

Finance 30220
Problem Set #2

1) Suppose that you have the following series for real GDP.

Year	Real GDP
2002	\$3,250
2003	\$3,450
2004	\$3,500
2005	\$3,700

- Calculate the trend rate of growth assuming a constant annual growth rate.
 - Rewrite the series in terms of deviation from trend.
- 2) Go to the Federal Reserve of St. Louis economic data web site (<http://research.stlouisfed.org/fred2/> or go to Google and type 'Fred'). Download the time series for GDP (GDP) and the GDP price index (GDPDEF) – the data will be quarterly from Jan 1947 though January 2007.
- The base year for the price index is 2000. Calculate real GDP for each quarter in terms of base year prices.
 - Plot Real and nominal GDP.
 - Calculate Average GDP growth over the period 1947-2007
 - Calculate average real GDP growth over the period 19547-2007
 - Calculate average inflation over the time period 1947-2007
 - Using the GROWTH formula in excel, calculate the trend in real GDP.
 - Calculate deviation from trend and plot deviation from trend.
- 3) Suppose that you have the following information on an economy (assume that depreciation and indirect taxes are equal to zero).

- Gross Domestic Product: \$5,000
- Government Purchases: \$2,000
- Tax Revenues: \$500
- Net Exports: -\$1,000
- Net Factor Payments: \$200
- Consumption Expenditures: \$3,000

Find national income, current account, private savings, net investment and gross investment.

For Questions (4) – (5), refer to the following chart.

Suppose that apples and oranges are the only two goods available in the economy, and that they are sold in the quantities and prices indicated in the following table.

	Apples		Oranges	
Year	Quantity	Price	Quantity	Price
2003	4	\$5	8	\$9
2004	6	\$8	12	\$12
2005	5	\$12	14	\$10

- 4) Suppose that the average American spend equal amounts on apples and oranges each year.
- Calculate nominal GDP for 2003, 2004, and 2005
 - Using 2004 as the base year, calculate the CPI in 2003, 2004, and 2005.
 - Calculate real GDP (in 2004 dollars) in 2003, 2004, and 2005.
 - Calculate inflation rates using the CPI.
- 5) Calculate real GDP each year using 2003 prices.
- Calculate the rates of economic growth for 2003-2004 and 2004-2005.
 - Calculate the implicit GDP deflator for 2003, 2004 and 2005.
 - Calculate the inflation rates for the GDP deflator.