1) Suppose that we have the following information on prices and production levels in the US:

<table>
<thead>
<tr>
<th></th>
<th>Manufacturing</th>
<th></th>
<th>Services</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Price</td>
<td>Quantity</td>
<td>Price</td>
<td>Quantity</td>
</tr>
<tr>
<td>January 1983</td>
<td>$50</td>
<td>300</td>
<td>$20</td>
<td>250</td>
</tr>
<tr>
<td>January 2013</td>
<td>$105</td>
<td>450</td>
<td>$30</td>
<td>800</td>
</tr>
<tr>
<td>January 2014</td>
<td>$115</td>
<td>440</td>
<td>$31</td>
<td>850</td>
</tr>
</tbody>
</table>

Suppose that the average household spends 60% of their budget on manufactured goods and 40% on services. Calculate a fixed weight index (i.e. the CPI). For 2013 and 2014 using 1983 as the base year.

\[ P_{2013} = (0.60) \left( \frac{105}{50} \right) + (0.40) \left( \frac{30}{20} \right) = 1.86 \]

\[ P_{2014} = (0.60) \left( \frac{115}{50} \right) + (0.40) \left( \frac{31}{20} \right) = 2.00 \]

2) Suppose that you have the following information on an economy.

- Gross Domestic Product: $8,500
- Government Purchases: $3,500
- Tax Revenues: $1,200
- Net Exports: $800
- Net Factor Payments: $100
- Consumption Expenditures: $4,000
- Depreciation: $1,000

Find (a) National Income, (b) Current Account, (c) National savings, (d) Net Investment (e) Gross National Product.

(a) National Income = GDP + NFP – DEP = 8,500 + 100 – 1,000 = 7,600
(b) Current Account = NX + NFP = 800 + 100 = 900
(c) Private Savings = NI – T – C = 7,600 – 1,200 - 4,000 = 2,400
(d) Net Investment = S – (G-T) – CA = 2,400 – (3,500 – 1,200) – 900 = -800
(e) Gross National Product = GDP + NFP = $8,500 + $100 = $8,600