Chapter2 The Data of Macroeconomics

(First Midterm, March 3, 2008, II, Q2)

Consider the following table of price and quantities produced for a small economy.

Year	Footballs		Grapes		Dresses		Wine	
	Price	Quantity	Price	Quantity	Price	Quantity	Price	Quantity
2000	$5	3	$1	15	$20	4	$5	5
2001	$6	4	$2	20	$25	5	$8.50	6

a) (4 points) Assume that all grapes in this economy are used to make wine. Compute nominal GDP for 2000 and 2001.

Since grapes are an intermediate good, we do not count the contribution of the grape industry to GDP. We sum the current year prices times the current year quantities of the remaining three goods to get NGDP(2000) = $120, NGDP(2001) = $200.

b) (2 points) Continue to assume that all grapes are used to make wine. Using 2000 as the base year, compute real GDP in 2000 and 2001.

Again, we ignore the grape industry. We sum the year 2000 price times the current year quantities to get RGDP(2000) = $120, RGDP (2001) = $150.

c) (2 points) Find the GDP Deflator for 2000 and 2001 on a 100-point scale. Report your answers to two decimal places, if necessary.

GDP Deflator = Nominal GDP / Real GDP, so we have

GDP Deflator(2000) = 100, GDP Deflator(2001) = 133.33

d) (1 points) What was the growth rate for real GDP between 2000 and 2001? Express your answer as a percentage.

Growth Rate =100*[RGDP(2001) – RGDP(2000)] / RGDP(2000) = 25%.

e) (4 points) Assume that the typical consumer in this economy purchases 2 footballs, 1 dress, and 4 bottles of wine per year. Using 2000 as the base year, find the CPI in 2000 and 2001 on a 100-point scale.

We compute the price of the market basket in each year using the prices in that year times the quantities in the market basket. Thus we have MB(2000) = $50, MB(2001) = $71. We then find the CPI by dividing the price of the market basket in the current year by the price of the market basket in the base year and multiplying by 100. This gives us CPI(2000) = 100, CPI(2001) = 142.

f) (2 points) What was the inflation rate in this economy between 2000 and 2001? Express your answer as a percentage.

Inflation Rate = 100*[CPI(2001)-CPI(2000)] / CPI(2000) = 42%.