Toronto Tuesday, Sept. 20
Winnipeg Wednesday, Sept. 21

HW 1-d due now! Get it out for me to check!

TTYN about the following (without using notes!):

1. Explain how you would use the concept of opportunity cost in everyday life.
2. Differentiate between increasing and constant opportunity cost PPCs.
3. Explain why the Law of Increasing Opportunity Cost occurs.
4. Explain how you calculate PER UNIT opportunity cost.
5. Explain difference btw productive and allocative efficiency on a PPC.
6. Identify the 2 Shifters of the PPC.
7. Give 2 SPECIFIC scenarios that would shift a PPC outward (Use Pizza and Robots).
8. List 10 types of Soda.

Toronto Tuesday, Sept. 20 | Winnipeg Wednesday, Sept. 21

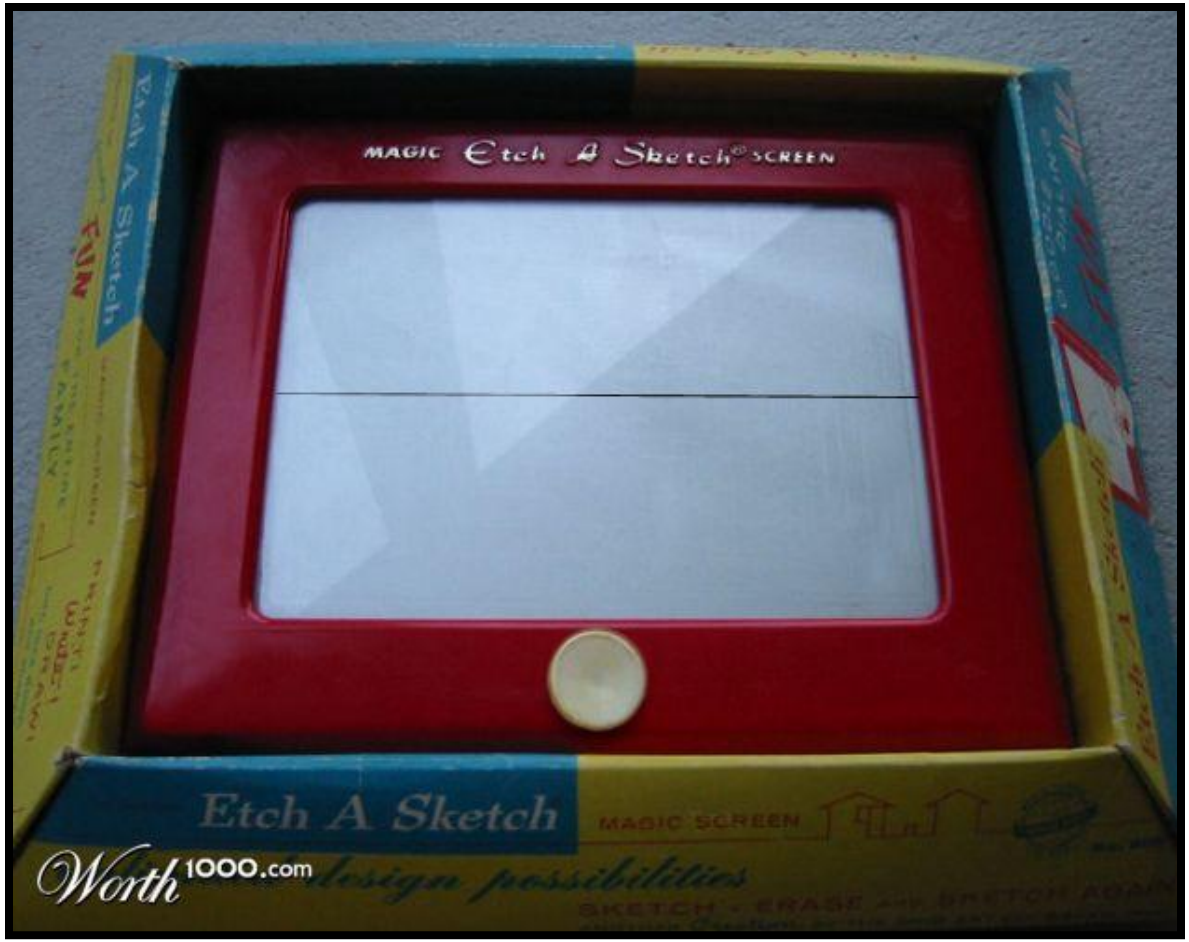
- *Learning targets: I can explain the law of supply. I can describe what happens to quantity supplied when the price of a good changes and I can show that change on a supply graph. I can describe and give examples of* ***non-price determinants*** *for supply ("supply shifters").* ***(Topic 1.5)*** *I can define market equilibrium and show what happens to equilibrium price and quantity when demand or supply shift. I can explain how markets move toward equilibrium when there is a surplus or shortage.* ***(Topic 1.6)***
- **AP Classroom videos + practice questions HW posted**
- **Unit 1 test Monday, 9/26 and Tuesday, 9/27: Who didn't get a study guide?**
- **Agenda:** Review quiz; notes on supply; graphing practice

Scholarship Resources

Quiz Review

Remember normal and inferior goods?

Inferior Goods?



Supply Defined

What is supply? Supply is the different quantities of a good that sellers are willing and able to sell (produce) at different prices.

Supply Defined

What is the Law of Supply?

There is a DIRECT (or positive) relationship between price and quantity supplied.

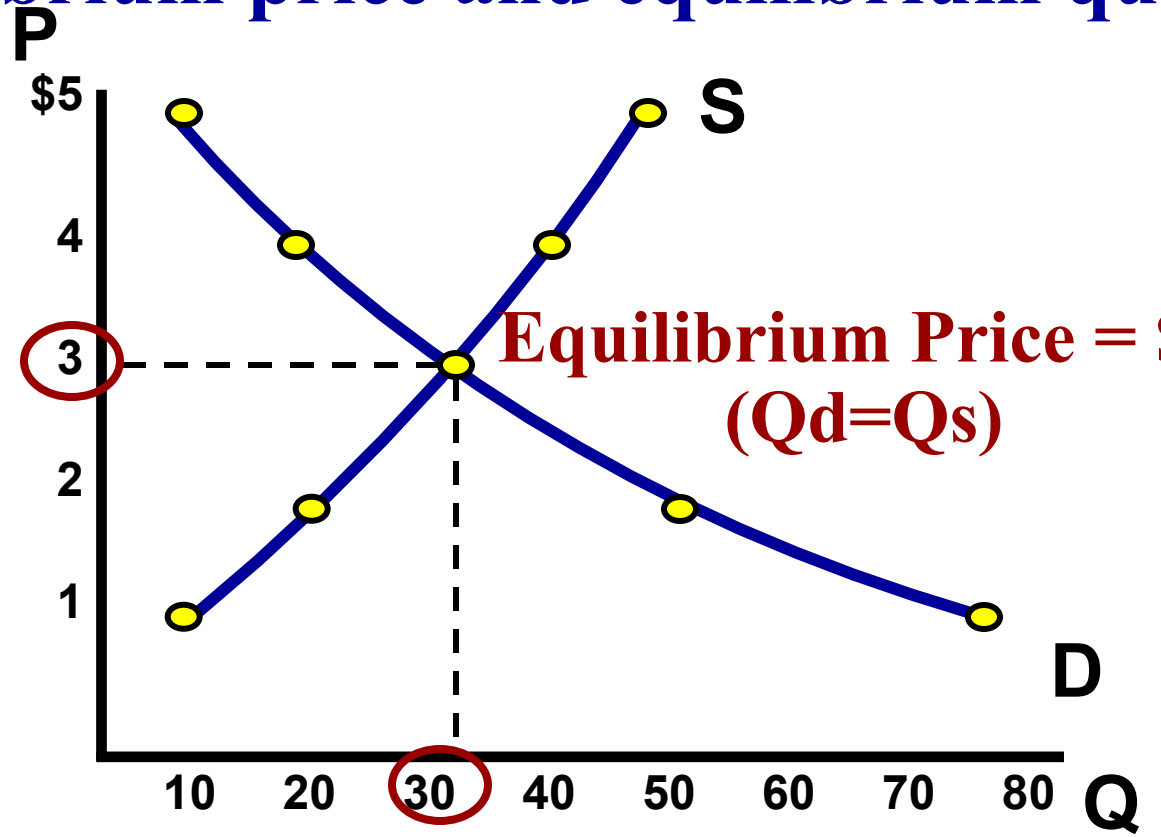
- **As price increases, the quantity produced increases.**
- **As price decreases, the quantity produced decreases.**

Why? Because, at higher prices profit seeking firms have an incentive to produce more.

Supply and Demand are put together to determine equilibrium price and equilibrium quantity

Demand Schedule

P	Qd
$5	10
$4	20
$3	30
$2	50
$1	80



Supply Schedule

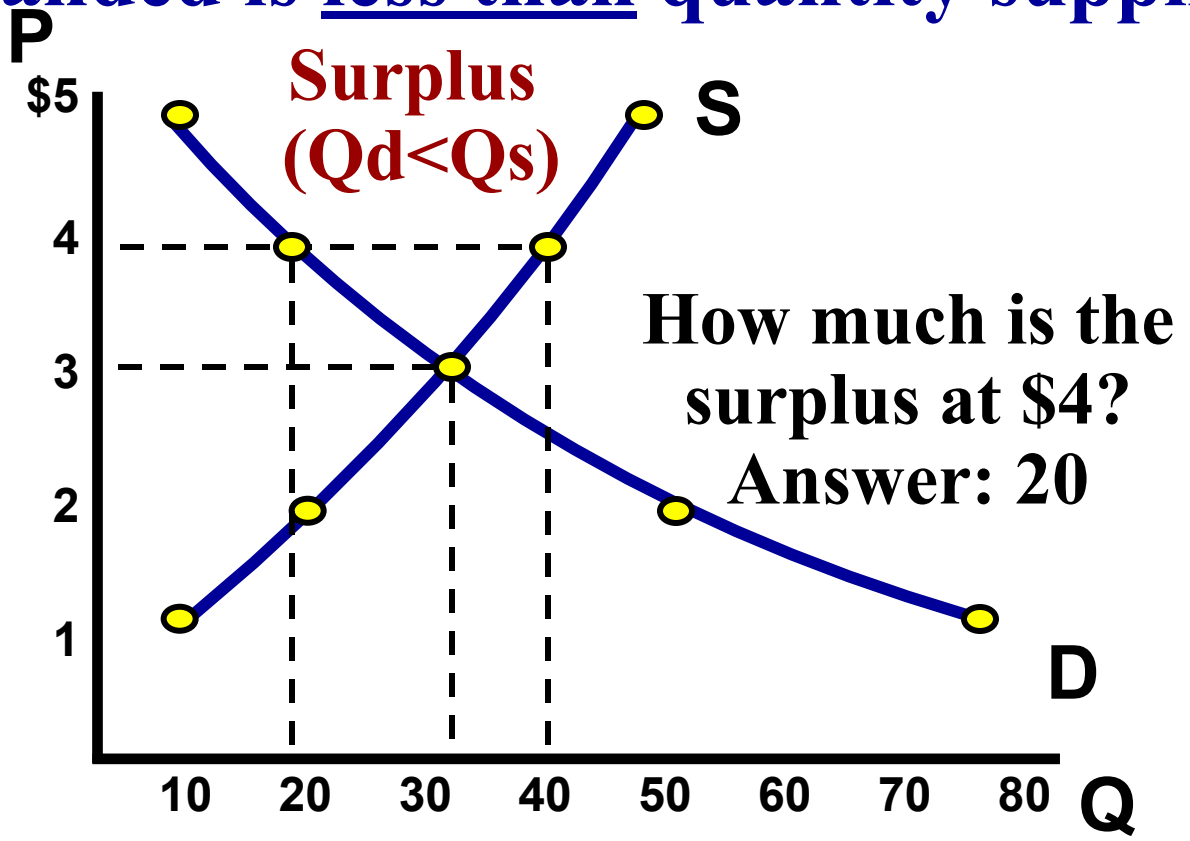
P	Qs
$5	50
$4	40
$3	30
$2	20
$1	10

Equilibrium Quantity is 30

At $4, there is disequilibrium. The quantity demanded is less than quantity supplied.

Demand Schedule

P	Qd
$5	10
$4	20
$3	30
$2	50
$1	80



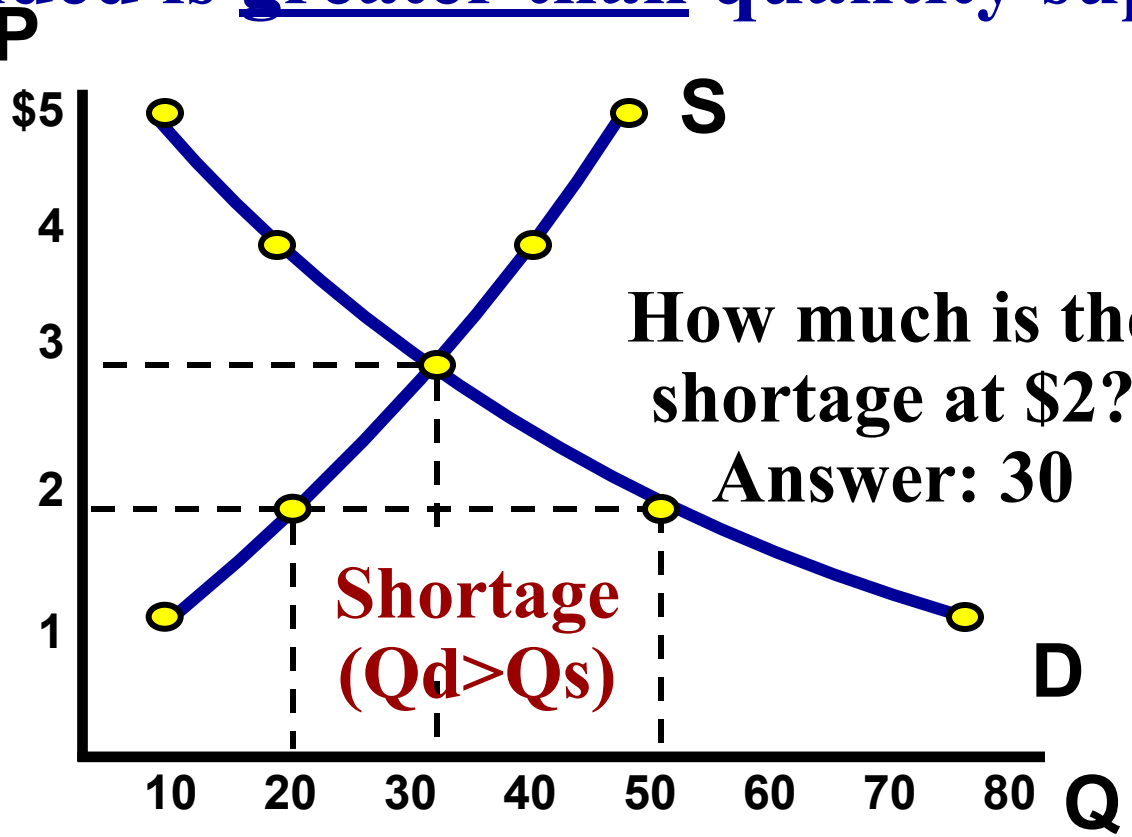
Supply Schedule

P	Qs
$5	50
$4	40
$3	30
$2	20
$1	10

At $2, there is disequilibrium. The quantity demanded is greater than quantity supplied.

Demand Schedule

P	Qd
$5	10
$4	20
$3	30
$2	50
$1	80



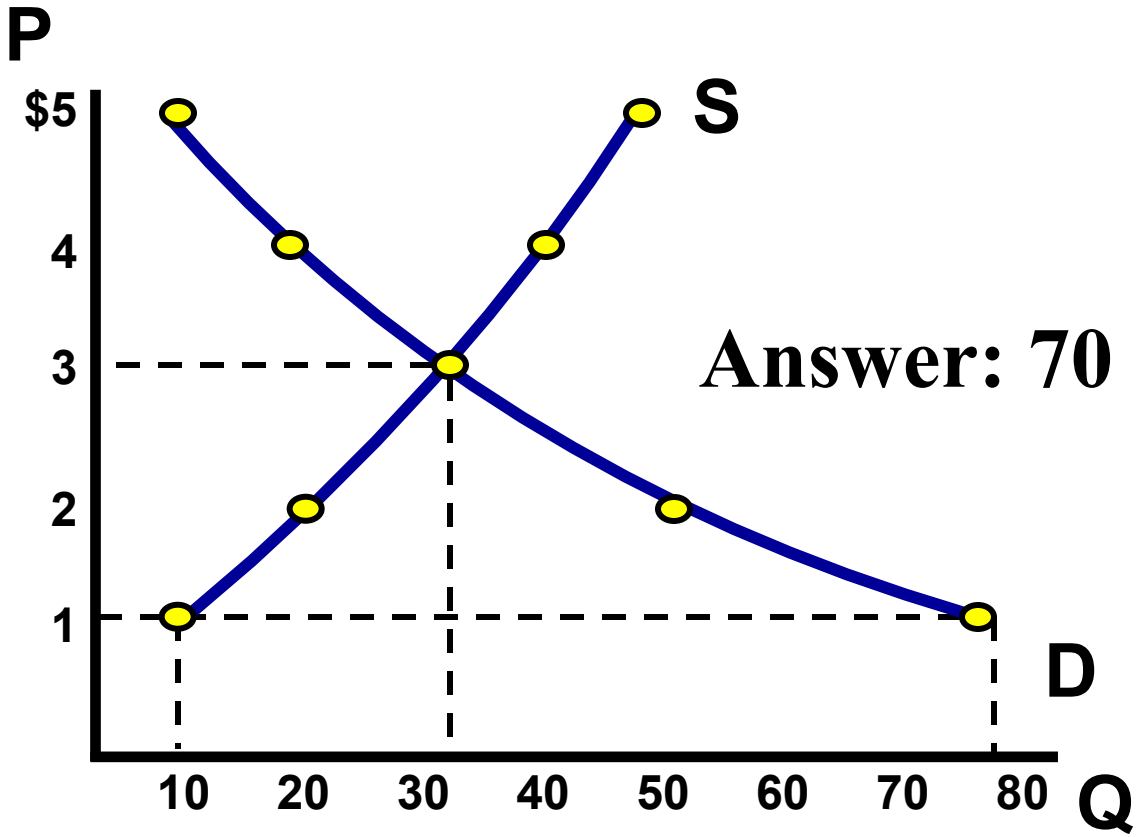
Supply Schedule

P	Qs
$5	50
$4	40
$3	30
$2	20
$1	10

How much is the shortage if the price is $1?

Demand Schedule

P	Qd
$5	10
$4	20
$3	30
$2	50
$1	80



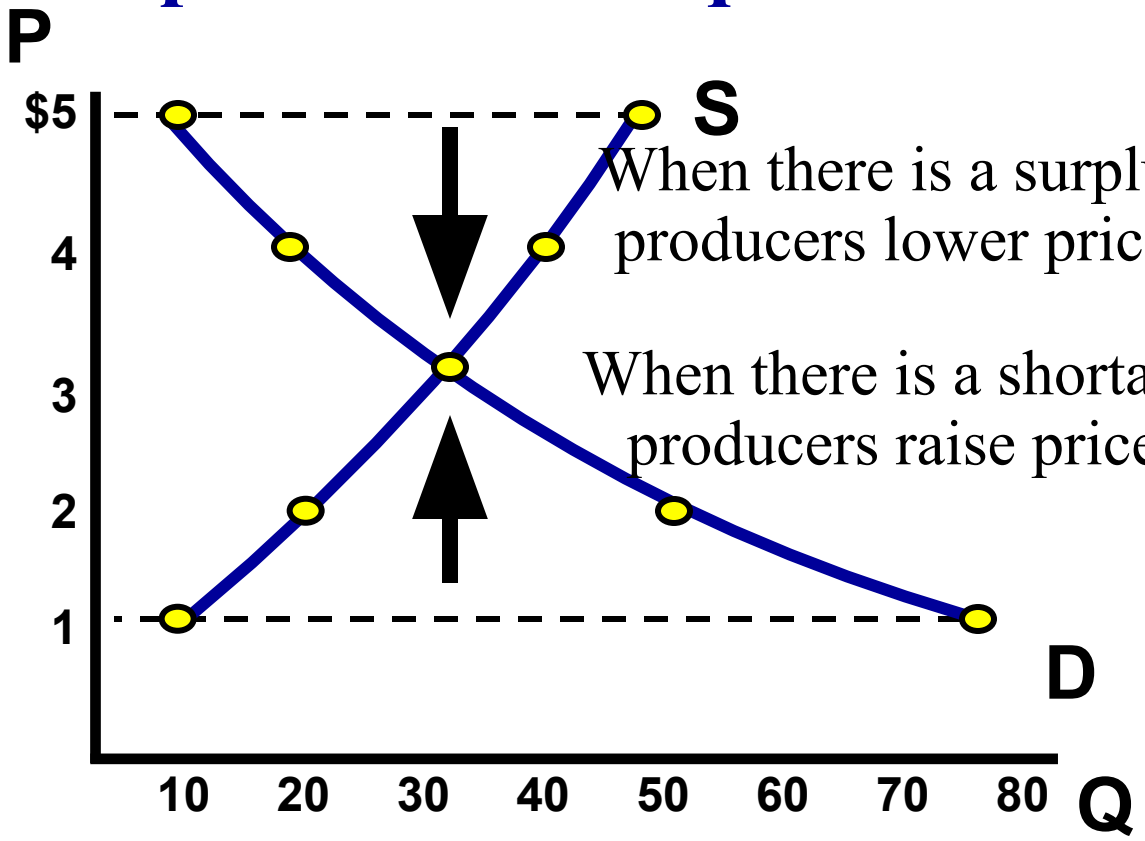
Supply Schedule

P	Qs
$5	50
$4	40
$3	30
$2	20
$1	10

The FREE MARKET system automatically pushes the price toward equilibrium.

Demand Schedule

P	Qd
$5	10
$4	20
$3	30
$2	50
$1	80

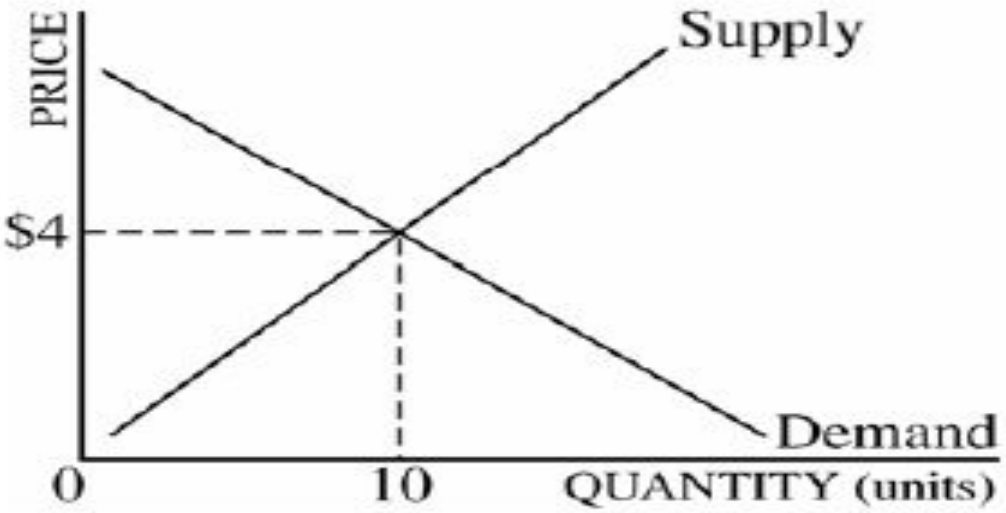


Supply Schedule

P	Qs
$5	50
$4	40
$3	30
$2	20
$1	10

22. Which of the following will occur in a competitive market when the price of a good is less than the equilibrium price?

(A) Price will decrease to eliminate the surplus and restore equilibrium.
(B) Price will decrease to eliminate the shortage and restore equilibrium.
(C) Price will increase to eliminate the surplus and restore equilibrium.
(D) Price will increase to eliminate the shortage and restore equilibrium.
(E) Price will remain constant, because supply will increase to eliminate the shortage.



32. In the market shown in the graph above, at a price of $5, there will be

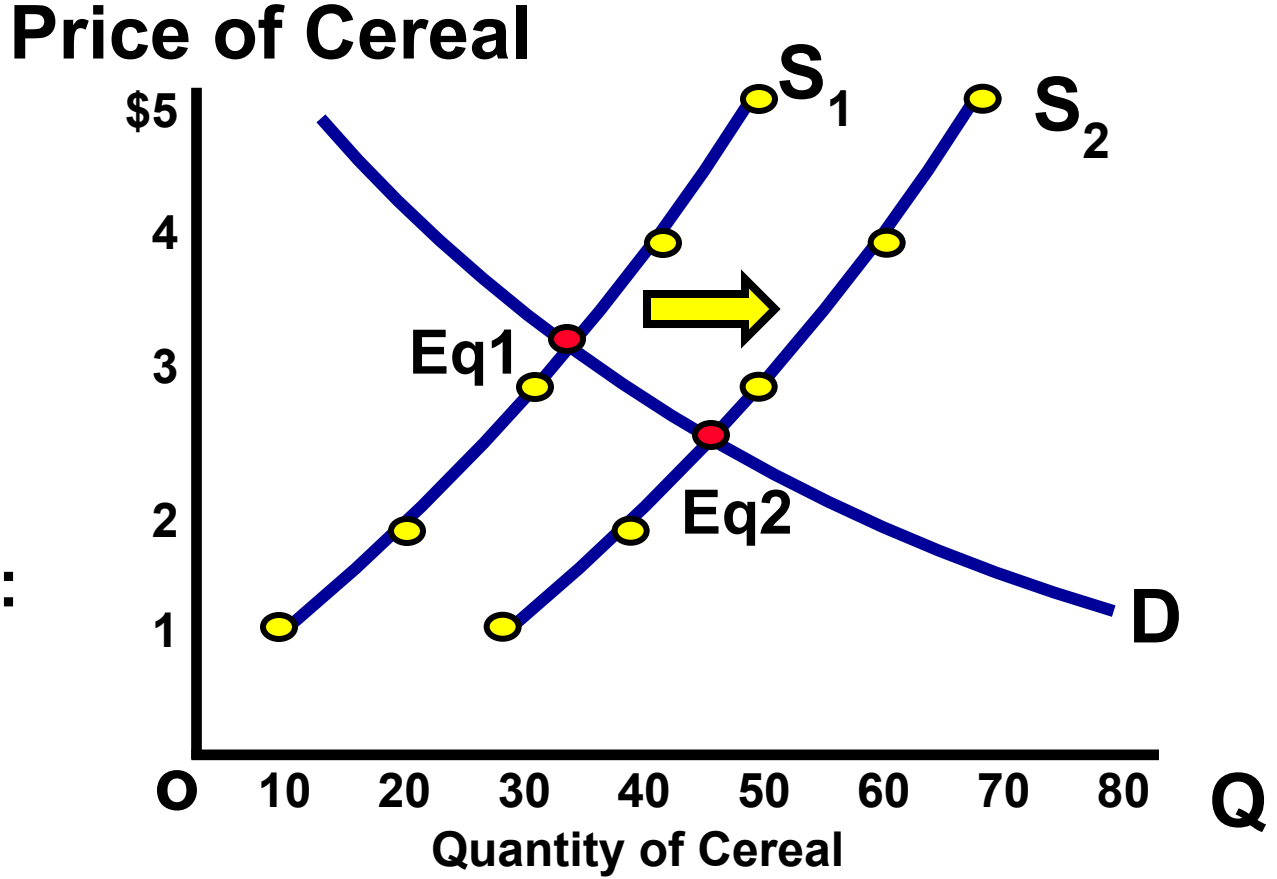
(A) a surplus and the price will eventually fall
(B) a surplus generating a decrease in demand
(C) a shortage and the price will eventually rise
(D) a shortage generating an increase in supply
(E) an increase in supply and a decrease in demand

Increase in Supply

After shift:

Eq. Price/Pe:

Eq. Quantity/Qe:

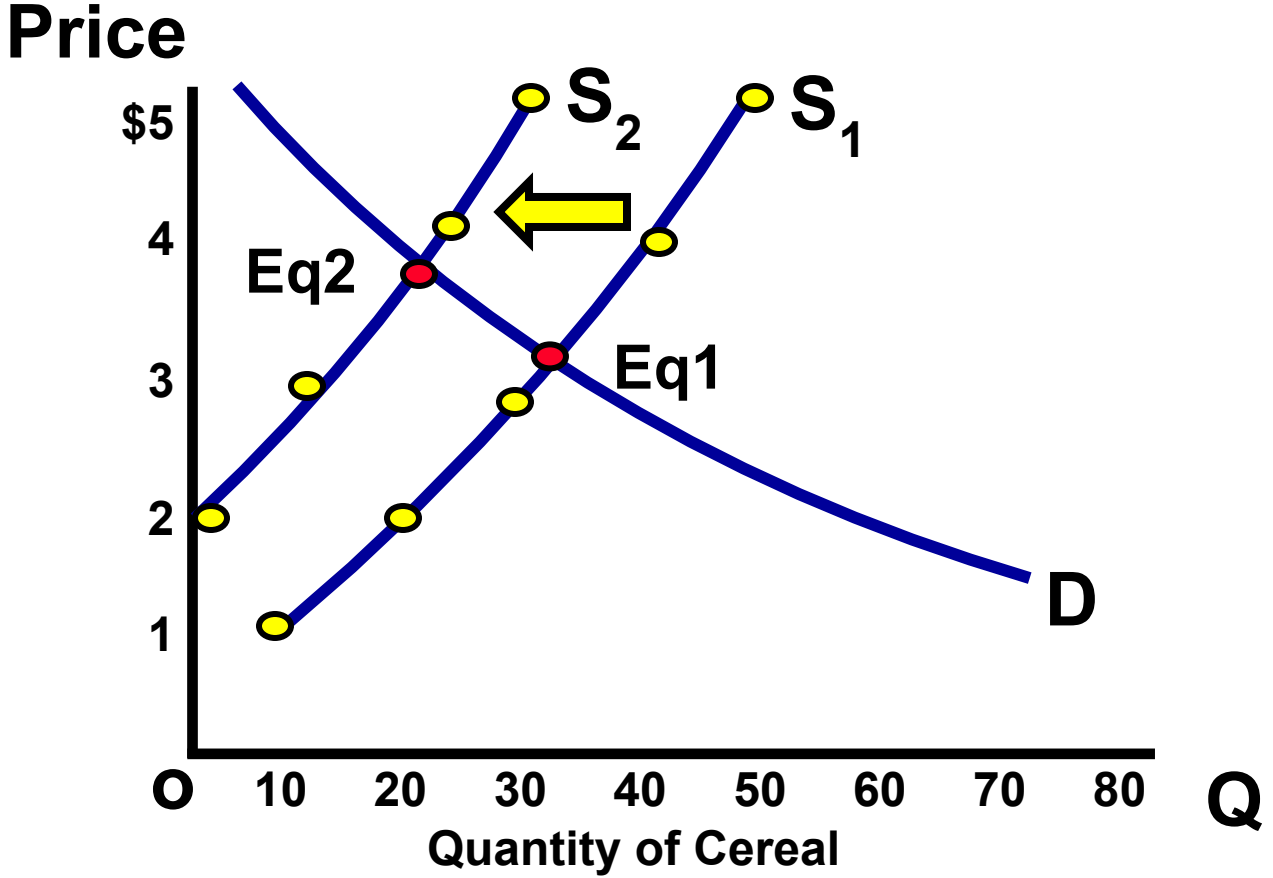


Decrease in Supply

After shift:

Price/P:

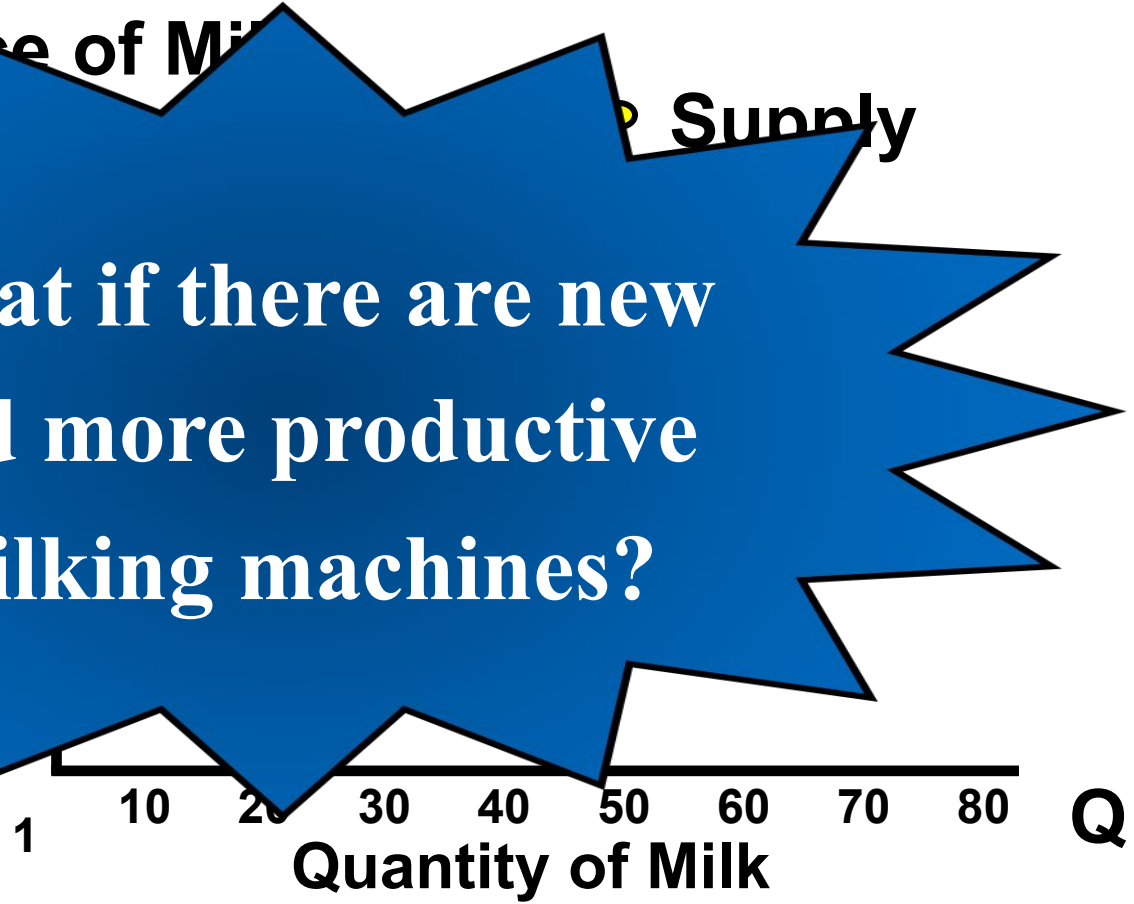
Quantity/Q:



GRAPHING SUPPLY

Supply Schedu

Price	Quan
$5	
$4	
$3	
$2	
$1	10

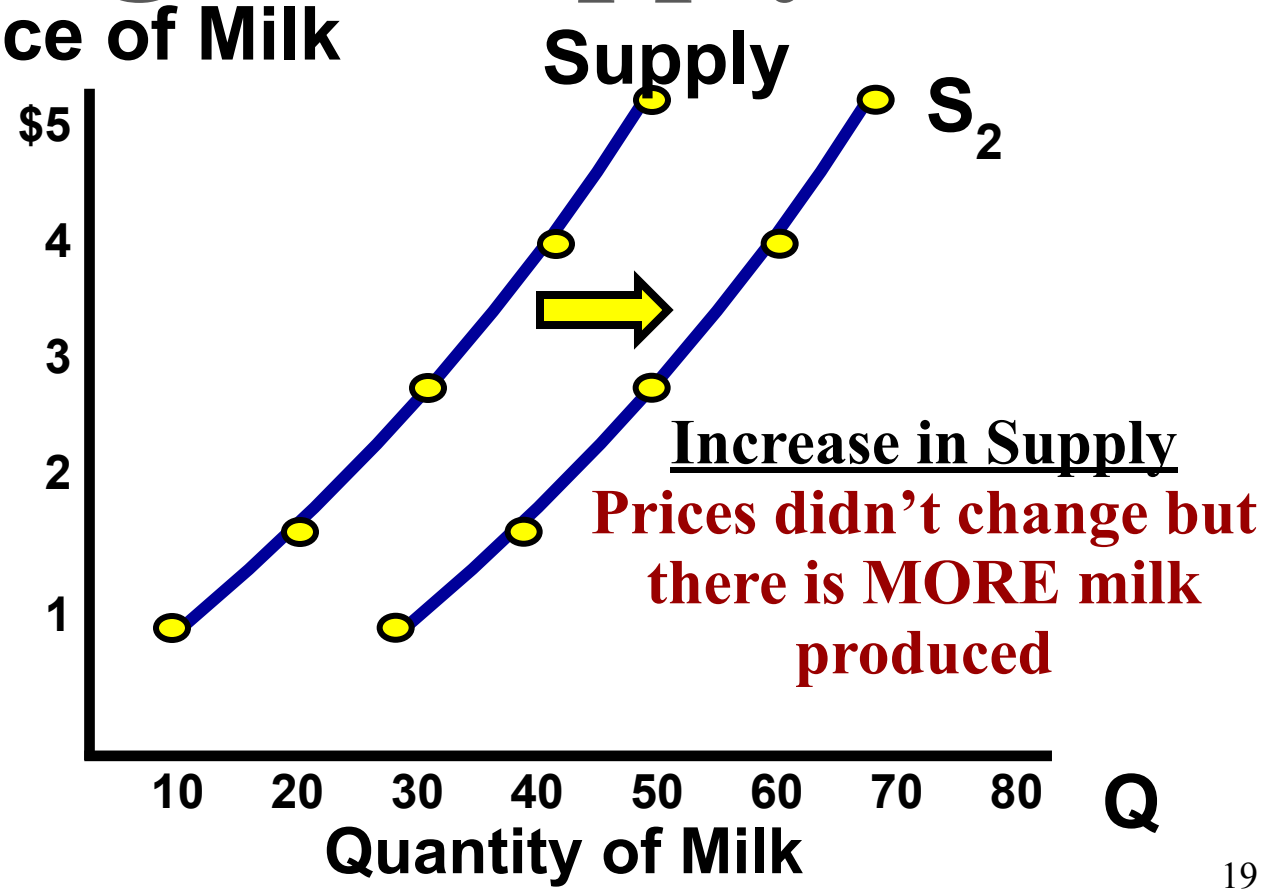


What if there are new and more productive milking machines?

Change in Supply

Supply Schedule

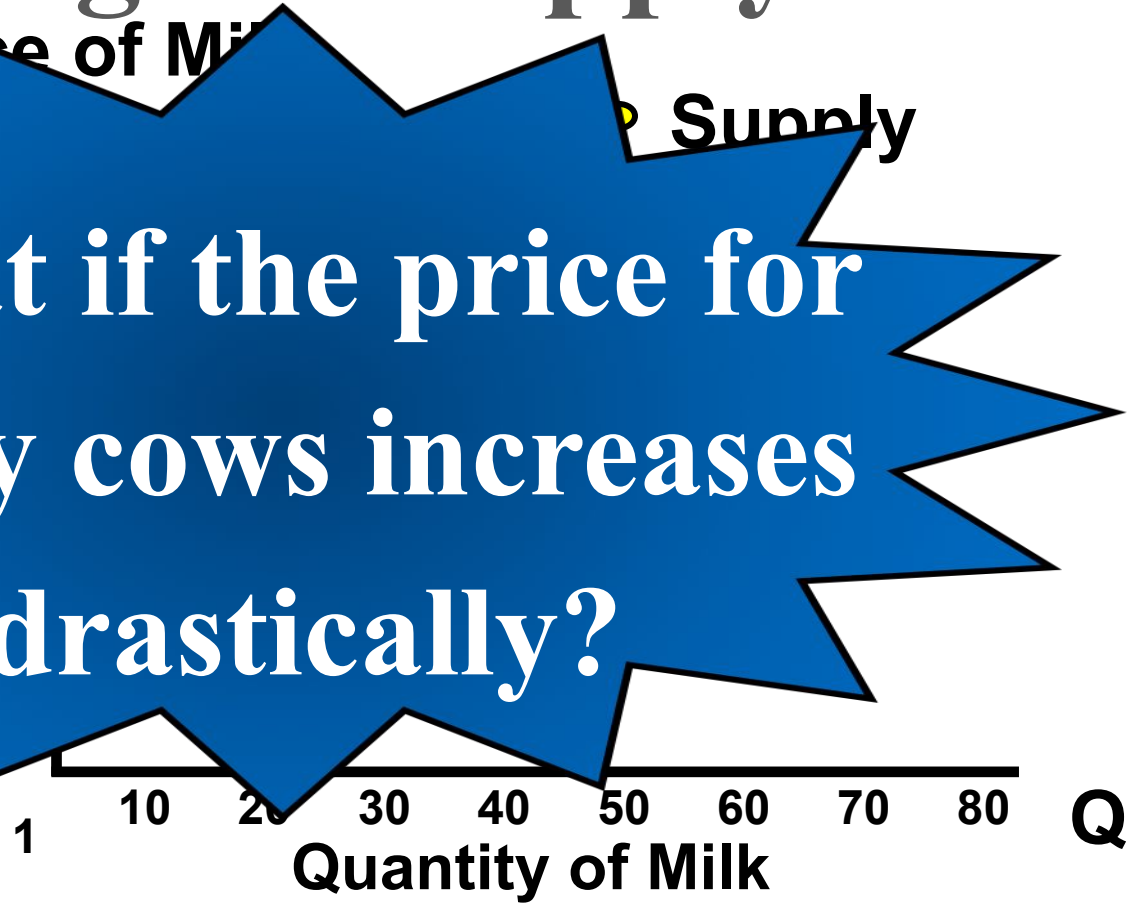
Price	Quantity Supplied
$5	~~50~~ 70
$4	~~40~~ 60
$3	~~30~~ 50
$2	~~20~~ 40
$1	~~10~~ 30



Change in Supply

Supply Schedule

Price	Quantity
$5	
$4	
$3	
$2	
$1	10

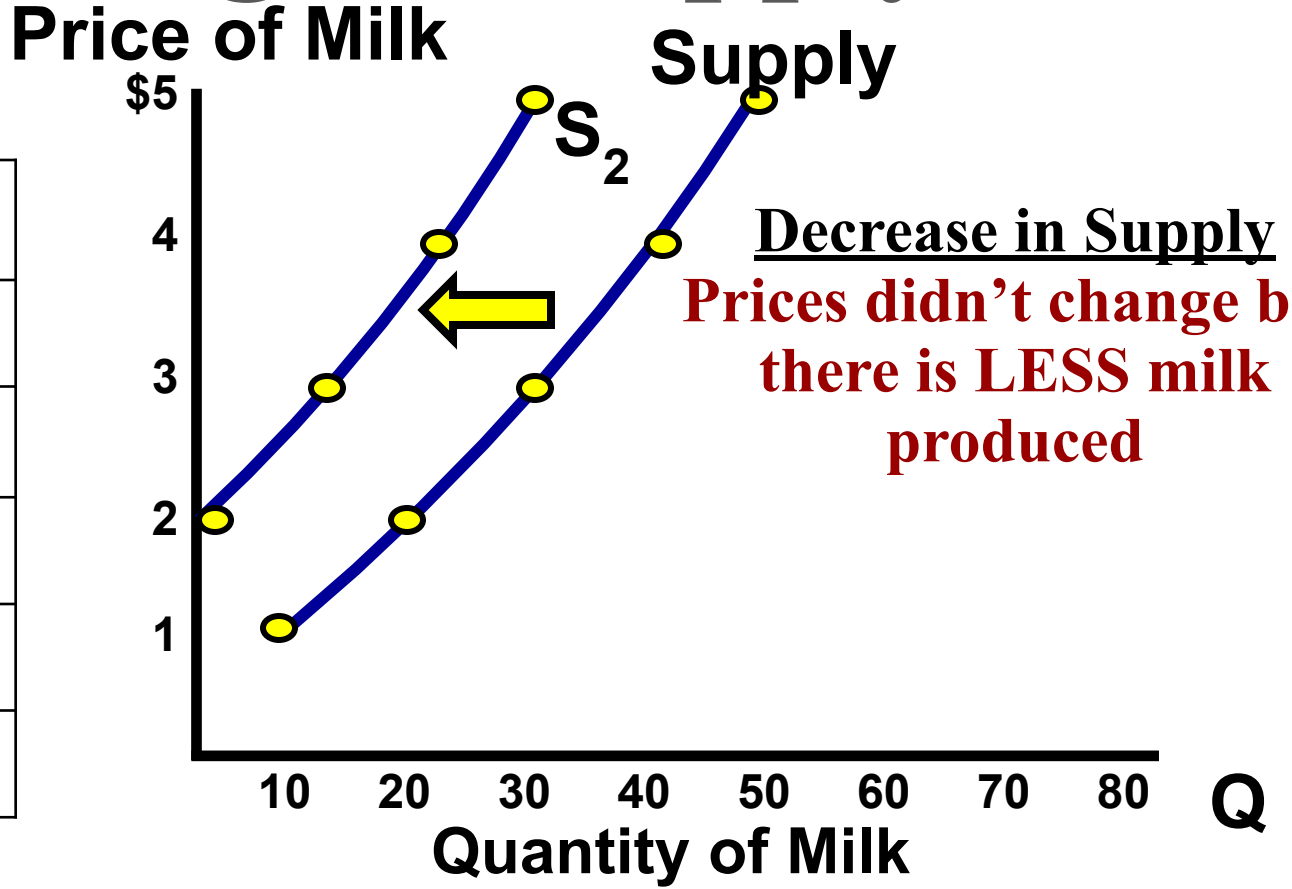


What if the price for dairy cows increases drastically?

Change in Supply

Supply Schedule

Price	Quantity Supplied
$5	~~50~~ 30
$4	~~40~~ 20
$3	~~30~~ 10
$2	~~20~~ 1
$1	~~10~~ 0



Decrease in Supply

Prices didn't change but there is LESS milk produced

What happens when demand or supply change (i.e., not just Qd or Qs)?

- **I**ncrease = moves **R**ight
- **D**ecrease = moves **L**eft
- Meet my friend, IRDL the Turtle:

6 Determinants (SHIFTERS) of Supply

- Expectations of Future Profit
- Availability of inputs (resources)
- Technology or productivity
- Input costs
- Number of Sellers
- Gov't Action: Taxes, Subsidies or regs (a subsidy is a government payment that supports a business or market.)

Expectations of Future Profit (Remember, businesses want profits!)

- If producers expect profits to ↓ in the future, then supply NOW will ↑
- If producers expect profits to ↑ in the future, then supply NOW will ↓

Availability of Inputs/Resources

- If availability of inputs or resources ↓, then supply will ↓
- If availability of inputs or resources ↑, then supply will ↑
  - E.g., if the U.S. discovers more oil, then the supply of gas will ↑

Technology or Productivity

- If technology or productivity ↑, then supply will ↑
  - E.g., If 5G wireless technology is available everywhere, then the supply of wireless service ↑
- If technology or productivity ↓, then supply will ↓ (unlikely)

Input/Resource Costs

- If costs of inputs or resources ↑, then supply will ↓
  - E.g., if the cost of milk ↑, then the supply of ice cream will ↓
- If costs of inputs or resources ↓, then supply will ↑

Number (#) of Producers

- As the # of producers ↑, supply will ↑
  - E.g., if AT&T, Sprint and Verizon start offering smart watches, the supply of watches will ↑
- As the # of producers ↓, supply will ↓

Gov't Action: Taxes, Subsidies or Regulations

- Subsidy is a government payment that supports a business or market, therefore subsidies ↑ supply
- Taxes make production more expensive, so taxes ↓ supply
- If regulations make it cheaper or easier to produce, then supply will ↑; if regs make it more expensive or harder to produce, then supply will ↓

6 Determinants (SHIFTERS) of Supply

- Expectations of Future Profit
- Availability of inputs (resources)
- Technology or productivity
- Input costs
- Number of Sellers
- Gov't Action: Taxes, Subsidies or regs (a subsidy is a government payment that supports a business or market.)

Thrilling Thursday, Sept. 22 | Frilly Friday, Sept. 23

TTYN (no notes!); write down what you don't know:

1. What are the two key aspects of the definition of demand?
2. What is the Law of Demand?
3. Give an example of the substitution effect.
4. Give an example of the income effect.
5. Give an example of the law of diminishing marginal utility.
6. What happens in the market for turkey in November?
7. Name 10 fast food places.

Completed study guide is due <u>beginning of class on day of test</u> if you want to be eligible to complete test corrections!!!

Learning target: I can practice changing markets based on supply and demand determinants. I can review for my unit 1 test.

Double Shifters: Market for Turkey in November

2012 Exam

18. Which of the following changes in the supply of and the demand for a good will definitely result in a decrease in both the equilibrium price and quantity of the good?

	Supply	Demand
(A)	Increase	Increase
(B)	Increase	No change
(C)	No change	Decrease
(D)	Decrease	Increase
(E)	Decrease	Decrease

By Jack Ewing Photographs by Brendan George Ko For The New York Times

Jack Ewing, who covers the global auto industry, reported from La Corne, Quebec.

Sept. 20, 2022

Having more mines will also help contain the price of lithium, which has soared fivefold since mid-2021, pushing the cost of electric vehicles so high that they are out of reach for many drivers. The average new electric car in the United States costs about $66,000, just a few thousand dollars short of the median household income last year.

metal, offering hope that badly needed raw materials can be extracted and refined close to Canadian, U.S. and Mexican auto factories, in line with Biden administration policies that aim to break China's dominance of the battery supply chain.

Shifters Practice with White Boards

1. Is this a supply or demand shifter?
2. Will there be an increase or decrease?
3. What is the determinant (shifter)?
4. Draw the movement on a graph and indicate the shifter with an initial.

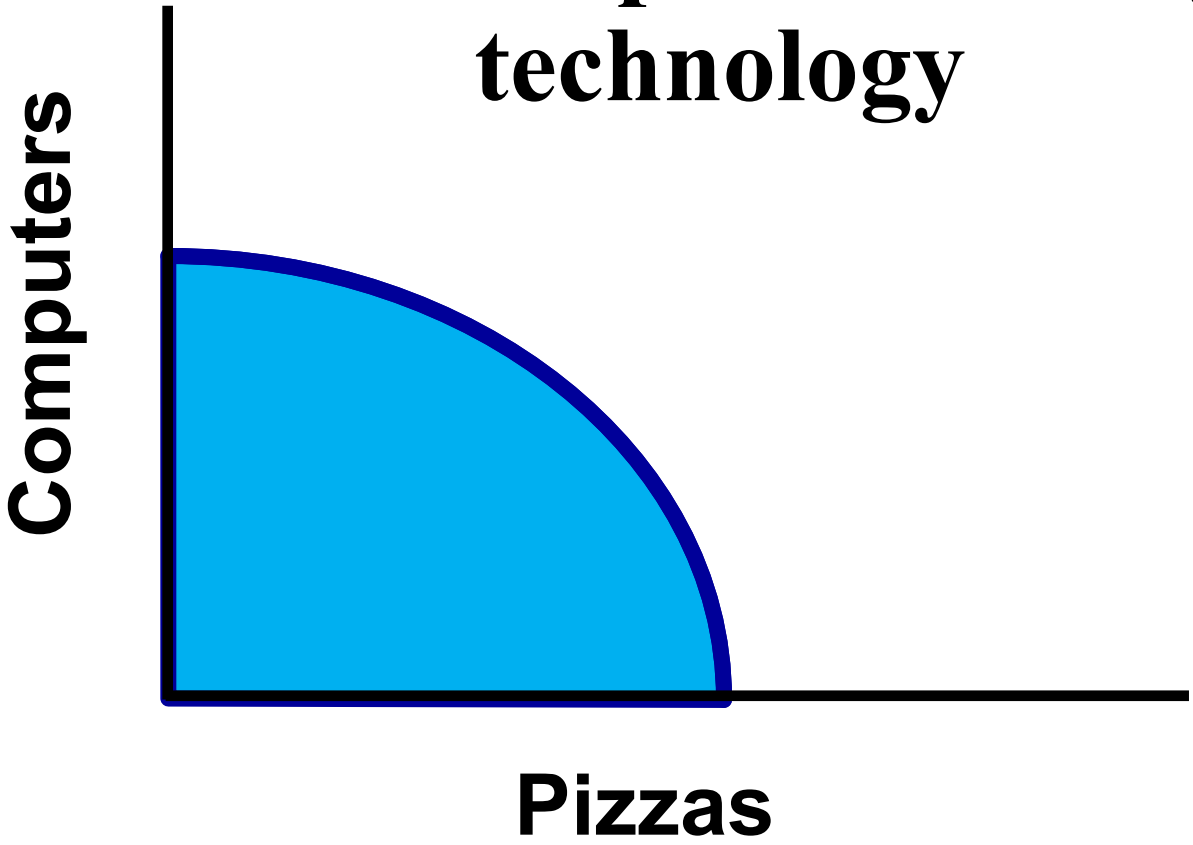
What happens in the market for Maple Syrup when

- A tree pest destroys much of the maple trees in New England.

What happens in the market for Maple Syrup when . . .

The price of maple syrup increases.

New computer-making technology



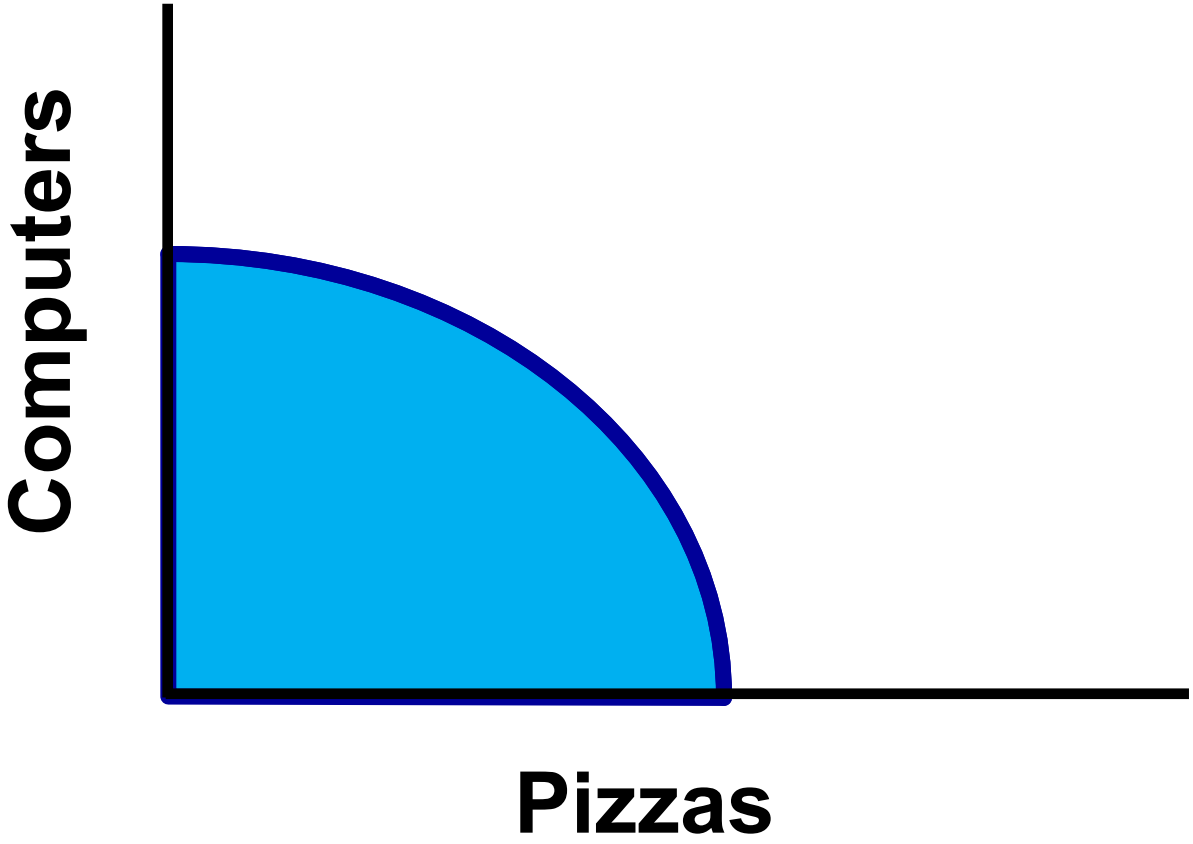
What happens in the market for iPhones when . . .

A new, faster processor makes it easier for Apple to produce iPhones.

What happens in the market for Gatorade when . . .

Powerade drops its prices.

Decrease in the demand for pizza



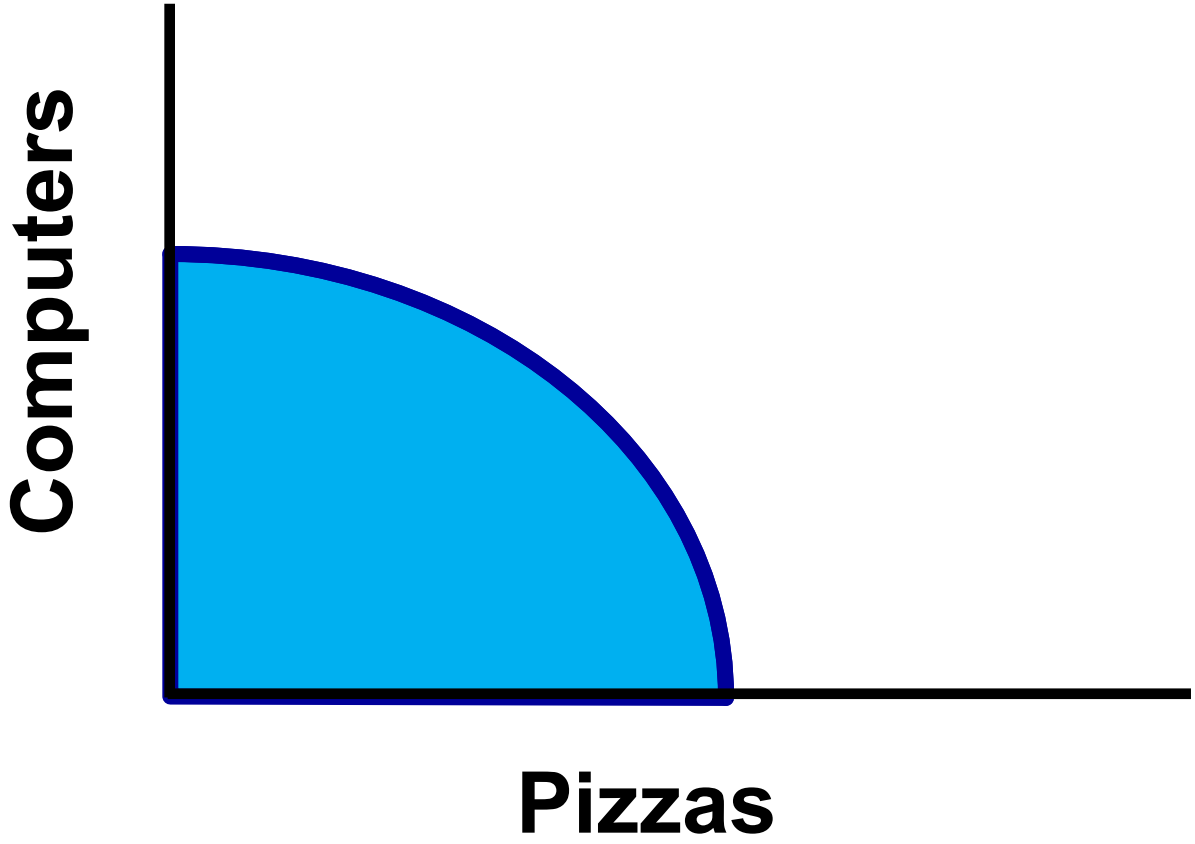
What happens in the market for **Apple Juice** when . . .

The price of apples decreases

What happens in the market for **Apple Juice** when . . .

The American Medical Association says fruit juices make children hyperactive.

Mad cow disease kills 85% of cows



What happens in the market for **Apple Juice** when . . .

A new fertilizer makes apples bigger and faster-growing.

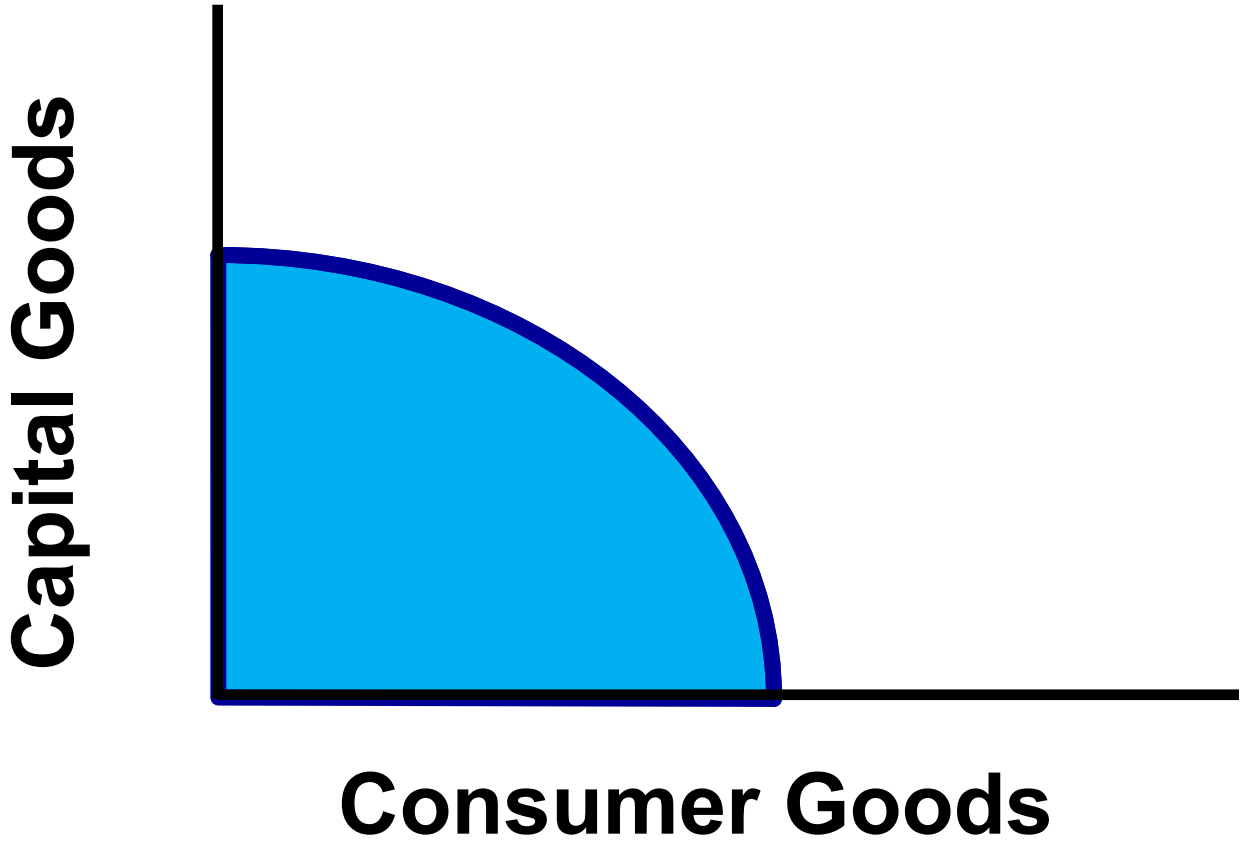
What happens in the market for **Jolly Ranchers** when . . .

Large tariffs are imposed on imported sugar.

What happens in the market for **Champion Sweatshirts** when

Champion expects that next year their profits from selling sweatshirts will decrease.

Significant increases in education



What happens in the market for homemade soaps & candles when

Stay-at-home parents discover how easy it is to make and sell soap and candles.

Cowboy Boots

- Old Navy launches an ad campaign called "Everyone in cowboy boots."

AP Classroom Practice FRQs

Free Response Questions

When you do a FRQ don't forget to R.O.L.L.

- **READ the entire question first**
- **ORGANIZE your answer**
- **LIST your answers like the question**
- **LABEL everything**

FRQ Words

- **"Show":** diagram or draw w/ correct labeling
- **"Explain":** take reader through all of the steps (graphs and symbols are acceptable!)
- **"Identify":** provide a specific answer (could be list or a label on a graph without any explanation)
- **"Calculate"** means to use math (show your work!)

OR: **"Draw"**

OR: **"Indicate"**

The table below shows the number of bushels *of grapes or bushels of tomatoes that France and Italy can produce in one day using the same amount of resources.*

	Bushels of Grapes	*Bushels of Tomatoes*
France	*100*	*25*
Italy	*100*	*50*

(a) Does France, Italy, or neither nation have a comparative advantage in producing grapes? Explain.

(b) Assume France and Italy decide to specialize and trade according to their comparative advantages, and 20 bushels of grapes are exchanged for 8 bushels of tomatoes. Are specialization and trade under these terms beneficial to both France and Italy? Explain.

(c) Suppose the productivity of labor in the production of grapes and tomatoes in France doubles. Assuming France experiences constant opportunity cost in the production of the two products, draw a correctly labeled graph of France's production possibilities curve, with grapes on the horizontal axis and tomatoes on the vertical axis. Plot the numerical values on the graph and show the effect of doubling labor productivity.

(d) Will the doubling of labor productivity in France change France's absolute advantage, change its comparative advantage, or change neither? Explain.

Assume gasoline is sold in a competitive market, the equilibrium price is $50 per barrel, and the equilibrium quantity is 1000 barrels.

(a) Using the numerical values above, draw a correctly labeled graph of the gasoline market and show each of the following.

(i) The equilibrium price

(ii) The equilibrium quantity

(b) At a price of $40 per barrel, will there be a surplus or a shortage in the market? Explain.

(c) Assume new oil wells are discovered. On your graph from part (a), show how this change will affect the equilibrium price and quantity in the market for gasoline.

(d) Assume instead there is an increase in the price of gasoline-operated automobiles. How will this change affect the market for gasoline? Explain.

(e) If both changes in part (c) and part (d) occurred simultaneously, what will happen to the equilibrium price and quantity of gasoline?

Need more graphing practice?

Let’s Kahoot!!