Student ID: 6304640573

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

Year	2014	2015
Nominal gross national income (GNI) ($ billion) (GNP)	291.53	292.56
Factor income sent abroad ($ billion) to (export)	68.30	75.90
Factor income earned abroad ($ billion) from (import)	8.13	9.49
Nominal gross domestic product (GDP) ($ billion)	351.7	358.97
GDP deflator	100	100.88
Real GDP ($ billion)	351.7	355.84

GNP = GDP + NFFI

= 358.97 + (9.49 − 75.90)

= 292.56 ✱

GDP = GNP − NFFI

= 291.53 − (8.13 − 68.30)

= 351.7 ✱

GDP deflator 2014 = $\frac{\text{Norminal GDP}}{\text{Real GDP}} \times 100$

$100 = \frac{351.7}{\text{Real GDP}} \times 100$

$\text{Real GDP}_{2014} = 351.7$ ✱

GDP deflator 2015 = $\frac{\text{Norminal GDP}}{\text{Real GDP}} \times 100$

$100.89 = \frac{358.97}{\text{Real GDP}} \times 100$

$\text{Real GDP}_{2015} = 355.84$ ✱

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	1.95	4.89
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 (%)	7.34	5.33	5.03	4.47

Inflation Rate = $\frac{CPI_{New} - CPI_{old}}{CPI_{old}} \times 100\%$

↳ Year 2014 = $\frac{102.51 - 100.55}{100.55} \times 100\% = 1.95\%$

↳ Year 2015 = $\frac{107.52 - 102.51}{102.51} \times 100\% = 4.89\%$

Unemployment rate = $\frac{\text{Unemployed}}{\text{Labor force}} \times 100\%$

↳ Year 2012 = $\frac{0.99}{0.99 + 12.5} \times 100\% = 7.34\%$

↳ Year 2013 = $\frac{0.71}{0.71 + 12.6} \times 100\% = 5.33\%$

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

Item	$ billion
Imports	289
Transfer payments	253
Saving	82
Exports	234
Income from employment	1160
Taxation	396
Consumer spending	745
Investment	229
Net factor income from abroad	–111
Government spending on goods and services	437

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

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

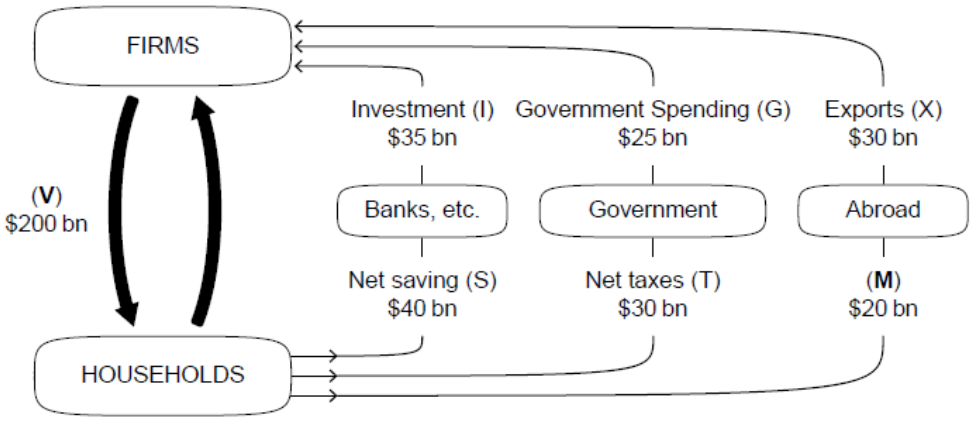
= 1356 ✱

GNP = GDP + NFFI

= 1356 − 111

= 1245 ✱

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?

T > G = surplus
T < G = dificit

Budget surplus by $5

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

X > M = surplus
X < M = dificit

Trade surplus by $10

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

leakage = injection => 40+30+20 = 35+25+30

90 = 90 ✱

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

Year	Consumer price index (CPI)	GDP deflator	GDP ($ million)	Real
2014	100	100	4465	4465
2015	105.35	105.11	4814	4579.96
2016	109.21	108.92	5026	4614.4

CPI focuses on consumer goods, but GDP deflator measure of the overall price level
When we calculate CPI, we will fixed quantity. So, price can increase but quantity still same.
And it make CPI higher than GDP deflator.

Question 6 Answer the following questions.

	Price per unit in dollars ($)	
	2013	2014
Pizza	12.50 ×10	12.90 ×10
Chocolate milk (litres)	1.15 ×100	1.25 ×100
Jazz concert	45.00 ×10	46.00 ×10
Total cost of the typical basket	690	714

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.

$CPI = \frac{\text{Market Basket in Desired year}}{\text{Market Basket in Base year}} \times 100$

$CPI_{2013} = \frac{690}{690} \times 100 = 100$ ※

$CPI_{2014} = \frac{714}{690} \times 100 = 103.48$ ※

6.2 Calculate the inflation rate of 2014.

$\text{Inflation Rate} = \frac{CPI_{new} - CPI_{old}}{CPI_{old}} \times 100\%$

$\text{Inflation Rate}_{2014} = \frac{103.48 - 100}{100} \times 100\%$

$= 3.48\%$

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Question 7 Fill in the blanks. You must show your work.

Year	Nominal GDP ($ billions)	GDP deflator	Real GDP ($ billions)	Annual real growth rate (%)	Population	Real GDP per capita ($)
2014	308.12	98.9	311.55		13273644	2.35×10^{-5}
2015	321.99	100	321.99	3.35	13340012	2.41×10^{-5}
2016	332.65	102.2	325.49	1.09	13473412	2.42×10^{-5}

GDP deflator = $\frac{\text{Nominal GDP}}{\text{Real GDP}} \times 100$

↳ 2014 : $98.9 = \frac{308.12}{\text{Real GDP}} \times 100$

$= 311.55$ ※

↳ 2015 : $100 = \frac{321.99}{\text{Real GDP}} \times 100$

$= 321.99$ ※

↳ 2016 : $102.2 = \frac{332.65}{\text{Real GDP}} \times 100$

$= 325.49$ ※

Annual Real Growth Rate = $\frac{\text{Real GDP}_{new} - \text{Real GDP}_{old}}{\text{Real GDP}_{old}} \times 100\%$

↳ 2014→2015 : $\frac{321.99 - 311.5}{311.5} \times 100\% = 3.35\%$ ※

↳ 2015→2016 : $\frac{325.49 - 321.99}{321.99} \times 100\% = 1.09\%$ ※

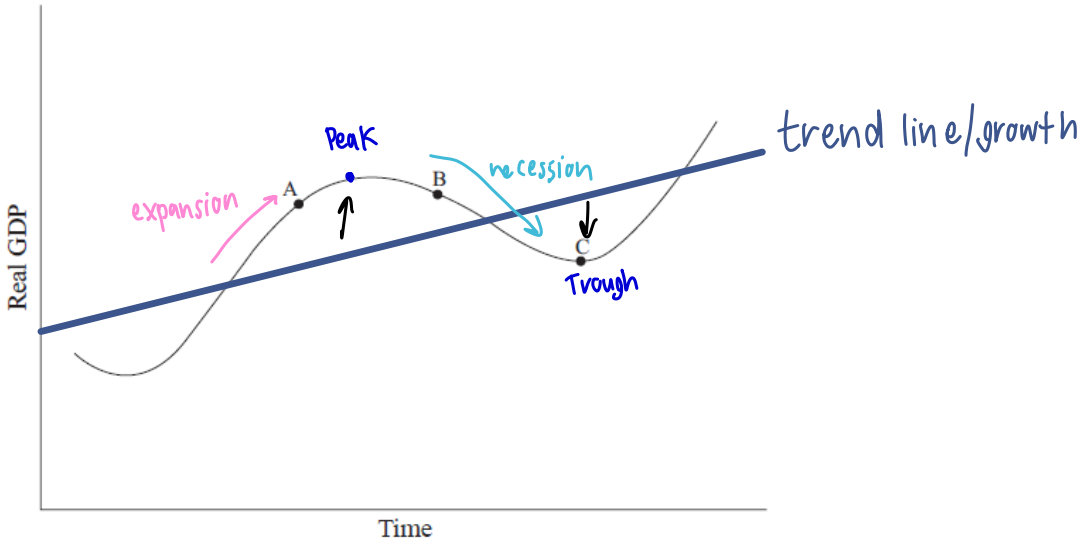
Real GDP per capita = $\frac{\text{Real GDP}}{\text{population}}$

↳ 2014 = $\frac{311.55}{13,273,644} = 2.35 \times 10^{-5}$ ※

↳ 2015 = $\frac{321.99}{13,340,012} = 2.41 \times 10^{-5}$ ※

↳ 2016 = $\frac{325.49}{13,473,412} = 2.42 \times 10^{-5}$ ※

Question 8 Based on the data above, which position – A, B, or C – best describes the economy in 2016? Why?



A is expansion because it is going up to the peak. (over time)

B is recession because it is going down to the trough. (over time)

C is Trough because it is minimum point. (observe deflation)

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Question 9 Answer the following questions.

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.

$AE = Y^* = C + I$: $MPS = 0.25$, $MPS = 0.75$

$\frac{1}{1 - MPC} = \frac{1}{1 - 0.75} = \frac{1}{0.25} = 4$ ※

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.

$\frac{\Delta Y^*}{\Delta I} = 4$ ⇒ if Y increase by 1 unit, I will increase by 4 units

if Y increase by 200 units, I will increase by $4 \times 200 = 800$ units ※

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?

When open economy is international trade, money will leaves the economy. there is import goods. So, Multiplier effect is smaller. Because Multiplier is depend on marginal propensity for consume or saving of an economy. MPS is more multiplier → the multiplier is more.

MPS is more multiplier → the multiplier is less.