Questions 1-3 ask you to calculate certain magnitudes for a hypothetical economy. At the start of 2014, the government owed $50 B in debt on which the average nominal interest rate was 5%. During 2014, the government purchased $25B in final goods and services, made $25 B in transfer payments, and collected $40 B in taxes. Also during 2014, consumers spent $50 B on final goods and services, firms invested $25 B in new equipment and structures, the economy exported $25 B in goods and imported $25 B in services. The government had started out the previous year (2013) also owing $50 B and GDP during 2013 was $100B.

1.) Calculate the following magnitudes:
   a.) GDP for 2014
   b.) the government budget deficit for 2014
   c.) the government budget deficit for 2013
   d.) the government primary budget surplus for 2014
   e.) the debt/GDP ratio as of the end of 2013
   f.) the debt/GDP ratio as of the end of 2014

2.) How much taxes would the government have to collect in 2014 in order to keep the debt/GDP ratio from rising during 2014?

3.) Suppose instead that the government had started out 2014 owing $100 B in debt instead of $50 B. How much taxes would the government have to collect in 2014 in order to keep the debt/GDP ratio from rising between the start and end of 2014 in this case?