Name: _____

AP Macro Problem Set #2
Unit 2: Measurement of Economic Performance

1. (____/15 Points) **Gross Domestic Product**
   a. Define GDP, identify what is not included, define the four components, and give an example of each (_____/5)
   b. Explain the difference between nominal GDP and real GDP. Use a simplified numerical example with two different years to show your understanding. (_____/5)
   c. If someone told you that the nominal GDP increased by 4% in 2004 explain why you would need two additional pieces of information to conclude that the standard of living for the typical person also increased by 4%. (____/5)

2. (_____/10 Points) **Unemployment**
   a. Define and give examples of the three types of unemployment discussed in class. (_____/5)
   b. How is the unemployment rate calculated? What is the Natural Rate of Unemployment? Do we want zero unemployment? (_____/5)

3. (_____/15 Points**) Inflation**
   a. Define and identify how to calculate the Consumer Price Index (CPI)? Explain the meaning of the following CPIs relative to a base year. Year 1=90, Year 2=100, Year 3=125, Year 4=150. Lastly explain why the percent change in prices from year 3 to year 4 is NOT 25%. (_____/5)
   b. Identify how to calculate nominal interest rates and real interest rates. Assume that you put $100 in the bank. Use numeric examples to explain three different scenarios in which your REAL income falls, stays the same, and increases. (_____/5)
   c. If the actual inflation is greater than the anticipated inflation, fully explain who would benefit and who would be hurt and explain WHY? (_____/5)

4. (_____/15 Points**)** Practice FRQs
   a. FRQ #1 (_____/8)
   b. FRQ #2 (_____/7)

3. Indicate whether each of the following is counted in the United States gross domestic product for the year 2006. Explain each of your answers.

   (a) The value of a used textbook sold through an online auction in 2006

   (b) Rent paid in 2006 by residents in an apartment building built in 2000

   (c) Commissions earned in 2006 by a stockbroker

   (d) The value of automobiles produced in 2006 entirely in South Korea by a firm fully owned by United States citizens

OUTPUTS AND PRICES IN GALA LAND

This Year's Output	This Year's Price
400 loaves of bread	$6 per loaf
1,000 gallons of water	$2 per gallon
800 pieces of fruit	$2 per piece

Gala Land produces three final goods: bread, water, and fruit. The table above shows this year's output and price for each good.

(a) Calculate this year's nominal gross domestic product (GDP).

(b) Assume that in Gala Land the GDP deflator (GDP price index) is 100 in the base year and 150 this year. Calculate each of the following.

   (i) The inflation rate, expressed as a percentage, between the base year and this year

   (ii) This year's real GDP

(c) Since the base year, workers have received a 20 percent increase in their nominal wages. If workers face the same inflation that you calculated in part (b)(i), what has happened to their real wages? Explain.

(d) If the GDP deflator in Gala Land increases unexpectedly, would a borrower with a fixed-interest-rate loan be better off or worse off? Explain.