



Measuring Inflation & Using the CPI as an Index

Friday March 25, 2011

Bad Parenting



Price Changes

- Do you remember when...
 - Gas was under \$3/gallon
 - It only cost \$6 to buy a movie ticket
 - A Double Cheeseburger was on the Dollar Menu
 - You could buy a pack of gum for a quarter
 - Any other examples?
- Why is this no longer the case? Why does it seem that prices of everything tend to constantly increase?

Inflation

- Your book defines inflation as “*a rise in the general level of prices*”.
- So when prices increase we call it inflation, but what does it mean?

Inflation Example

- Let's assume that you receive \$30 a week from your parents in allowance
- You use 4 gallons of gas driving to and from school and work
- If gas is \$3 per gallon, how much money do you have left over to spend?
- If gas prices jump to \$4 per gallon, how much money do you have left to spend?

Inflation Example (cont.)

- In this basic example, if you are forced to spend more on gas what effect does this have on the amount of money you have remaining?
- When gas prices increase, it costs more \$ to buy the same amount of gas. The **Purchasing Power** of the dollar has diminished

Types of Inflation

- There are two general causes of inflation
- 1.) Demand-Pull Inflation
 - When demand increases across the entire economy and supply is not able to keep up, prices will increase
 - Recall from microeconomics: when demand increases prices increase
- 2.) Cost-Push Inflation
 - Prices rise because of an increase in production costs
 - Common Sense: if it costs more to produce, than suppliers must charge more to consumers

Types of Inflation

- Tell me what type of inflation is causing the increase in prices we see today, Demand-Pull or Cost-Push
 - tomatoes
 - iPhone
 - Oil

What Causes Inflation?

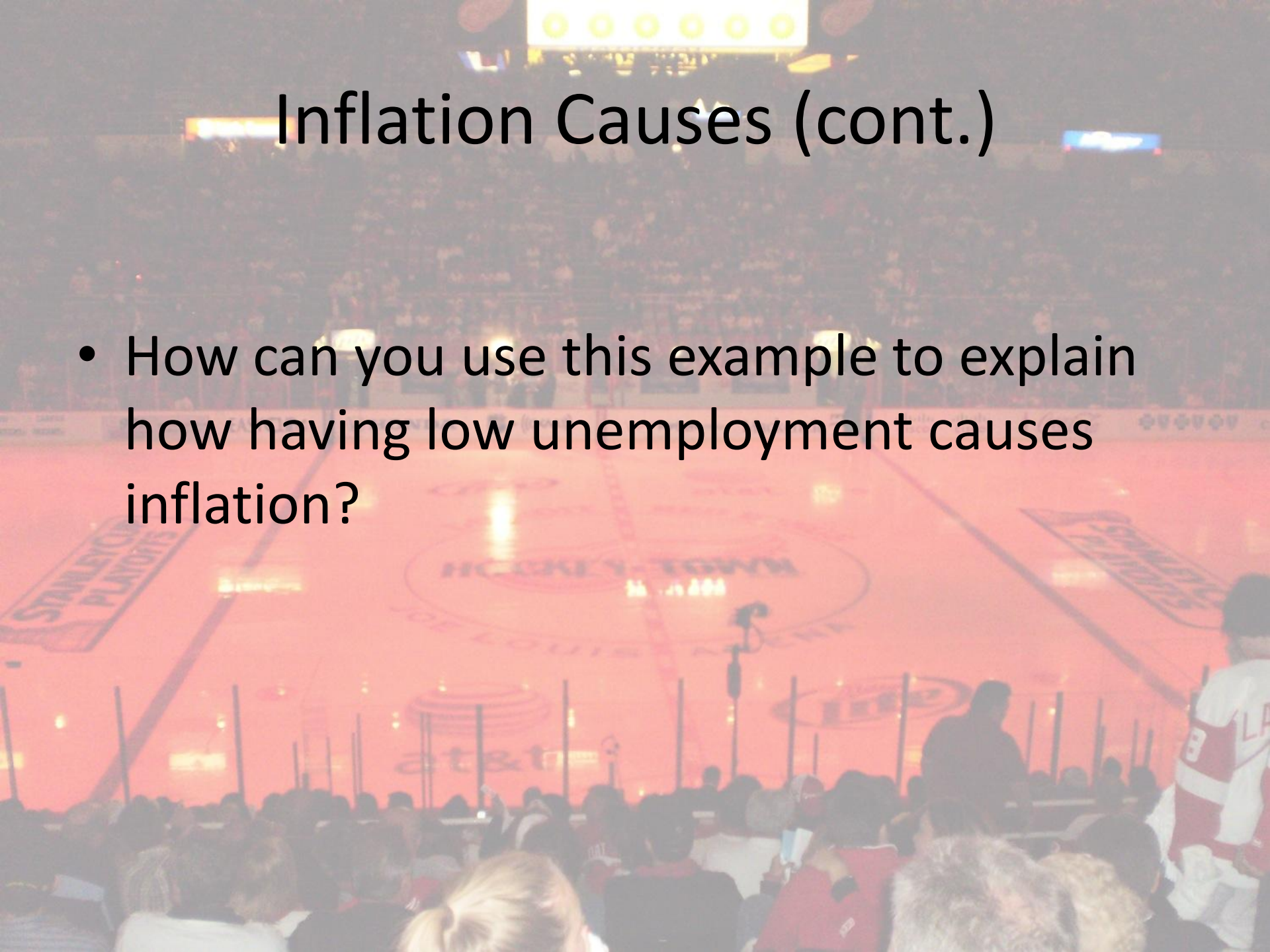
- Put very simply, inflation is most often triggered by an abundance of or easy access to money in a market.
- This is most often caused by low unemployment or low interest rates, but can be caused by any factor that in essence gives people more money (e.g. tax break)

Auction Example

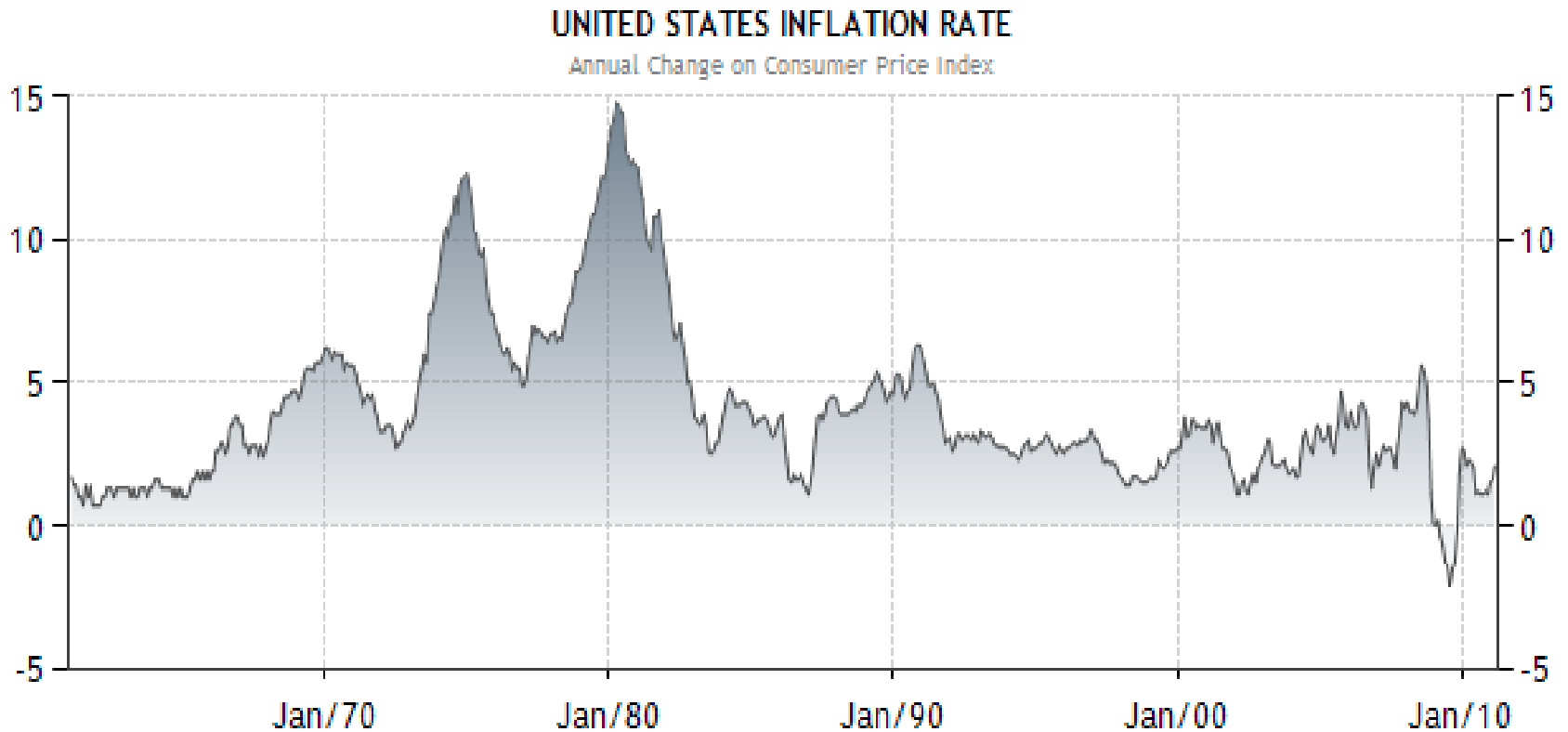
- Let's pretend I am auctioning off a pair of concert tickets to see...
- How much would you be willing to pay?
- I am now going to give everyone \$1000 in credit to use at the auction
- How much are you willing to pay now?
- What effect did the money I give you have?
- Does this make sense?

Inflation Causes (cont.)

- How can you use this example to explain how having low unemployment causes inflation?



Historical Rates of Inflation



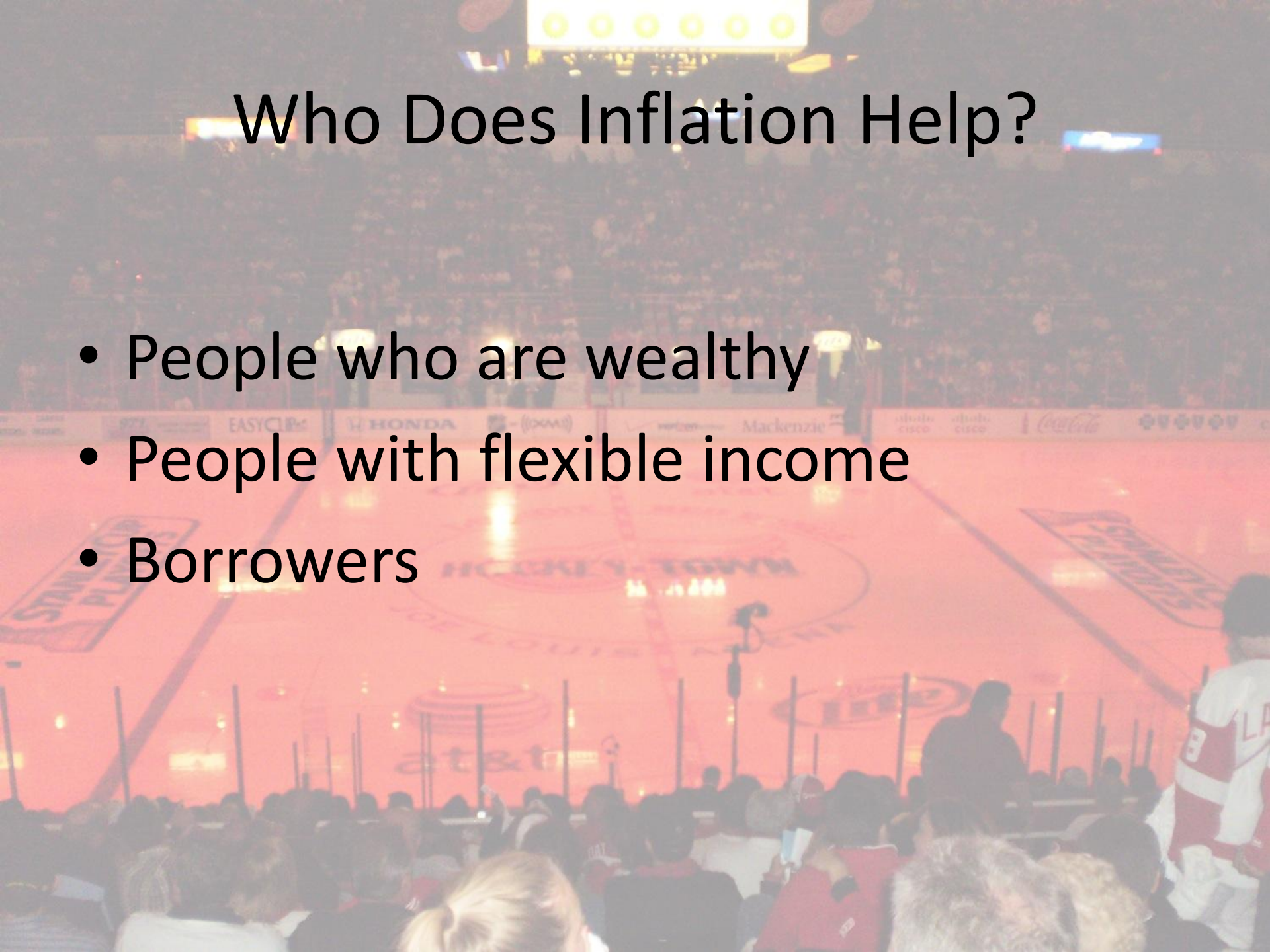
source: TradingEconomics.com; Bureau of Labor Statistics

Who does Inflation Hurt?

- Those living on fixed incomes
- People who save money
- People who lend money

Who Does Inflation Help?

- People who are wealthy
- People with flexible income
- Borrowers



Inflation and the CPI

- Inflation is not concerned with the price of one good, but the price of goods across the entire market.
- The Consumer Price Index (CPI) is most often used to help find the rate of inflation across the economy.

The Consumer Price Index

- How does the CPI work?
 - It looks at spending patterns for all Urban Consumers (represents 87% of the population)
 - It takes a bundle of goods composed of over 200 categories that fit in 8 Groups:

Food and Beverages	Medical Care
Housing	Recreation
Apparel	Education and Communication
Transportation	Other Goods and Services

The Consumer Price Index (cont.)

- The prices of this “bundle” are collected and then added up.
- The total price of the bundle is then compared to the price of a similar bundle from the base year. This comparison will give you the CPI.
- The base year that the CPI uses is from 1982-1984 and equals 100.
- In order to find the rate of inflation, we must find the percent change from the previous year.

Lets calculate the rate of inflation...

- **The Formula for Calculating Inflation**
- The formula for *calculating the Inflation Rate* using the Consumer Price Index (CPI) is relatively simple. Every month the Bureau of Labor Statistics (BLS) surveys thousands of prices all over the country and generates the CPI or (Consumer Price Index)

Step 1: Calculate- How Much has the Consumer Price Index Increased?

- By looking at the above example, common sense would tell us that the index increased (it went from 100 to 198). The question is how much has it increased? To calculate the change we would take the second number (198) and subtract the first number (100). The result would be 98. So we know that from 1984 until 2006 prices increased (Inflated) by 98 points.
- But, what good does knowing that it moved 98 points do?
- Well, we know that prices almost doubled in 22 years, since it was 100 1984 and in 2006 it is almost 200 but other than that we don't know much. We still need something to compare it to

Step 2: Comparing the CPI Change to the Original CPI

- Since we know the increase in the Consumer Price Index we still need to compare it to something, so we compare it to the price it started at (100). We do that by dividing the increase by the first price or $98/100$. the result is (.98).

Step 3: Convert it to a Percent

- This number is still not very useful so we convert it into a percent. To do that we multiply by 100 and add a % symbol. $.98 \times 100 = 98$
- So the result is a 98% increase in prices since 1984. That is interesting but (other than being the date of George Orwell's famous novel) to most people today 1984 is not particularly significant.

Calculating the Inflation Rate Over a Specific Time Period

- The formula for calculating the Inflation Rate looks like this:
- $((B - A)/A) * 100$
- Where "A" is the Starting number and "B" is the ending number.

Calculating the Inflation Rate Over a Specific Time Period

- So if exactly one year ago the Consumer Price Index was 178 and today the CPI is 185, then the calculations would look like this:
 - $((185-178)/178)*100$
or
 $(7/178)*100$
or
 $0.0393*100$
 - which equals 3.93% inflation over the sample year.
(Not Actual Inflation Rates).

Inflation and CPI Activity

- Let's Practice
- Split up into groups of 3
- <http://data.bls.gov/cgi-bin/surveymost?ap>



The Consumer Price Index (cont.)

- What impact does the CPI have on our lives?
 - Many people receive a “price of living” increase every year at their job.
 - Social Security also includes a “price of living” increase every year.
 - The last two years, people receiving Social Security checks have not received this increase. Why?

The Consumer Price Index (cont.)

- Are there any flaws to the CPI?
 - It is not reflective of what people live in rural populations spend on
 - It treats the entire U.S. Population the same (what does this mean)
 - Effects will be felt differently by different people (elderly, poor, rich, salaried, waged)
 - Changing in buying habits must be considered