Name _____

Calculate!

Date (Year-Quarter)	Real GDP (Base Year 200)	Nominal GDP
1994-1	8727.9	6916.3
1994-2	8847.3	7044.3
1994-3	8904.3	7131.8
1994-4	9003.2	7248.2
1995-1	9025.3	7307.7

1a. Calculate the fractional rate of growth of real GDP from 1994-1 to 1995-1. Use this formula:

Growth Rate = $\frac{Y_{1995-1} - Y_{1994-1}}{Y_{1994-1}}$

1b. Convert this fractional growth rate to a percentage (Multiply by 100%)

2a. Now calculate the rate of growth using this formula:

Growth Rate = $\ln\left(Y_{1995-1}\right) - \ln\left(Y_{1994-1}\right)$

2b. Convert this fractional growth rate to a percentage

3a. Again use the log-based formula to calculate the (quarterly) growth rate from 1994-2 to 1994-3.

Growth Rate = $\ln\left(Y_{1994-3}\right) - \ln\left(Y_{1994-2}\right)$

3b. Convert this to an annualized rate of growth by multiplying by 4

3c. Convert to a percentage rate of growth by multiplying by 100%

4a. Calculate values for the GDP Deflator for 1994-1 and 1995-1 using this definition:

$$Deflator = \frac{Nominal\ GDP}{Real\ GDP} \times 100$$

4b. How much higher was the average level of prices in 2005 (the base year) compared to 1994, according to the GDP deflator?

4c. Calculate the rate of inflation over the 1994-1 to 1995-1 interval (use the log-based formula)

Answers

1a.	0.03407	
1b.	3.40746	
2a.	0.03351	
2b.	3.35070	
3a.	0.00642	
3b.	0.02569	
3c.	2.56879	
4a.	79.24358	
	80.96905	
4b	80.10631	Mid-Year Average
	24.83410	Answer
4c.	0.02166	Fraction
	2.16565	Percentage