

Question 1 Fill in the blanks. You must show your work.

Year	2014	2015
Nominal gross national income (GNI) (\$ billion)	291.53	292.56
Factor income sent abroad (\$ billion)	68.30	75.90
Factor income earned abroad (\$ billion)	8.13	9.49
Nominal gross domestic product (GDP) (\$ billion)	351.7	358.97
GDP deflator	100	100.88
Real GDP (\$ billion)	351.7	355.9366

$$100.88 = \frac{358.97}{\text{real}} \times 100$$

$$\text{real} = \frac{358.97}{100.88} = 355.9366$$

$$\text{GNP} = \text{GDP} + \text{NFFI}$$

$$\text{NFFI} = \text{income from abroad} - \text{income to abroad}$$

$$= (8.13) - (68.3)$$

$$\text{GDP deflator} = \frac{\text{nominal}}{\text{real}} \times 100$$

$$\text{real} = \frac{\text{nominal}}{\text{real}} \times 100$$

$$291.53 = \text{GDP} + (8.13 - 68.3)$$

$$351.7 = \text{GDP}$$

$$\text{GNP} = \text{GDP} + (\text{from abroad} - \text{to abroad})$$

$$= 358.97 + (9.49 - 75.9)$$

$$= 292.56$$

Question 2 Fill in the blanks. You must show your work.

Year	2012	2013	2014	2015
Consumer price index (CPI)	99.08	100.55	102.51	107.52
Inflation rate (%)	-0.92	1.48	-0.0348	4.9873
Employed (millions)	12.50	12.60	12.85	13.05
Unemployed (millions)	0.99	0.71	0.68	0.61
Population (millions)	20.75	21.48	21.82	22.02
Unemployment rate (%)	7.3348	5.3343	5.03	4.47

$$\text{Inflation rate}_{2014} = \frac{102.51 - 100.55}{100.55} \times 100$$

$$= -0.0348$$

$$\text{Inflation rate}_{2015} = \frac{107.52 - 102.51}{102.51} \times 100$$

$$= 4.9873$$

$$\text{Unemployment rate} = \frac{\text{unemployed}}{\text{labor force}} \times 100$$

$$\text{labor force} = \text{employed} + \text{unemployed}$$

$$\text{labor force} = 12.5 + 0.99$$

$$\text{Unemployment rate}_{2012} = \frac{0.99}{13.49} \times 100 = 7.3348$$

$$= 13.49$$

$$\text{Unemployment rate}_{2013} = \frac{0.71}{13.31} \times 100 = 5.3343$$

$$\text{labor force}_{2013} = 12.6 + 0.71$$

$$= 13.31$$

$$\text{Percentage change in CPI} = \text{inflation rate}$$

$$= \frac{\text{new} - \text{old}}{\text{old}} \times 100$$

Question 3 Calculate GDP and GNP. You must show your work.

Item	\$ billion
Imports <i>M</i>	289
Transfer payments	253
Saving	82
Exports <i>X</i>	234
Income from employment	1160
Taxation	396
Consumer spending <i>C</i>	745
Investment <i>I</i>	229
Net factor income from abroad <i>NFFI</i>	-111
Government spending on goods and services <i>G</i>	437

$$GDP = C + I + G + (X - M)$$

$$= 745 + 229 + 437 + (234 - 289)$$

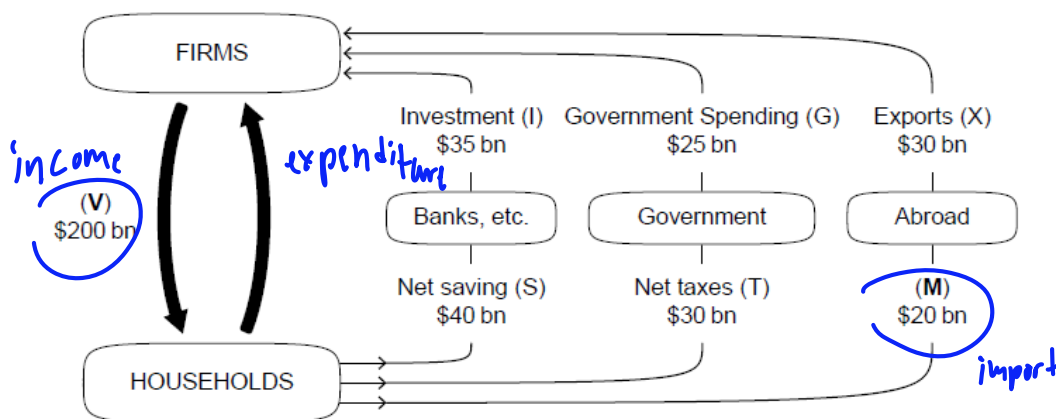
$$= 1,361$$

$$GNP = GDP + NFFI$$

$$= 1361 - 111$$

$$= 1,250$$

Question 4 Answer the following questions.



4.1 What do the flows (V) and (M) represent?

V = income *M = import*

4.2 Does the government run a budget deficit or surplus? By how much?

surplus by \$5 bn

4.3 Does the country run a trade deficit or surplus? By how much?

surplus by \$10 bn

4.4 Is the economy in equilibrium? Why or why not?

No because total spending $\neq$ total producing.

Question 5 Why does CPI tend to be higher than GDP deflator?

Year	Consumer price index (CPI)	GDP deflator	GDP (\$ million)
2014	100	100	4465
2015	105.35	105.11	4814
2016	109.21	108.92	5026

because CPI measured by market basket of citizens means what that people consumed but GDP deflator measured by all goods in economy mean the overall price level. So, CPI reflect the cost of living but GDP deflator aren't. When GDP ↑ people consume more.

Question 6 Answer the following questions.

	Price per unit in dollars (\$)	
	2013	2014
Pizza	12.50	12.90
Chocolate milk (litres)	1.15	1.25
Jazz concert	45.00	46.00
Total cost of the typical basket	100	102.5575

The typical basket of goods purchased by an average consumer consists of 10 pizzas, 100 litres of chocolate milk and 10 jazz concerts.

6.1 With 2013 as the base year, calculate CPI of 2013 and 2014.

$$CPI = \frac{\text{current}}{\text{base}} \times 100$$

$$CPI_{2013} = \frac{12.9 + 1.25 + 46}{12.50 + 1.15 + 45} \times 100$$

$$CPI_{2013} = \frac{60.15}{59.65} \times 100$$

$$CPI_{2013} = \frac{12.50 + 1.15 + 45}{12.50 + 1.15 + 45} \times 100 = 100$$

$$= 102.5575$$

6.2 Calculate the inflation rate of 2014.

$$\text{Inflation rate} = \frac{CPI_{\text{NEW}} - CPI_{\text{OLD}}}{CPI_{\text{OLD}}} \times 100$$

$$= \frac{102.5575 - 100}{100} \times 100 = 2.5575$$

Question 7

Fill in the blanks. You must show your work.

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new - old
old

Year	Nominal GDP (\$ billions)	GDP deflator	Real GDP (\$ billions)	Annual real growth rate (%)	Population	Real GDP per capita (\$)
2014	308.12	98.9	311.547		13 273 644	23,421
2015	321.99	100	321.99	3.3514	13 340 012	24,137
2016	332.65	102.2	325.489	1.0766	13 473 412	24,157

$$\text{GDP deflator} = \frac{\text{nominal}}{\text{real}} \times 100 \rightarrow \text{real} = \frac{\text{nomi}}{\text{defla}} \times 100$$

$$\text{real 2014} = 311.547$$

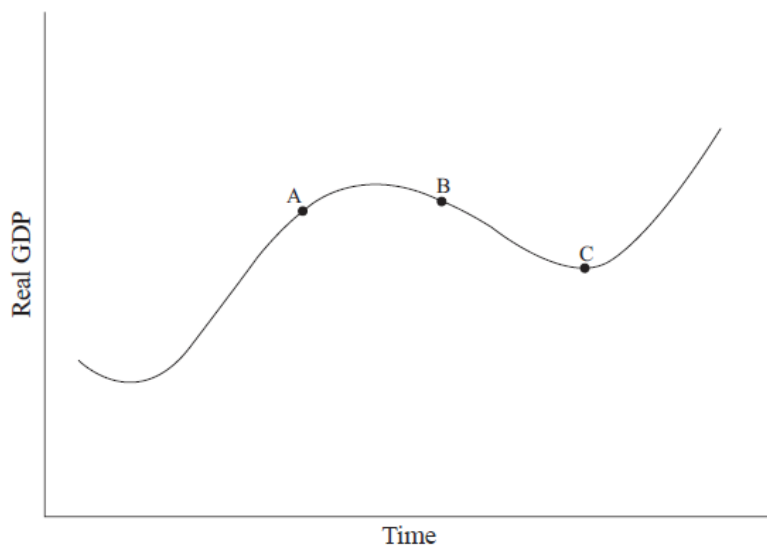
$$2015 = 321.99$$

$$2016 = 325.489$$

$$\text{real GDP per capita} = \frac{\text{real GDP}}{\text{population}}$$

Question 8

Based on the data above, which position – A, B, or C – best describes the economy in 2016? Why?



B- because A is during the economics growth

C is the point after recession that mean in the economy will growth a lot
B is the middle of both points which is not growth a lot and not minimum of the recession

Question 9 Answer the following questions.

$$MPS = 0.25$$

Country A is a closed economy with no government. The marginal propensity to save in the country is 0.25.

9.1 Calculate the value of the (investment) multiplier.

when people get income 1000\$ they save 250 \$ (invest)
consume 750 \$

9.2 Due to the initial investment made by firms and the multiplier effect, the (equilibrium) output in the economy has increased by \$200m. Calculate the value of the initial investment.

Country B is an open economy with government.

9.3 Do you think the multiplier effect in Country B will be larger than that of Country A? Why or why not?