CALCULATING INFLATION WORKSHEET (gr 12)

**TASK 1 - CALCULATE INFLATION**

<table>
<thead>
<tr>
<th>a) CPI</th>
<th>b) INFLATION RATE</th>
<th>c) GDP DEFLATOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>FORMULA?</td>
<td>FORMULA?</td>
<td>FORMULA?</td>
</tr>
</tbody>
</table>

Use 1999 as the base year. Calculate the inflation rate between 2000 and 2001.

<table>
<thead>
<tr>
<th>Year</th>
<th>Price of a Gun</th>
<th>Quantity of Guns</th>
<th>Price of Apple</th>
<th>Quantity of Apples</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>$50</td>
<td>3</td>
<td>$0.50</td>
<td>1000</td>
</tr>
<tr>
<td>2000</td>
<td>$60</td>
<td>3</td>
<td>$0.75</td>
<td>900</td>
</tr>
<tr>
<td>2001</td>
<td>$70</td>
<td>1</td>
<td>$1.00</td>
<td>950</td>
</tr>
</tbody>
</table>

**TASK 2 - STUDY THE DIAGRAM ABOVE: IS INFLATION RISING OR FALLING?** Analyse and explain the diagram.

**TASK 3 - TEST YOUR UNDERSTANDING**

a) Use the table below, construct a CPI using 2009 as the base year:

<table>
<thead>
<tr>
<th>Goods/services</th>
<th>Quantity (basket)</th>
<th>Price per unit 2008</th>
<th>Price per unit 2009</th>
<th>Price per unit 2010</th>
<th>Price per unit 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pizzas</td>
<td>25</td>
<td>7</td>
<td>6</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>DVDs</td>
<td>9</td>
<td>15</td>
<td>17</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td>Bus rides</td>
<td>47</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>3</td>
</tr>
</tbody>
</table>


c) Identify the years when inflation, deflation and disinflation occurred. Explain your answer.

d) Construct a new price index with 2010 as the base year. Is it the same as the previous index?

e) Would it make sense to COMPARE the index number of the two price indexes. Explain.
1. Last year, the Consumer Price Index (CPI) was 120 and Bob’s household earned $80,000. Assuming this year’s CPI is 130, what would Bob’s household need to earn in order to have the same purchasing power as last year?
   A. about $87,000
   B. $80,000
   C. $61,538
   D. about $51,000
   E. $78,000

2. If nominal GDP is $5 trillion in year 1, and real GDP is $4.5 trillion, then the GDP Deflator is:
   A. $5 trillion - $4.5 trillion = $3.5 trillion
   B. $5 trillion + $4.5 trillion = $9.5 trillion
   C. $5 trillion / $4.5 trillion = around 1.111
   D. $1 trillion / $2.2 trillion = about ½
   E. the GDP deflator only applies to deflation

3. In year 1, nominal GDP is $5,000, while real GDP is $4,500. In year 2, nominal GDP is $5,500, while real GDP is $4,800. Which of the following statements is true?
   A. not enough information to answer
   B. Real GDP grew by more than nominal GDP did.
   C. Nominal GDP grew by more than real GDP did.
   D. Nominal and real GDP grew by the same amount.
   E. Inflation was negative.

4. Economists use real GDP because
   A. this measure of economic output is more realistic than marginal GDP
   B. it removes all of the purchases the government makes but leaves in the purchases of consumers and businesses
   C. price controls may interfere with the actual level of demand
   D. the Federal Reserve agreed on this standard in 1959
   E. using nominal GDP can create a false impression of the amount of output happening in the economy from one year to another

5. What is the major drawback of using nominal GDP to measure the economic output of a nation?
   A. most countries only use Real GDP, therefore nations should keep up with other nations
   B. It creates a false impression of the amount of output taking place from one year to the next because of the change in prices.
   C. As its name suggests, it only shows nominal amounts of production
   D. Nominal GDP includes goods that were produced outside the nation, while Real GDP does not
   E. It creates a false impression of the quantities of goods sold because it only measures the costs and not the revenue

6. Using the chart below, which statement is true regarding wages over the 3-year period?

<table>
<thead>
<tr>
<th>Year</th>
<th>Consumer Price Index</th>
<th>Nominal Wage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>100</td>
<td>$40,000</td>
</tr>
<tr>
<td>2</td>
<td>110</td>
<td>$50,000</td>
</tr>
<tr>
<td>3</td>
<td>125</td>
<td>$50,000</td>
</tr>
</tbody>
</table>

   A. nominal wages rose while real wages stayed the same
   B. nominal wages rose by 30%
   C. real wages rose, but nominal wages stayed the same
   D. nominal wages fell by 30%
   E. real wages went down.

7. When actual inflation is higher than expected inflation,
   A. real wages stay the same
   B. real wealth increases
   C. a redistribution of wealth takes place between banks and the government
   D. A redistribution of wealth takes place between savers to borrowers
   E. real wages go up