• If you have Part 3 of the Final Exam Review, it needs to be turned in to the basket at the beginning of class in order to earn extra credit.

• During the first 5 minutes, you may check your answers for Part 2 with the key that is posted around the room. This key is also posted on the class website if you want to check them that way.
SECTION 1
Inflation and Deflation

What Is Inflation?

- Inflation is an increase in the price level, or the average level of prices.
How Do We Measure Inflation?

- If the price level increases from one year to the next, the economy is experiencing inflation.
- One way of determining inflation is to look for changes in the consumer price index (CPI).
  - For example, if the CPI increases from 180 in one year to 187 in the next year, the inflation rate is 3.89 percent.
  - Between 1960 and 2006, the United States experienced wide fluctuations in inflation rates. Approximately what was the highest rate during those years? (Answer: 13.25 percent) Approximately what was the lowest rate? (Answer: 0.5 percent)
Measuring Inflation

Inflation rate = \frac{\text{CPI}_{\text{later year}} - \text{CPI}_{\text{earlier year}}}{\text{CPI}_{\text{earlier year}}} \times 100

**Example:** Inflation rate = \frac{187 - 180}{180} \times 100 = 3.89\%
Demand-Side Versus Supply-Side Inflation

- Inflation can originate on either the demand side of the economy or the supply side of the economy. If aggregate demand (aggregate = the whole economy) increases and aggregate supply stays the same, inflation will occur.

- **Demand-side inflation** occurs when an increase in the price level originates on the demand side of the economy. Demand-side inflation can be caused by an increase in the money supply.

- **Supply-side inflation** occurs when an increase in the price level originates on the supply side of the economy.
The Effects of Inflation

- Inflation increases the amount that people must spend on particular goods or services. It can affect people on fixed incomes, savers, and partners in contracts.

- Inflation reduces the buying power of people on fixed incomes, such as social security or investment proceeds.

- If the inflation rate is greater than the interest rate earned on savings accounts, the money in those accounts loses value. As time goes on, savers will be able to buy fewer goods with the same amount of money.

- Over time, inflation can eat up the profits factored into a long-term contract. As the costs of supplies and labor increase during the length of the project, the profit that was factored into the contract begins to disappear.

- To hedge against inflation is to try to avoid or lessen a loss by taking some counterbalancing action. People try to figure out the best protection against inflation by investing in items such as gold, real estate, and art.
What Is Deflation?

- Deflation is the opposite of inflation. Deflation is a decrease in the price level, or the average level of prices.
- A downward change in the CPI indicates deflation.

Demand-Side Deflation Versus Supply-Side Deflation

- Like inflation, deflation can result from a change in demand or a change in supply. For example, if aggregate demand decreases and aggregate supply stays the same, deflation will occur.
A Major Effect of Deflation

- When prices fall, they do not all fall at the same time. When prices do not fall at the same time, deflation can lead to firms going out of business and workers being laid off. These are common results during times of deflation.
What Is a Business Cycle?

- A **business cycle** includes **recurrent** swings (up and down) in real **GDP** of an economy. Economists usually talk about five phases of a **business cycle**.
The Business Cycle:

1. **Peak.** At the peak of a business cycle, real GDP is at a temporary high.
2. **Contraction.** If real GDP decreases, the economy is said to be in contraction. A **recession** occurs when real GDP falls for **two** consecutive quarters.
3. **Trough.** The low point in real GDP, just before GDP turns up, is called the trough.
4. **Recovery.** The recovery is the period when real GDP is rising.
5. **Expansion.** The expansion refers to increases in real GDP beyond the recovery.
What Causes the Business Cycle?

- Between 1945 and 2005, the United States went through 10 business cycles. What causes a business cycle?
The Phases of the Business Cycle

Business cycles can be caused by several types of events:

- Changes in money supply
- Changes in business investment, residential construction, and government spending
- Politics
- Innovation
- Dramatic changes to supply
<table>
<thead>
<tr>
<th>Cause</th>
<th>How it leads to expansion</th>
<th>How it leads to contraction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Money Supply</strong></td>
<td>An increase in the money supply means people <strong>buy more</strong> goods and services, leading to an economic expansion.</td>
<td>When the money supply drops or the growth rate in the money supply declines, people end up <strong>buying fewer</strong> goods and services, which leads to an economic contraction.</td>
</tr>
<tr>
<td><strong>Business investment, residential construction, and government spending</strong></td>
<td>When business or government spending increases, aggregate <strong>demand rises</strong>. The <strong>increase in employment</strong> leads to further increases in spending.</td>
<td>When business and government spending decrease, aggregate <strong>demand falls</strong>. The resulting <strong>decrease in employment</strong> leads to further decreases in spending.</td>
</tr>
<tr>
<td><strong>Politics</strong></td>
<td>Members of Congress may pass spending bills to improve their chances of reelection. This <strong>increase in spending</strong> increases aggregate demand, leading to economic expansion.</td>
<td>If inflation becomes a problem, politicians may <strong>cut spending</strong> to lower aggregate demand, which may lead to an economic contraction.</td>
</tr>
<tr>
<td><strong>Innovation</strong></td>
<td>If a company develops a <strong>new technology</strong> or product, <strong>investment spending increases</strong> for the innovator’s competitors. The increase in investment spending leads to economic expansion.</td>
<td>Eventually, investment spending <strong>tends to slow</strong> and the economy contracts.</td>
</tr>
<tr>
<td><strong>Supply shocks</strong></td>
<td><strong>Supply shocks lead to economic contraction, not expansion</strong></td>
<td><strong>War</strong> and <strong>shortages of necessary resources</strong> reduce the productive capacity of an economy. The economy contracts, real GDP falls, and the unemployment rate rises.</td>
</tr>
</tbody>
</table>
Forecasting Business Cycles

- Let’s compare the economy to your health:
  1. In the first stage, you feel a little sluggish and tired. These feelings are **leading indicators**, letting you know that something may be wrong. In an economy, leading indicators **precede** economic upturns or downturns.

  - Stock prices
  - The money supply
  - Consumer expectations
  - Average weekly hours worked in manufacturing
Forecasting Business Cycles

Let’s compare the economy to your health:

2. When you are ill, you might have a bad headache or a stuffed-up nose. These are **coincident indicators**, or indicators that coincide with your illness. In an economy, coincident indicators will **accompany** economic upturns or downturns.

- Nonagricultural employment
- Personal income
- Industrial production
Forecasting Business Cycles

Let’s compare the economy to your health:

3. When you are recovering from an illness, you may continue to experience a slight headache or a runny nose. These are lagging indicators of your previous condition. The same holds true for members of an economy: they may notice indicators that lag behind economic upturns or downturns.

- Unemployment
- Corporate profits
- Labor costs
- Interest rates
What Is Economic Growth?

- **Absolute real economic growth** is an increase in **real** GDP from one period to the next.

- **Per capita real economic growth** is an increase in per capita real GDP from one period to the next. Per capita real GDP is real GDP divided by **population**.
Per Capita Real GDP Growth and the Rule of 72

- The Rule of 72 states that the amount of time it would take for any variable to **double** is equal to 72 divided by the variable’s percentage **growth** rate.
- For example, if a variable is growing at 10 percent, it will double in 7.2 years: 72 divided by 10 equals 7.2.
Economic Growth and a Production Possibilities Frontier

- The production possibilities frontier (PPF) shows us all possible combinations of two goods that an economy can produce in a certain period of time.
- Using a PPF, we can show what absolute economic growth looks like.
Economic Growth

- An economy can grow from a point **below** the PPF because some resources in the economy are currently **unused**. Movement from a point below the PPF to a point on the PPF is **evidence** of economic growth. Real GDP is higher at the point **on** the PPF than it is at the point **below** the PPF.
- When an economy already resides on the PPF, the only way for it to experience economic growth is by **shifting** the frontier to the **right**.

![Diagram](image)
What Causes Economic Growth?

- Factors that cause economic growth include natural resources, labor, capital, human capital, technological advances, and incentives.

- With more natural resources, a country can produce more goods and services.

- With more labor, a country can produce more output. An increase in productivity of existing labor will also cause economic growth.

- Capital investment can lead to increases in labor productivity and therefore lead to increases in output or real GDP.
• Human capital can also affect economic growth. **Human capital** is the knowledge and skill that people use in the production of goods and services. Human capital includes honesty, creativity, and perseverance—traits that lend themselves to finding work.

• Technological advances can make it possible to obtain more output from the same amount of resources. Technological advances may result from new capital goods or new ways of producing goods.

• Some economists argue that economic growth develops where people are given the incentive to produce and innovate.
Two Worries About Future Economic Growth

- Growth can come at a great cost. Economic growth may mean more pollution, more factories, and more crowded cities, along with increased social and psychological issues.
- Continued economic and population growth may bring us to a time when there is no clean air or water, and no land for people to live on comfortably.