Exercise 1: Labor Force

Indicate whether the following people are employed, unemployed, or out of the labor force. If they are unemployed indicate whether their unemployment is structural, cyclical, frictional, or seasonal if possible.

a) A full-time student who does not work
   If the student is not looking for work, then she is not in the labor force. If she is looking for work, she is unemployed.
b) An auto assembly-line worker who was laid-off when his plant was closed for production changes and has not been looking for work.
   Even though he is not looking for work, because he plans to return to work after the production plant's change-over, he is considered unemployed.
c) A stay-at-home mother
   Assuming she is not looking for work or self-employed, she is not in the labor force.
d) A retired aero-space engineer that bags groceries part time
   Employed.
e) Katie looses her life guarding job at the end of the summer, just before returning to school
   Katie is seasonally unemployed if she is looking for new work. Otherwise, she is not in the labor force.
f) After a tariff on steel is repealed, American steel manufacturers lay-off some workers
   If the steel workers are looking for new jobs they are structurally unemployed.
g) Due to generally decreasing retail sales, many retail workers loose their jobs
   Because the layoffs are the result of generally poor economic conditions, these people are cyclically unemployed.
h) John leaves his position at McDonalds to look for a new job
   John is frictionally unemployed.
i) Mary is working a part time job while she looks for a permanent position
   Mary is employed.

Exercise 2: Unemployment

The following is employment information about the country Badger Land.

Entire Population	800
People under the age of 16	75
Retired people	200
Number of people with full time job	250
Number of people with part time job	175
Number of people without a job but looking for one	75
Number of people without a job and not looking for one	25

a. What is the unemployment rate of Badger Land?
   75/500 = 15%
b. What is the labor force participation rate in Badger Land?
   500/750 = 68.97%

Exercise 3: Price Indexes

In Fast Foodland the market basket of goods is 2 hotdogs and 1 cheeseburger. Fill in the table below, using 2007 as the base year.

	Hotdogs		Cheeseburgers			GDP		
Year	Price	Quantity	Price	Quantity	CPI	Nominal	Real	Deflator
2005	$2.00	400	$3.50	200	2*2+3.5=7.5 7.5/10 *100 = **75**	2*400 + 3.5*200 = **1500**	3*400 + 4*200 = **2000**	1500/2000 *100 = **75**
2006	$2.50	300	$3.00	250	2.5*2+3 = 8 8/10*100 = **80**	2.5*300 + 3*250 = **1500**	3*300 + 4*250 = **1900**	1500/1900 *100 = **78.95**
2007	$3.00	310	$4.00	150	3*2+4 = 10 10/10*100 = **100**	3*310 + 4*150 = **1530**	3*310 + 4*150 = **1530**	1530/1530 *100 =**100**

Exercise 4: Inflation

Using the information above, calculate the rate of change in prices of hotdogs and cheeseburgers , the inflation rate, and the growth rate of nominal and real GDP from 2005 to 2006 and 2006 to 2007. Is there anything that is counter intuitive?

Year	Hotdog Prices	Cheeseburger Prices	CPI	Nominal GDP	Real GDP
2005 to 2006	(2.5 – 2)/2 *100 = **25%**	(3.5 – 3)/3.5 *100 = **- 14.3%**	(80 – 75)/75 *100 = **6.67%**	(1500 – 1500)/ 1500 *100 = **0%**	(1900– 2000)/ 2000 *100 = **-10%**
2006 to 2007	(3 – 2.5)/2.5 *100 = **20%**	(4 – 3)/3 *100 = **33.3%**	(100 – 80)/80 *100 = **25%**	(1530 – 1500)/ 1500 *100 = **2%**	(1530– 1900)/ 1900 *100 = **-19.47%**

Exercise 5: Real versus Nominal Variables

Fill in the table below.

Year	CPI	Nominal Wage	Real Wage
1980	100	$6/hour	**$6/hour**
1990	**125**	$10/hour	$8/hour
2000	150	**$10.5/hour**	$7/hour

Exercise 6:

Use the information above to calculate the CPI in 2000 with 1990 as the base year.

150 / 125 * 100 = 120