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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	355.83

(75.9

Nominal GNI$_{2015}$ = GDP − NFFI

= 358.97 − 66.41

= 292.56

100.88 = $\frac{358.97}{R}$ × 100

RGDP$_{2015}$ = 355.8386

Nominal GDP$_{2014}$ = GNI + NFFI

= 291.53 + 68.3 − 8.13 = 351.7

RGDP$_{2014}$ = $\frac{351.7}{100}$ × 100 = 351.7

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	1.949	4.88
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 (%)	7.33	5.33	5.03	4.47

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

2015 = $\frac{107.52 - 102.51}{102.51}$ × 100

Unemployment rate$_{2012}$ = $\frac{0.99}{0.99+12.5}$ × 100

2013 = $\frac{0.71}{0.71+12.6}$ × 100

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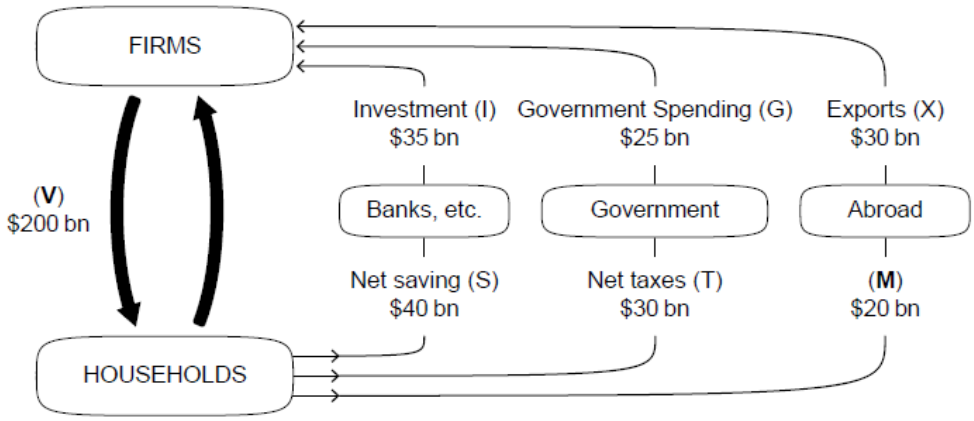
Question 3 Calculate GDP and GNP. You must show your work.

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

$GDP = C + I + G + (X - M)$
$= 745 + 229 + 437 + (234 - 289)$
$= 1350$

$GNP = GDP + NFFI$
$= 1350 - 111$
$= 1245$

Question 4 Answer the following questions.



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

V represents income. M represents import.

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

surplus by 5$

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

surplus by 10$

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

Yes, the economy is in equilibrium. Because aggregate expenditure is equal to aggregate income.

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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)
2014	100	100	4465
2015	105.35	105.11	4814
2016	109.21	108.92	5026

Because CPI is fixed but when price change. So, overall CPI higher than GDP deflator. And inflation affects the price of products

Question 6 Answer the following questions.

	Price per unit in dollars ($)	
	2013	2014
Pizza 10	12.50	12.90
Chocolate milk (litres) 100	1.15	1.25
Jazz concert 10	45.00	46.00
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.

$CPI_{2013} = \frac{\sum P_{2013} \times Q_{fixed}}{\sum P_{2013} \times Q_{fixed}} \times 100 = 100$

$CPI_{2014} = \frac{\sum P_{2014} \times Q_{fixed}}{\sum P_{baseyear} \times Q_{fixed}} \times 100 = 103.4782$

6.2 Calculate the inflation rate of 2014.

$\text{Inflation rate}_{2014} = \frac{CPI_{2014} - CPI_{2013}}{CPI_{2013}} \times 100 = 3.4782$

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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	311.5470		13 273 644	0.00002347
2015	321.99	100	321.99	3.3519	13 340 012	0.00002413
2016	332.65	102.2	325.4892	1.0867	13 473 412	0.00002475

nominal / real x 100

RGDP / pop

$98.9 = \frac{308.12}{R} \times 100$

$RGDP_{2014} = 311.5470$

$RGDP_{2015} = \frac{321.99}{100} \times 100 = 321.99$

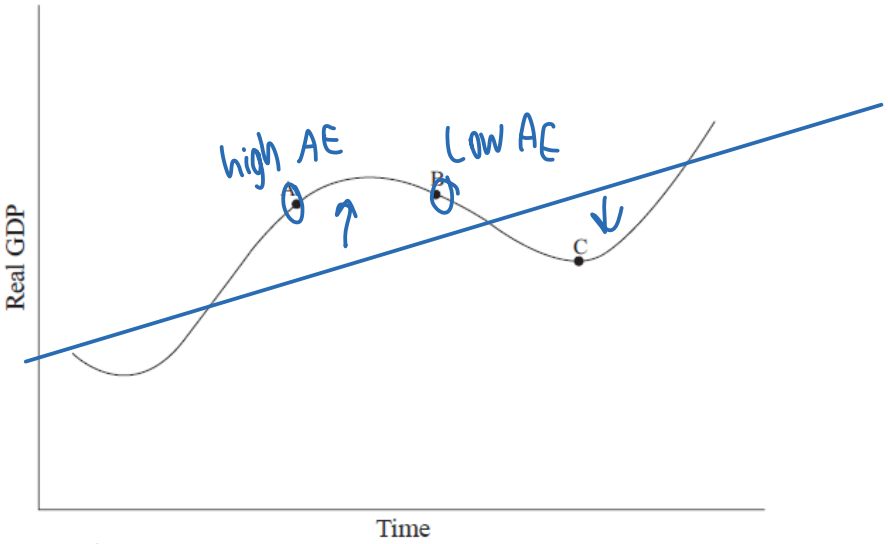
$RGDP_{2016} = \frac{332.65}{102.2} \times 100 = 325.4892$

annual real growth rate$_{2015} = \frac{321.99 - 311.547}{311.547} \times 100$

annual real growth rate$_{2016} = \frac{325.4892 - 321.99}{321.99} \times 100$

≈ 1.0867

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



A → Expansion

B → Recession

C → through – observe deflation

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Question 9 Answer the following questions.

MPS + MPC = 1
MPC = 0.75

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.

$Y = C + I$
$Y = C_0 + C_1(Y) + I$ | $\Delta Y = \Delta C_0 + MPC(\Delta Y) + \Delta I$ | $\Delta Y - 0.75(\Delta Y) = \Delta C_0 + \Delta I$ | $\Delta Y = \frac{1}{0.25}(\Delta I)$

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.

$\Delta Y = \frac{1}{0.25}(\Delta I)$ | $200 = \frac{1}{0.25}(\Delta I)$

$\Delta I = 50$

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?

No, it doesn't. In my opinion, multiplier effect will only cause the change in consumption and national income.