

BUTCHER-BUSINESS MATH A –8TH PERIOD – OFF-SITE LEARNING PACKET DAY 7

State Indicator/Competency:

1. Calculate expected values and use them to solve problems.

Instructional Objective(s):

8.6a Economic Statistics

1. Students will be able to calculate rates of inflation with 80% accuracy.

Instructions:

1. Read through lesson and examples.
2. If able, watch suggested videos for extra instruction.
3. Complete the practice problems. Check your answers to see how you're doing.
4. Complete attached worksheet. Show your work. Worksheet will be collected and graded.
5. Questions? Contact me by email. butcherna@mwood.cc

Activities:

Rate of Inflation

For consumers, business firms, organizations, and the government, **inflation** means that the prices of goods and services they buy are rising. The U.S. Department of Labor publishes the **Consumer Price Index (CPI)** report that tells how much inflation has occurred within the past year. A calculation in the report, called the **rate of inflation**, shows the percent increase in prices from the previous year.

Watch these videos for more on Inflation and the CPI. Copy/paste the URL in your web browser.

<https://www.khanacademy.org/economics-finance-domain/core-finance/inflation-tutorial/inflation-basics-tutorial/v/what-is-inflation>

<https://www.khanacademy.org/economics-finance-domain/ap-macroeconomics/economic-indicators-and-the-business-cycle/price-indices-and-inflation/v/introduction-to-inflation>

Historical Report—Consumer Price Index, 1994–2007
Categories of Goods and Services

| Years | All Items | Food & Beverages | Housing | Apparel | Transportation | Medical Care | Recreation | Education & Communication | Other |
|---------|-----------|------------------|---------|---------|----------------|--------------|------------|---------------------------|-------|
| 1982–84 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | — | — | 100.0 |
| 1994 | 148.2 | 147.2 | 145.4 | 130.5 | 137.1 | 215.3 | 93.0 | 90.3 | 202.4 |
| 1995 | 152.4 | 150.3 | 149.7 | 130.6 | 139.1 | 223.8 | 95.6 | 93.9 | 211.1 |
| 1996 | 156.9 | 156.6 | 154.0 | 130.3 | 145.2 | 230.6 | 98.5 | 97.1 | 218.7 |
| 1997 | 160.5 | 159.1 | 157.7 | 131.6 | 143.2 | 237.1 | 100.0 | 100.0 | 230.1 |
| 1998 | 163.0 | 162.7 | 161.3 | 130.7 | 140.7 | 245.2 | 101.2 | 100.7 | 250.3 |
| 1999 | 166.6 | 165.9 | 164.8 | 130.1 | 148.3 | 254.2 | 102.0 | 102.3 | 263.0 |
| 2000 | 172.2 | 170.5 | 171.9 | 127.8 | 154.4 | 264.8 | 103.7 | 103.6 | 274.0 |
| 2001 | 177.1 | 175.3 | 177.6 | 124.8 | 149.0 | 278.3 | 105.3 | 106.9 | 287.0 |
| 2002 | 179.9 | 177.8 | 181.1 | 121.5 | 154.2 | 291.3 | 106.5 | 109.2 | 295.8 |
| 2003 | 184.0 | 184.1 | 185.1 | 119.0 | 154.7 | 302.1 | 107.7 | 110.9 | 300.2 |
| 2004 | 188.9 | 188.9 | 190.7 | 118.8 | 164.8 | 314.9 | 108.5 | 112.6 | 307.8 |
| 2005 | 195.3 | 193.2 | 198.3 | 117.5 | 172.7 | 328.4 | 109.7 | 115.3 | 317.3 |
| 2006 | 201.6 | 197.4 | 204.8 | 118.6 | 175.4 | 340.1 | 110.8 | 118.9 | 326.7 |
| 2007 | 207.3 | 206.9 | 210.9 | 118.3 | 190.0 | 357.7 | 111.7 | 121.5 | 337.6 |

Examples:

- The CPI table shows an index number of 201.6 for 2006 and an index number of 207.3 for 2007 for food and beverages. What was the rate of inflation for 2007, to the nearest tenth percent?

Subtract 2007 CPI – 2006 CPI: $207.3 - 201.6 = 5.7$
 Divide by 2006 CPI to find rate $5.7 \div 201.6 = .0282 = 2.8\%$

- Find the rate of inflation for 1999 for all items, to the nearest tenth percent.

Subtract 1999 CPI – 1998 CPI: $166.6 - 163.0 = 3.6$
 Divide by 1998 CPI to find rate $3.6 \div 163.0 = .0221 = 2.2\%$

Closure: Complete the review problem and check your answer.

- Find the rate of inflation for the Medical Care category for 2002. (Answer 4.6%)

Assignment: 8.6a Inflation worksheet (10 pts)

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8.6a Inflation

Name: _____

1. The CPI table shows an index number of 340.1 for 2006 and an index number of 357.7 for 2007 for medical care. What was the rate of inflation for 2007, to the nearest tenth percent?
2. Of the categories Housing and Transportation, which had the higher rate of inflation between 1994 and 2000, to the nearest percent?
3. What was the rate of inflation, to the nearest tenth percent, for Education and Communication in 2004?
4. For the Recreation category, find the rate of inflation, to the nearest tenth percent in 1997?
5. Do a search on the internet. Find the current Consumer Price Index and the Current Inflation Rate. Where did you find them?