

# ***Everybody Wins When Government Controls Prices!! Or Do They??***

by

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**Lesson Description:** This lesson looks at the effects of price floors and price ceilings. Students will see that there are winners and losers when floors and ceilings are imposed. Students will be given scenarios and asked to evaluate whether they are price floors or price ceilings and who benefits and who loses in each scenario.

**Grade Level:** High School

**Essential Question:** Why might the government set price controls on specific goods or service?

**End of Cluster Expectations (Benchmarks):** Students will be able to demonstrate how individual economic choices are made within the context of a market economy in which markets influence the production and distribution of goods and services.

**Assessment – Multiple Choice:**

Fees on ATMS keep increasing and customers of the banks are complaining to legislators. Congress passes a law that limits how much banks can charge for ATM transactions. What will be the result of this action?

- a. More ATMS will be constructed.
- b. There will be longer lines at ATMs.
- c. Consumers' convenience will improve.
- d. Bank profits will be greater.

Correct Answer: b

**Assessment - Constructed Response:**

Why might a price limit on doctor's visits have a negative effect on the elderly? Explain.

**Desired Response:**

Price limits create shortages. Have to wait longer for appointments. Many doctors may quit so there will be fewer available because they cannot cover the costs of their practice.

**Scoring Rubric:**

2 = The response gives a valid effect with an accurate, relevant explanation.

1 = The response gives a valid effect with an inaccurate or irrelevant explanation.

0 = The response gives an invalid effect with an inaccurate and irrelevant explanation.

**Objectives:**

- Students will be able to analyze price floors.
- Students will be able to analyze price ceilings.
- Students can explain the effects of a price floor using a cost benefit analysis.
- Students can explain the effects of a price ceiling using a cost benefit analysis.

**Prior Knowledge and Skills:** Students need to understand the following economic concepts prior to performing this lesson: supply, demand, equilibrium price, equilibrium quantity, quantity demanded, quantity supplied, efficiency, shortage, and surplus.

**Time to Complete:** One block period or two forty-five minute periods.

**Materials:**

- Overhead projector and transparency markers
- Visual 1 - Pictures of gasoline lines, grain elevators, unemployment, and the South Bronx
- Visual 2 - Survey on Prices
- Activity 1 - Survey on Floors and Ceilings (2 copies per student, one pre and one post)
- Visual 3: - Base Supply and Demand Graph
- Visual 4: - Graph for Apartments (1 transparency and one hard copy per student)
- Visual 5: - Graph for Corn (1 transparency and one hard copy per student)
- Activity 2: - Analyzing Scenarios (1 copy per student)
- Visual 6: - USA Today Survey

**Procedure:**

1. Show pictures of gas lines, the South Bronx, unemployment line and, grain elevators. Ask the students what they think explains shortages or surpluses? How many of you have ever had to wait in line for over a half hour to purchase something you wanted? How would you feel if you did have to do that and do it for most items? (Answers will vary.)
2. Distribute Activity One: Have the students complete the survey about pricing of various goods and services. Have them read each scenario and put on the first line in front of each statement an “A” if they agree with the statement and a “D” if they disagree with the statement. Have them give a brief explanation on their survey. . Place the class results on Visual One. Record them on the board for later reference. Ask the class the reasons for their answers. Set aside.
3. Display Visual Two: Base supply and demand graph. Ask:
  - a. How is the price of a good or service determined? (When consumers and producers interact in a market so that the quantity consumers are demanding

equals the quantity producers have supplied. This is the most efficient place to produce because there are no shortages or surpluses which mean resources have not been over allocated or under allocated to the production and consumption of the good.)

- b. What does it mean to be efficient? (Consumers get what they want at the least cost to them. Producers make a good/service paying the least amount they can for the productive resources they need, then charge the highest price consumers are willing and able to pay.)
- c. How many think that the government should set prices for goods and services? (Answers will vary. Refer back to the survey.)

#### 4. Price Ceilings:

- a. Project Visual 3 for one bedroom apartments. Give each student a copy of the “Supply and Demand for One Bedroom Apartments” graph. What is the market (equilibrium) price and quantity? (\$1200 per month and 70,000 apartments.)
- b. Tell students that the city council of a large city has decided that rents are too high for the average citizen of the city, so they set a maximum price of \$900 that can be charged for a one bedroom apartment. Who is this law designed to help? (Consumers.)
- c. Draw the ceiling at \$900.

What will happen at the price limit set by city council? (At \$900, only 40,000 apartments will be available. **Quantity supplied.** However, consumers want 100,000 at that price. **Quantity demanded.** A shortage of approximately 60,000 apartments will occur.)

Who gains from this ceiling? (The first 40,000 consumers who get apartments pay less than the apartment is worth in the market. The landlords of those first 40,000 units who can cover their costs.)

Who loses from this law? (The consumers who need the housing and would have been willing to pay more to get it. The landlords who can't afford to get only \$900.)

What expenses do landlords have? (Cost to build if new apartments. Property taxes, utilities, maintenance, upkeep, maintenance of grounds.)

What steps could you take if you are a landlord and the government establishes a price ceiling? (Not do as many or any repairs, no painting etc., less replacement of appliances, consumers pay all utilities, no on-site

manager, discriminate on who moves in, charge to get on the waiting list. Don't pay property taxes, abandon the building.)

Why not sell out to some other entrepreneur? (No one wants the property if they are limited as to what they can charge. Housing will not be the use for the land. The South Bronx was a rent controlled area.)

- d. Tell students that the price limit passed by city council is an example of a price ceiling. Define a price ceiling for them. (Price ceiling: a maximum legal price that can be charged for a good or service.) No matter what the good or service a ceiling will always create shortages.
- e. Are there other solutions that might help lower income people obtain housing and at the same time provide incentives that allow landlords to make a profit and provide more units? (Housing vouchers and government subsidies are possible solutions.)

#### 5. Price Floors:

- a. Project Visual 4: Corn Market  
Give each student a copy of the "Supply and Demand for Corn graph. What is the market (equilibrium) price and quantity? (\$5 per bushel and 1,700,000 bushels -  $17 \times 100,000$ .)
- b. Tell students that the government of a nation is concerned because so many of its farmers are selling their farms because they are not able to compete at the equilibrium price. As a result, many laws are passed guaranteeing farmers a minimum price for various commodities. Tell students they will be analyzing what happens when farmers are guaranteed a minimum price for corn.

What will happen at the minimum price guaranteed by Congress? (At \$8, 2,400,000 bushels will be available. **Quantity supplied.** However, consumers want only 800,000 bushels at that price. **Quantity demanded.** A surplus of approximately 1,600,000 bushels will occur. Farmers overproduced and used more resources than the market wanted.)

What will happen to those surpluses? (The government will have to purchase them, then store or dispose of them.)

How does the government pay for the surpluses? (With tax dollars.)

Who benefits from a price floor? (Producers of corn with most going, not to small farmers, but to those with large acreage.)

Who is hurt by this action? (Consumers of corn will be hurt, first by higher prices and also because tax dollars are used to deal with the surplus.)

- c. Explain to students that the above is an example of a price floor. Define price floor. (Price floor: a minimum price for a good or service.)
6. Divide the students into pairs or threes. Give each student Activity 2 Analyzing Scenarios. Students go back to the survey on prices and on the second line in front of each scenario, put an “A” if they agree or a “D” if they disagree with each statement. They should identify whether each scenario is an example of a floor or ceiling.

Have your opinions changed? Why or Why not? In their groups, have them analyze each of the scenarios.

7. Discuss each scenario with the class so that they can identify the winners and losers if controls are put in place. Have each student choose one scenario and create a graph illustrating the effects of the action in the scenario. Students should label the graph and fully explain the effects of the action including who benefits and who is hurt. Students can do this individually, in pairs or in groups. Each student will write a paragraph in which they either agree or disagree with the action taken in the scenario and explain why. If they choose to agree with a price ceiling or price floor, they should clearly explain why the benefits to the few outweigh the costs to the many.

**Closure:**

Have students answer the following questions:

1. What is a price ceiling? (Government sets a maximum price that can be charged for a good or service. Supposed to protect consumers.)
2. What are the effects on the market for that good? (It creates shortages because producers cannot cover their costs if they produce more. It's an under allocation of resources.)
3. What is a price floor? (Government sets a minimum price that producers will charge. Another way of putting it is that the government will guarantee the price to protect producers.)
4. What are the effects of a price floor? (It creates surpluses because the producers use more resources to make the good or service than consumers are willing to pay. An over allocation of resources. Government pays and stores for most floors are agricultural goods.)
5. What does it look like on a supply and demand graph? (A ceiling is set below equilibrium and the floor is set above.)

**Assessment:** Display Visual 6. Ask students how they would vote on this survey? Have each one choose one of the markets to analyze by using the analytical tool from Activity 2.

**Tips for the Teacher:**

Each block for price on the corn graph is 40 cents which makes its use somewhat awkward.

**Extension or Reinforcement Ideas:**

There are often stories in newspapers about proposed price floors or price ceilings. These articles provide practical applications of the concepts. If the predicted shortage of natural gas drives up heating prices, cries for a price ceiling will erupt. Visual 6 is a survey of consumers from November 4, 2004. Have the students write editorials in which they support or reject price controls on one of the goods or services mentioned in the survey.

## **Visual 1**

## **Visual 1 (Continued)**



## **Visual 1 (Continued)**

## **Visual 1 (Continued)**

## Visual 2

### Survey on Price Setting

Put an “A” on the first line if you **agree** with the statement and a “D:” if you **disagree**.  
Give a reason for your answer after the statement.

\_\_\_\_\_ 1. Because they are necessary, the government should not permit doctors charge more than \$25 for an office visit.  
**Explain:**

\_\_\_\_\_ 2. The government should set a maximum price for heating oil.  
**Explain:**

\_\_\_\_\_ 3. There should be a limit on the amount cell phone companies charge.  
**Explain:**

\_\_\_\_\_ 4. Dairy farmers should be guaranteed a minimum price for their milk to make sure we have a good supply.  
**Explain:**

\_\_\_\_\_ 5. If gasoline prices get too high, the government should set a limit on them.  
**Explain:**

\_\_\_\_\_ 6. The minimum wage should be higher.  
**Explain:**

## Activity 1

Name: \_\_\_\_\_

### Survey on Price Setting

Put an “A” on the first line if you **agree** with the statement and a “D:” if you **disagree**.  
Give a reason for your answer after the statement.

\_\_\_\_\_ 1. Because they are necessary, the government should not permit doctors charge more than \$25 for an office visit.  
**Explain:**

\_\_\_\_\_ 2. The government should set a maximum price for heating oil.  
**Explain:**

\_\_\_\_\_ 3. There should be a limit on the amount cell phone companies charge.  
**Explain:**

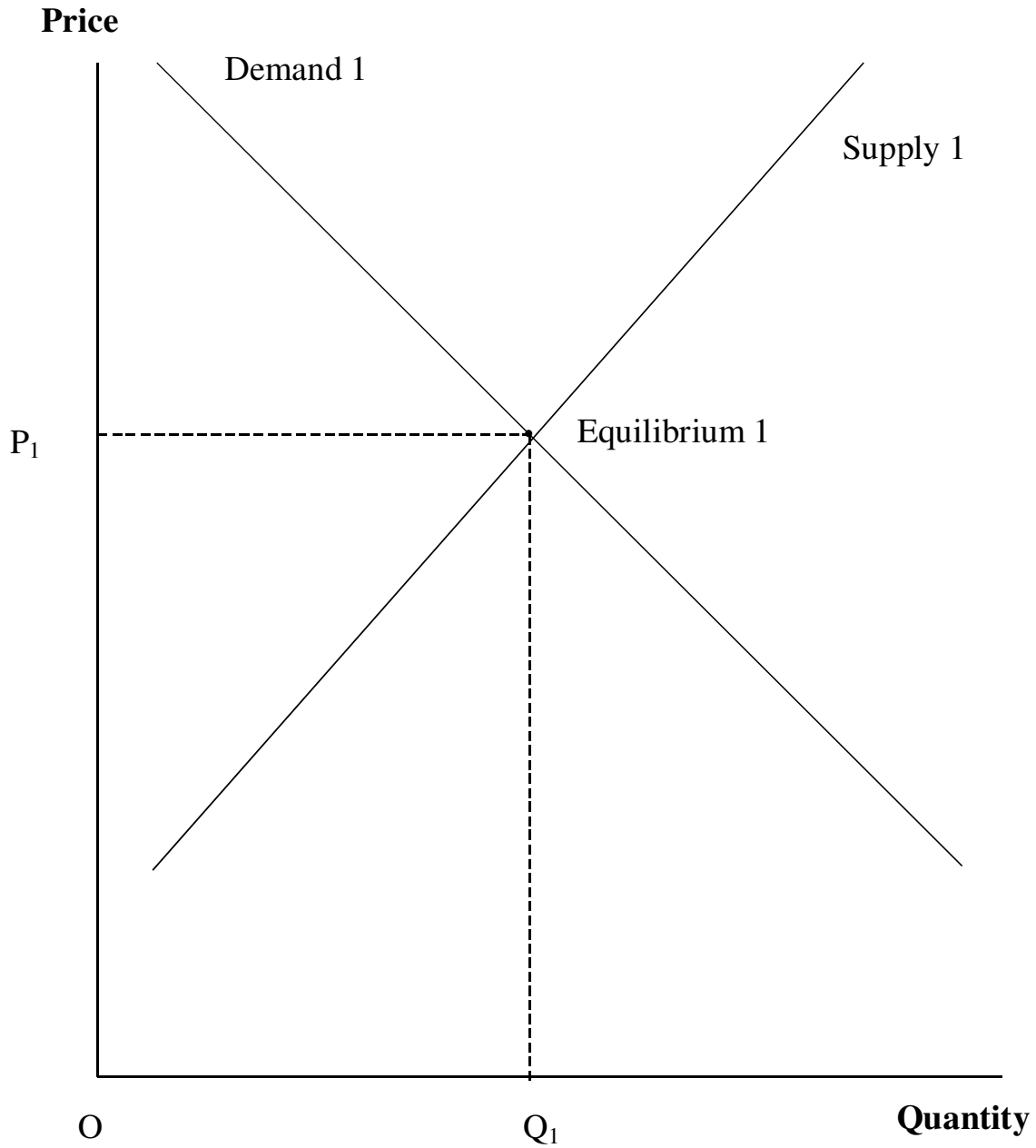
\_\_\_\_\_ 4. Dairy farmers should be guaranteed a minimum price for their milk to make sure we have a good supply.  
**Explain:**

\_\_\_\_\_ 5. If gasoline prices get too high, the government should set a limit on them.  
**Explain:**

\_\_\_\_\_ 6. The minimum wage should be higher.  
**Explain:**

### Visual 3

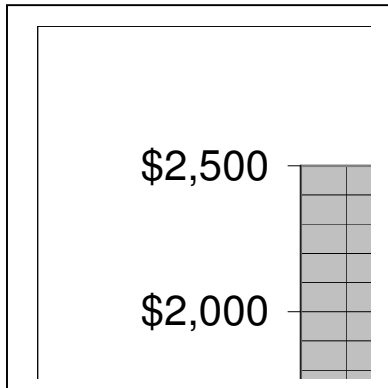
## Supply & Demand Base Graph



Effects on: Price  
Quantity

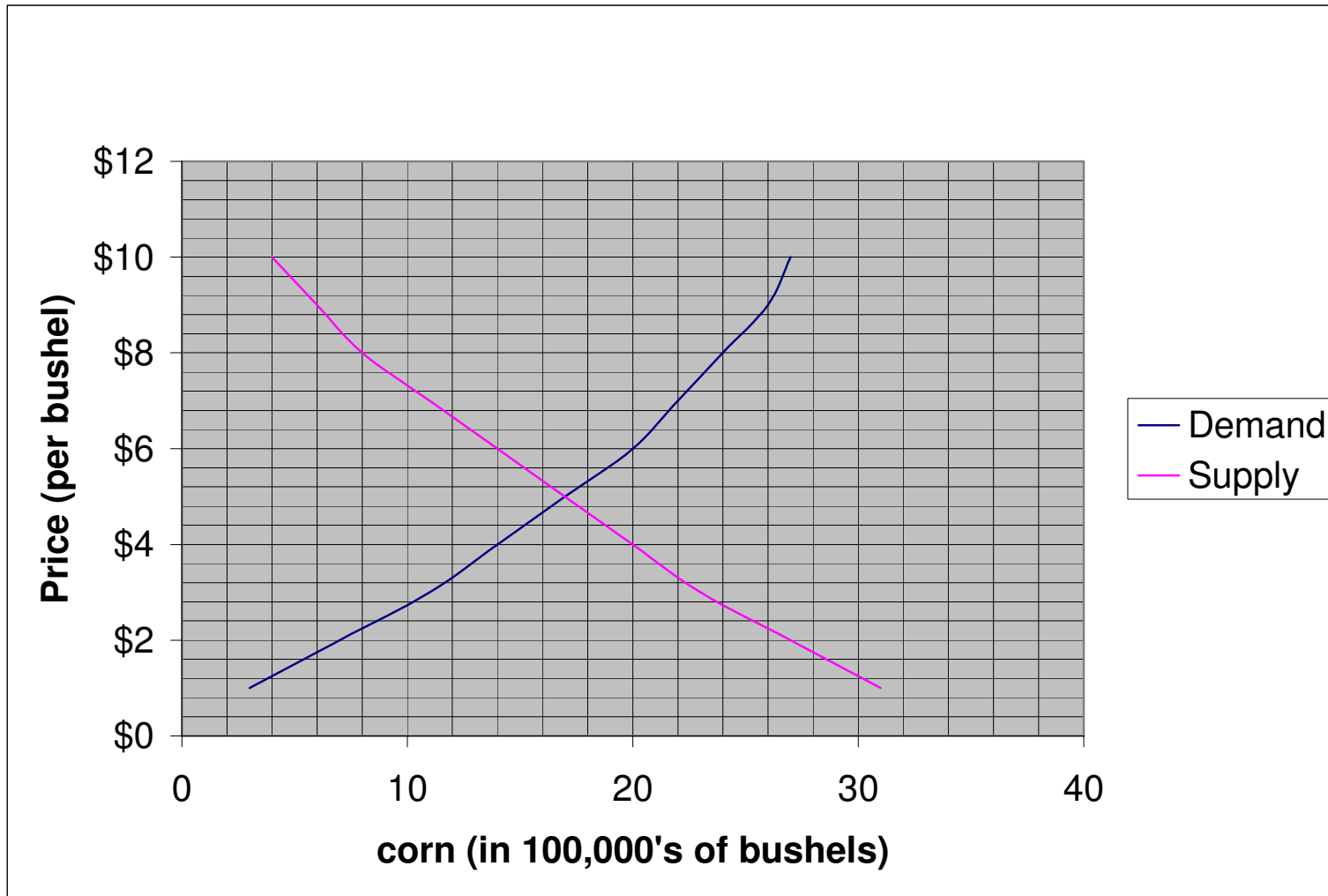
## Visual 4

### Supply and Demand for One Bedroom Apartments



### Visual 5

## Supply and Demand for Corn



## Activity 2

### Cost/Benefit Analysis of Price Floors and Price Ceilings

| Scenario   | Price Floor or Price Ceiling + (Causes What?) | Costs and Losers | Benefits and Gainers |
|--|---|------------------|----------------------|
| <p><b>1. Because they are necessary, the government should make doctors charge no more than \$25 per office visit.</b></p> |   |                  |                      |
| <p><b>2. The government should set a maximum price for heating oil.</b></p>  |   |                  |                      |



### Activity 2 (Continued)

| Scenario   | Price Floor or Price Ceiling + (Causes What?) | Costs and Losers | Benefits and Gainers |
|--|---|------------------|----------------------|
| <b>3. There should be a limit set on the rates cell phone companies can charge.</b>                    |   |                  |                      |
| <b>4. Dairy farmers should be guaranteed a minimum price for their milk so there is enough supply.</b> |   |                  |                      |

## Activity 2 (Continued)

| <b>Scenario</b>  | <b>Price Floor or Price Ceiling + (Causes What?)</b> | <b>Costs and Losers</b> | <b>Benefits and Gainers</b> |
|--|--|-------------------------|-----------------------------|
| <b>5. Because gasoline is so important, the government should set a limit on how much gas stations charge.</b> |  |                         |                             |
| <b>6. The minimum wage should be higher.</b>   |  |                         |                             |

## Activity 2 - Answers

### Cost/Benefit Analysis of Price Floors and Price Ceilings

| Scenario   | Price Floor or Price Ceiling + (Causes What?) | Costs and Losers  | Benefits and Gainers   |
|--|---|---|--|
| <p><b>1. Because they are necessary, the government should make doctors charge no more than \$25 per office visit.</b></p> | <p>Price Ceiling which creates shortages</p>  | <p><u>Doctors</u>: cannot cover the costs of running their business which include facility, salaries for staff, malpractice insurance, etc. Had very high opportunity costs to get training plus the lost income for that time period. No one wants to go into the profession because of income limits.<br/><u>Patients</u>: trouble getting timely appointments, time with doctor becomes less, less choices of doctors, decrease in quality overall, can't get appointments at all.</p> | <p><u>Patients</u>: with low and fixed incomes who get appointments. Those who can afford to pay and get in have more income for other things.<br/><u>Elected officials</u>: looks like they are trying to help consumers.</p> |
| <p><b>2. The government should set a maximum price for heating oil.</b></p>  | <p>Price Ceiling which creates shortages</p>  | <p><u>Consumers</u>: There will be shortages. People will not be able to get as much as they would be willing to pay for. Problems from lack of heat include illness, frozen pipes that have to be replaced and no plumbing until repaired.<br/><u>Producers</u> Some lose business and may close.</p>  | <p><u>Consumers</u>: Those who get the oil at the lower price.<br/><u>Elected officials</u>: looks like they are trying to help consumers.</p>   |

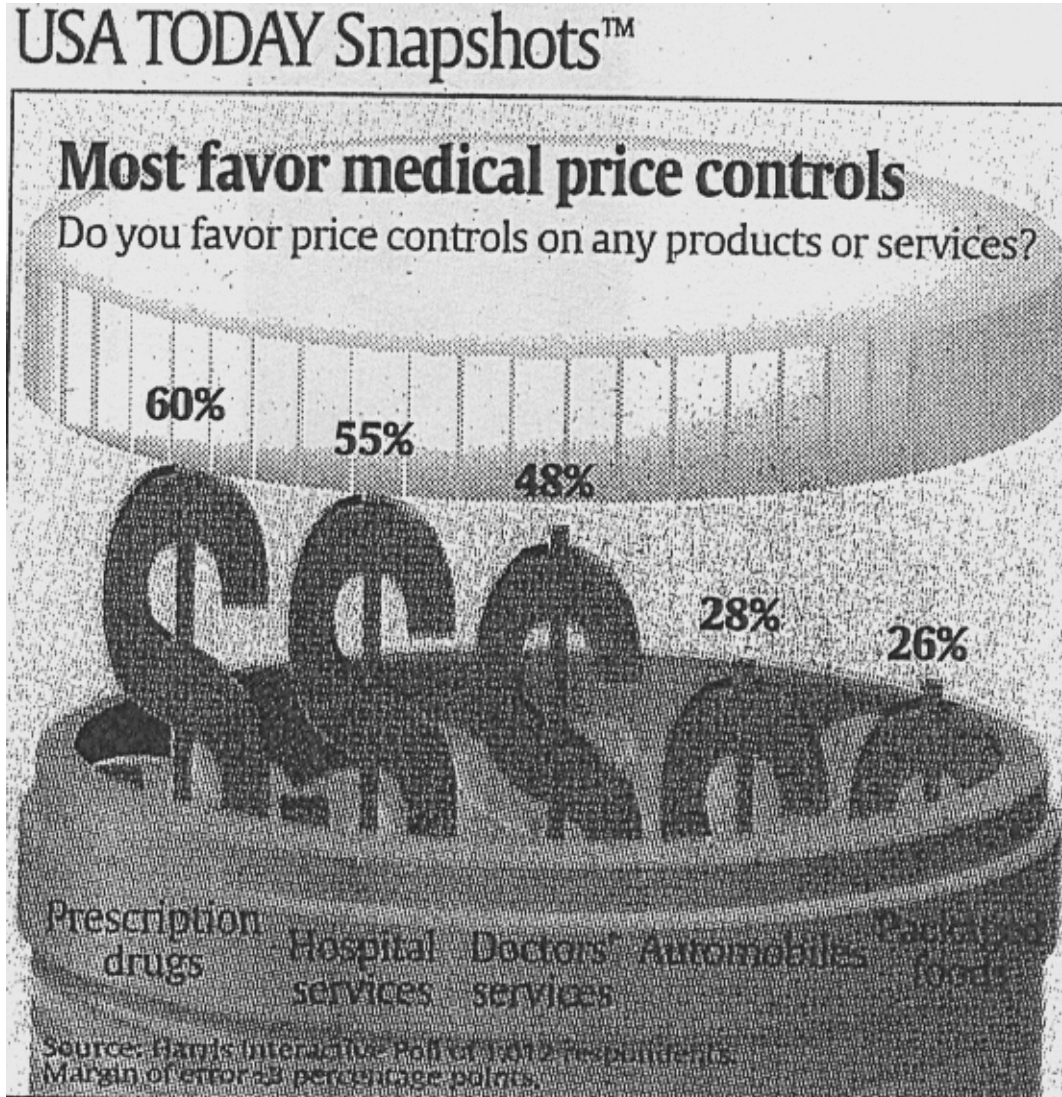
## Activity 2 – Answers (Continued)

| Scenario  | Price Floor or Price Ceiling + (Causes What?)           | Costs and Losers  | Benefits and Gainers  |
|---|---|---|---|
| <p><b>3. There should be a limit set on the rates cell phone companies can charge.</b></p>                    | <p><u>Ceiling</u><br/>Shortage of telephone service</p> | <p><u>Consumers:</u> those who want the service but cannot get it.<br/><u>Producers:</u> restricted on income, some will go out of business. Others will cut costs and provide less services.</p>   | <p><u>Consumers:</u> those who receive the service at the controlled price.<br/><u>Elected officials:</u> looks like they are trying to help consumers.</p>                               |
| <p><b>4. Dairy farmers should be guaranteed a minimum price for their milk so there is enough supply.</b></p> | <p><u>Floor:</u><br/>There will be surpluses</p>        | <p><u>Consumers:</u> Prices will be higher for all dairy products. Less money to spend on other things.<br/><u>Government:</u> Inefficient use of resources. Have to store or get rid of product.<br/><u>Taxpayers:</u> Money spent to keep inefficiency going.</p> | <p><u>Producers:</u> Those farmers that are inefficient will be able to stay in business.<br/><u>Elected officials in dairy states:</u> looks like they are trying to help producers.</p> |

## Activity 2 – Answers (Continued)

| Scenario  | Price Floor or Price Ceiling + (Causes What?)            | Costs and Losers  | Benefits and Gainers  |
|---|--|---|---|
| <p><b>5. Because gasoline is so important, the government should set a limit on how much gas stations charge.</b></p> | <p><u>Price Ceiling:</u><br/>There will be shortages</p> | <p><u>Consumers:</u> People willing to pay more, use the gas for work and cannot get it. Travel to and from work, delivery businesses, salespeople, medical personnel, police, etc.<br/><u>Producers:</u> Can only refine the amount where costs are covered. Cut back on supply.</p>                             | <p><u>Consumers:</u> The people who are on fixed incomes and teens who are willing to wait in line to get the cheaper gas. Their time waiting in line is worth it to pay the controlled price. Only the ones who get the gas. Much gas wasted sitting in long gas lines</p> |
| <p><b>6. The minimum wage should be higher.</b></p>   | <p><u>Price Floor:</u><br/>There will be surpluses</p>   | <p><u>Workers:</u> Those people with few skills or little experience looking for work and can't find any.<br/><u>Employers:</u> Low level workers too expensive to hire. Other workers do more jobs. Increasing hourly wages increases unemployment and workers comp. insurance so cost per worker is higher.</p> | <p><u>Workers:</u> Those low skilled with families have more income. Ones that are already employed.</p>  |

## Visual 6



By Darryl Haralson and Marcy E. Mullins, USA TODAY

## November 4, 2004