- Macroeconomics is the study of the economy as a whole; microeconomics is the study of individual parts of the economy such as businesses, households, and prices. Macroeconomics looks at the forest while microeconomics looks at the trees.
- A circular flow diagram illustrates the major flows of goods and services, resources, and income in an economy. It shows how changes in these flows can alter the level of goods and services, employment, and income.
- Gross domestic product (GDP) is the market value of all final goods and services produced in a nation in one year. It is the most important measure of production and output.
- GDP may be calculated two ways:
  1. **The expenditures approach:** add all the consumption, investment, government expenditures, and net exports

     $$GDP = C + I + G + Xn.$$

  2. **The income approach:** add all the income received by owners of resources (land, labor, capital, entrepreneurship) in the economy.

     $$\text{National income} = \text{wages} + \text{rent} + \text{interest} + \text{profit}.$$

- The expenditures approach to calculating GDP counts only final goods and services to avoid double counting. That is, it does not count intermediate goods and services.
- The expenditures approach to calculating GDP does not count the purchase of secondhand goods, stocks and bonds, or items not purchased in a legal market because these do not represent new production during the year.
- The income approach to calculating GDP includes profits and income earned by foreigners in the United States but does not count income and profits earned by U.S. citizens abroad, transfer payments like Social Security, unemployment compensation, or certain interest payments.
- Inflation is a general increase in the price level in the economy. Savers, lenders, and people on fixed incomes generally are hurt by unanticipated inflation. Borrowers gain from unanticipated inflation.
- Price indices measure price changes in the economy. They are used to compare the prices of a given bundle or "market basket" of goods and services in one year with the prices of the same bundle/market basket in another year.
- The most frequently used price indices are the GDP price deflator, the Consumer Price Index (CPI), and the Producer Price Index (PPI).
- Price changes over time are measured by comparing prices each year to the prices in a selected year, called the base year. The price level in the base year has an index number of 100. The price level in other years is expressed in relation to the price level in the base year.

$$\text{Price index} = \frac{\text{current-year price of a market basket}}{\text{base-year price of a market basket}} \times 100.$$

- If domestic prices increase relative to prices in other countries, imports will increase while exports decrease because people want to purchase the goods and services where they are relatively cheaper.
- The labor force is defined as people who have a job (employed) and people who are not working but are actively seeking

a job (unemployed). The labor force participation rate is the percentage of the population over the age of 16 that is in the labor force.

- Unemployment occurs when people who are willing and able to work are not working. The unemployment rate equals the number of people who are not working but who are actively seeking a job as a percentage of the labor force.
- There are three types of unemployment: frictional, cyclical, and structural.
- The unemployment rate associated with full employment is above zero because frictional and structural unemployment will always exist. Full employment occurs where cyclical unemployment equals zero.
- The unemployment rate at full employment is called the natural rate of unemployment.