Assignment 2:Inflation

Question 1

Answer the following questions about the (real) inflation tax, assuming that the price level starts at 1.

a. Maria Moneybags keeps $1,000 in her sock drawer for a year. Over the year, the inflation rate is 10%. What is the real inflation tax paid by Maria for this year?

b. Maria continues to keep the $1,000 in her drawer for a second year. What is the real value of this $1,000 at the beginning of the second year? Over the year, the inflation rate is again 10%. What is the real inflation tax paid by Maria for the second year?

c. For a third year, Maria keeps the $1,000 in the drawer. What is the real value of this $1,000 at the beginning of the third year? Over the year, the inflation rate is again 10%. What is the real inflation tax paid by Maria for the third year?

d. After three years, what is the cumulative real inflation tax paid?

e. Redo parts a through d with an inflation rate of 25%. Why is high inflation such a problem?

Question 2

The inflation tax is often used as a significant source of revenue in developing countries where the tax collection and reporting system is not well developed and tax evasion may be high. All dollars are in billions.

a. Use the numbers in the accompanying table to calculate the inflation tax in the United States and India (Rp = rupees).

	Inflation (2015)	**Money Supply (2015)**	**Gov't Receipts (2015)**
India	5.87%	Rp24,581	Rp12,409
United States	0.12%	$3,082	$3,515

b. How large is the inflation tax for the two countries when calculated as a percentage of government receipts?

Question 3

Who are the winners and losers when a mortgage company lends $100,000 to the Miller family to buy a house worth $105,000 and during the first year prices unexpectedly fall by 10%? What would you expect to happen if the deflation continued over the next few years? How would continuing deflation affect borrowers and lenders throughout the economy as a whole?

Question 4

In the country of Wiknam, the velocity of money is constant. Real GDP grows by 3% per year, the money stock grows by 8% per year, and the nominal interest rate is 9%. What is

a. the growth rate of nominal GDP?

b. the inflation rate?

c. the real interest rate?

Question 5

Suppose that the money demand function takes the form

$$(M/P)^d = L(i, Y) = Y/(5i)$$

a. If output grows at rate g and the nominal interest rate is constant, at what rate will the demand for real money balances grow?

b. What is the velocity of money in this economy?

c. If inflation and nominal interest rates are constant, at what rate, if any, will velocity grow?

d. How will a permanent (once-and-for-all) increase in the level of interest rates affect the level of velocity? How will it affect the subsequent growth rate of velocity?

Question 6

A newspaper article once reported that the U.S. economy was experiencing a low rate of inflation. It said that "low inflation has a downside: 45 million recipients of Social Security and other benefits will see their checks go up by just 2.8 percent next year>"

a. Why would policymakers link increases in Social Security and other benefits to inflation?

b. Is the small increase in benefits a "downside" of low inflation, as the article suggests? Why or why not?