

Problem Set 1
Due: Friday, September 17.

Question 1. (10 points each) True, false or uncertain? Give a brief but careful explanation.

a) National accounts report that Hong Kong and Singapore had years when the ratio of exports to GDP was above 100 %. There must be some error in the data!

b) When comparing the evolution of the unemployment rate and inflation in France (see figure here for inflation, and see p11 of the textbook for the unemployment rate: the French unemployment rate was similar to that of Europe), we find a complete failure of the Phillips relation.

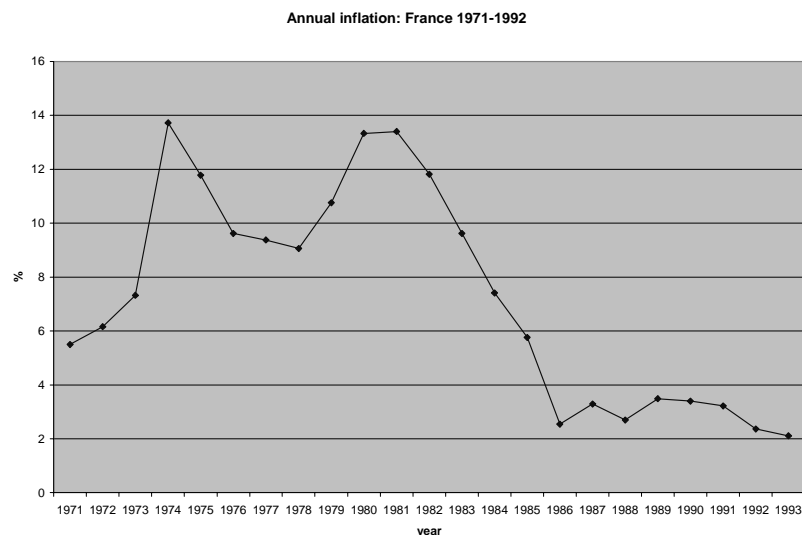


Figure 1:

Question 2

a) (10 points) From 1989 to 1993, Russia's real GDP has declined by approximately 40 %. Does it necessarily mean that true output has also declined

by a similar amount?

b) (5 points) How many years would it take to return to the 1989 level with a 4 % annual growth rate?

Question 3 Short answer (20 points).

Why do people care about inflation?

Question 4

A small cafe declares itself an independent state. One of its first tasks is to do some national accounting. In 1997, it produced 5,000 brownies, 20,000 bagels and 50,000 cups of coffee. Prices were \$1 per brownie, \$0.5 (50 cents) per bagel and \$1 per cup of coffee. In 1998, production was 12,000 brownies, 24,000 bagels and 50,000 cups of coffee, at \$1, \$1 and \$0.5 per unit, respectively.

- a) (5 points) Calculate nominal GDP in each year.
- b) (5 points) Calculate real GDP in each year, using 1997 as base year.
- c) (5 points) Calculate real GDP in each year, using 1998 as base year.
- d) (10 points) Determine the growth rate of GDP based on your answers in a, b and c. Did the economy grow or not?
- e) (10 points) Find the change in the GDP deflator, both with 1997 and 1998 as base year. Relate your finding to your answers in d.

Question 5 (5 points each) Explain why each of the following would or would not be counted in GDP.

- a) You buy a used bike for \$50 on a yard sale.
- b) A taxi driver buys gasoline for his cab.