1. See notes. Consumption (C) is household spending, which is broken down into durable goods, non-durable goods and services (know the difference!). Investment (I) is business spending, new homes and changes in inventory. Government Expenditures (G) is spending by the government on goods and services such as national defense, police and fire protection and education. Net Exports (NX) are the value of the exports out of the country (X) minus the value of the imports into the country.

2. Chapter 6, Problem 1 in the textbook (Page 169).
   a. *Counted in GDP* as an increase in inventories; “I”
   b. Counted in GDP; “C”
   c. *Not counted.* This is an intermediate good whose value will be included in the value of the restaurant meals.
   d. *Not counted.* Stock is not a final good or service. (The broker’s commission, however, would be counted in GDP, as “C” if a household paid the commission.)
   e. *Not counted.* The property itself was not produced.
   f. *Counted in GDP.* The service provided by the real estate agent is counted as part of “C.” (Notice that the purchase price of the property is not counted, since it is just represents an exchange of an existing good, not something newly produced.)
   g. *Not counted.* Not a transaction for the marketplace.
   h. Counted in GDP; “NX”
   i. *Not counted.* Social Security payments are transfer payments, not government purchases.

3. A farmer grows wheat, which he sells to a miller for $100. The miller turns the wheat into flour, which he sells to a baker $150. The baker turns the wheat into bread, which he sells to consumers for $180. Consumers eat the bread.
   a. GDP=$180
   b. The farmer adds $100, the miller adds $50, the baker adds $30.
   c. The total value added is $180, which is equal to the GDP. This is an example where the total value added=GDP=household income (factor payments).
4. Chapter 6, Problem 12 in the textbook (Page 171).
Suppose in a given year, someone buys a Ford automobile for $30,000. That same year, Ford produced the car in Michigan, using $10,000 in parts imported from Japan. However, the parts imported from Japan themselves contained $3,000 in components produced in the United States.
a. U.S. GDP rises by $23,000 = $30,000 – ($10,000 – $3000).
b. Consumption (C) rises by $30,000, investment (I) is unchanged, government purchases (G) are unchanged, and net exports (NX) falls by $7000. (Exports rise by $3000 and Imports rise by $10,000.)
c. Japan’s GDP rises by $7000. C is unchanged, I is unchanged, G is unchanged, and NX rises by $7000. (Exports rise by $10,000 and Imports rise by $3000.)

5. Chapter 6, Problem 8 parts a-c, in the textbook (Page 170)
   a. The unemployment rate = 2140/(2140 + 46,000)= 4.4%.

<table>
<thead>
<tr>
<th>Population</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 16</td>
<td>10,600</td>
</tr>
<tr>
<td>Over 16</td>
<td></td>
</tr>
<tr>
<td>In military service</td>
<td>1,000</td>
</tr>
<tr>
<td>In hospitals</td>
<td>60</td>
</tr>
<tr>
<td>Worked one hour or more in previous week</td>
<td>46,000</td>
</tr>
<tr>
<td>Searched for work during previous four weeks</td>
<td>2,140</td>
</tr>
<tr>
<td>Did not search for work in previous week but</td>
<td>200</td>
</tr>
<tr>
<td>would have taken a job if one were offered</td>
<td></td>
</tr>
</tbody>
</table>

b. There are 48,140 people in Ziponia’s labor force.

c. There are 200 discouraged workers in Ziponia.

d. If we include the 200 discouraged workers in the unemployment calculation, they would be added to both the numerator and denominator in part (a). The discouraged unemployment rate would then be (2140+200)/(2140+46000+200)=4.8%.

6. Given one of our goals as macroeconomists is to have full employment, which of the following situations should macroeconomists be concerned with and why?
   a. Frictional
   b. Seasonal
   c. Structural, but possibly cyclical if the increase in immigration leads to long term job loss.
   d. Structural
   e. Cyclical
7. There are three types of goods in the economy of Blandland: paper, pencils and economic textbooks. The cost of the goods in the base year are as follows:

Base Year Price: Paper=$10.00, Pencils=$5.00, Economic Textbooks=$25.00
Current Year Price: Paper=$20.00, Pencils=$5.00, Economic Textbooks=$20.00
The weights of the goods are: Paper=50%, Pencils=30% and Textbooks=20%.

Weighted Basket Cost Base Year=10*0.5 + 5*0.3 + 25*0.2 = 11.50
Weighted Basket Cost Current Year=20*0.5 + 5*0.3 + 20*0.2 = 15.50
CPI Base Year=11.50/11.50 x 100=100 (Base Year CPI always equals 100)
CPI Current Year=15.50/11.50 x 100=134.78
Inflation=134.78-100/100 x 100=34.78%
If CPI Next Year=150, inflation=150-134.78/134.78 x 100 = 11.29%

8. Chapter 7, Problem 6 (Page 194)
If there is a 5 percent inflation each year for 8 years, what is the total amount of inflation (i.e., the total percentage rise in the price level) over the entire 8-year period? (Hint: The answer is not 40 percent.)

The price level would rise by 5% each year, to the values shown in the following table.
The total amount of inflation = (147.75 – 100)/100 = 0.4775 = 47.75%.