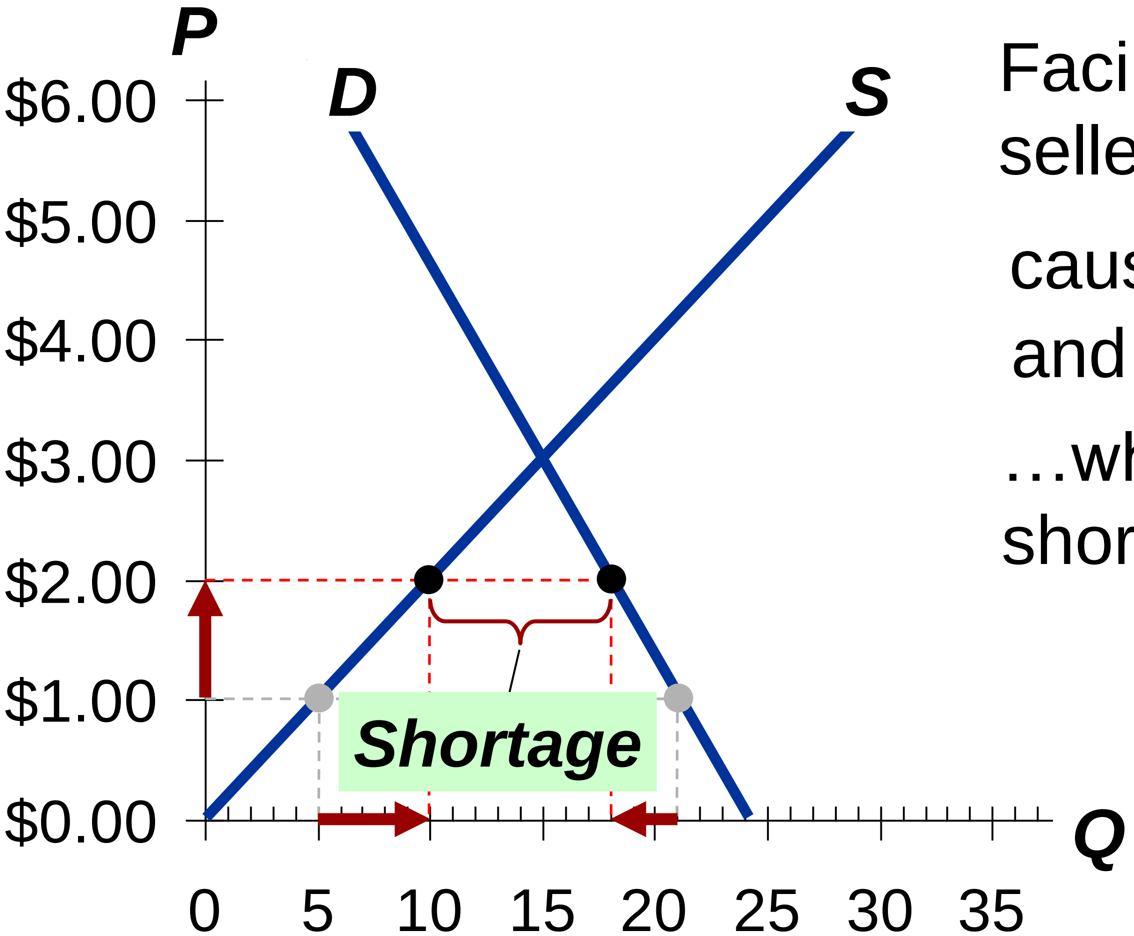
and

$Q^S = 5$ lattes

resulting in a shortage of 16 lattes

Shortage (a.k.a. excess demand):

when quantity demanded is greater than quantity supplied



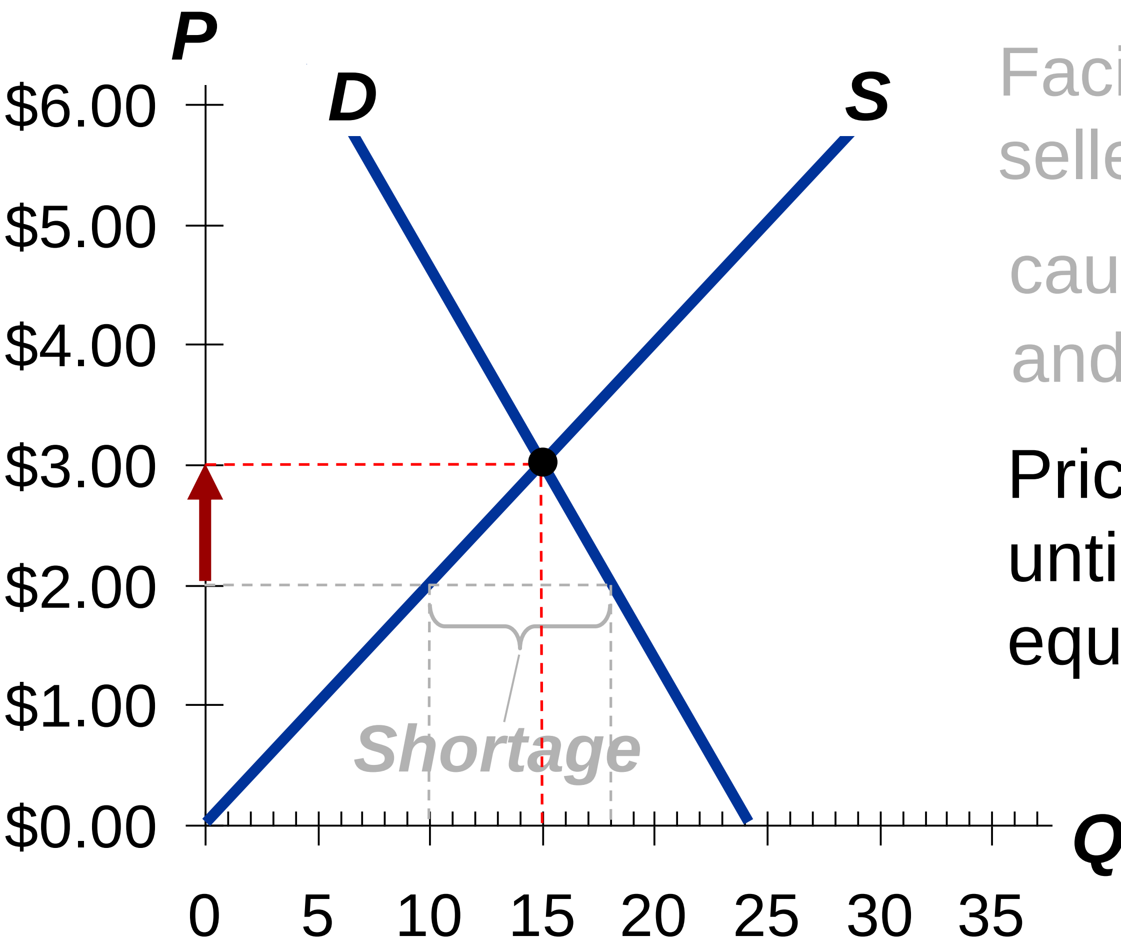
Facing a shortage, sellers raise the price,

causing Q^D to fall and Q^S to rise,

…which reduces the shortage.

Shortage (a.k.a. excess demand):

when quantity demanded is greater than quantity supplied



Facing a shortage, sellers raise the price,

causing Q^D to fall and Q^S to rise.

Prices continue to rise until market reaches equilibrium.

- What will happen to equilibrium price and quantity after a decrease in supply?
- What will happen to equilibrium price and quantity after a increase in supply?
- What will happen to equilibrium price and quantity after a decrease in demand?
- What will happen to equilibrium price and quantity after a increase in demand?