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Mana Tohu Mātauranga o Aotearoa  
New Zealand Qualifications Authority

## Level 3 Economics 2024

### 91403 Demonstrate understanding of macro-economic influences on the New Zealand economy

Credits: Six

Achievement	Achievement with Merit	Achievement with Excellence
Demonstrate understanding of macro-economic influences on the New Zealand economy.	Demonstrate in-depth understanding of macro-economic influences on the New Zealand economy.	Demonstrate comprehensive understanding of macro-economic influences on the New Zealand economy.

Check that the National Student Number (NSN) on your admission slip is the same as the number at the top of this page.

**You should attempt ALL the questions in this booklet.**

If you need more room for any answer, use the extra space provided at the back of this booklet.

Check that this booklet has pages 2–14 in the correct order and that none of these pages is blank.

Do not write in the margins (// // //). This area will be cut off when the booklet is marked.

**YOU MUST HAND THIS BOOKLET TO THE SUPERVISOR AT THE END OF THE EXAMINATION.**

**Excellence**

**TOTAL 22**

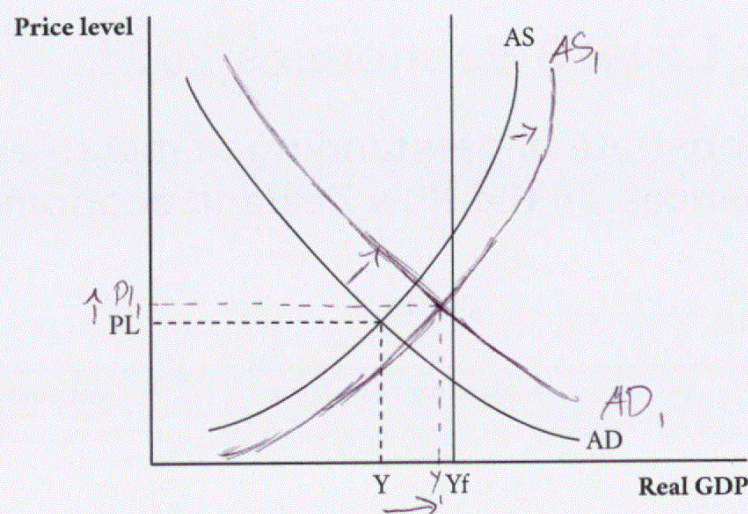


### QUESTION ONE: Migration and monetary policy

#### Immigration surge threatens smooth path to lower interest rates.

Immigration can have both positive and negative effects on economic growth and price stability. While recent gains in net migration have potential to help ease wage costs for businesses (reduce wage pressure), there is concern that it may heighten demand pressures in the economy, especially for housing. This could lead to at least one more hike of the official cash rate (OCR).

Graph One: The New Zealand economy



- (a) (i) On Graph One above show the effect of higher net migration by shifting both curves. Fully label all changes.
- (ii) Referring to the changes to Graph One above and the resource material, explain the impacts higher net migration may have on economic growth.

An increase in net migration will increase consumption spending (C) as the migrants coming to New Zealand will have to set up their households and livelihoods by purchasing goods such as white ware, cars, or houses. As C is a component of AD, AD increases from AD to AD<sub>1</sub>. An increase in immigration means that there is an increase in the supply of skilled labour which will be able to decrease the cost of wages for skilled jobs, thereby reducing the cost of production for firms. They will earn more profits and therefore more revenue which means that they will be incentivised to increase their production to maximise \* as these firms become more efficient.



profits, resulting in AS also increasing from  $AS$  to  $AS_1$ .  
 Increases in both AD and AS will result in an increase in the Real GDP from  $Y$  to  $Y_1$ , which will result in ~~an unemployment decreasing from  $Y_f - Y$  to  $Y_1 - Y_1$~~  ~~economic growth.~~ an increase in economic growth.

- (b) Referring to the changes to Graph One and the resource material, explain how the higher net migration could affect price stability. In your answer, state the current Policy Targets Agreement and explain how this may impact the Reserve Bank's monetary policy decisions. ~~inflation at 2.2%~~ inflation at 2.2%.

An increase in net migration will result in an increase in consumption spending as ~~there~~ new households will want to set up their lives by purchasing items such as whitegoods, cars, or houses which results in an increase in consumption spending ( $C$ ).  $C$  is the largest component of ~~the~~ AD so AD increases from  $AD$  to  $AD_1$ . Increases in net migration will also ~~increase~~ increase efficiency for firms as cost of production has decreased due to a decrease in wage costs, causing firms to have increased profits thus AS increases from  $AS$  to  $AS_1$ .

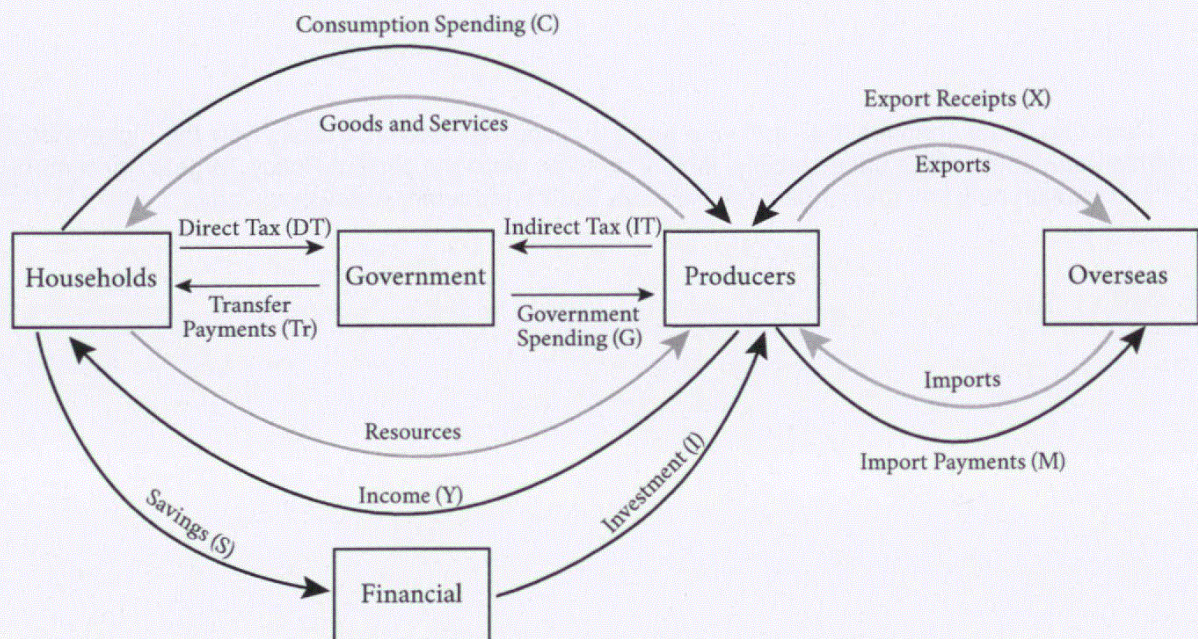
While an increase in AS will reduce the inflationary pressures on the economy for scarce resources, the increase in AD to  $AD_1$  is greater than ~~there~~ due to  $C$  being the largest component of AD so there still will be overall ~~increase~~ demand-pull inflation, resulting in an increase in the price level from  $P$  to  $P_1$ . The current policy target agreement set by the reserve bank is to keep the level of inflation between 1% to 3% over the medium term, with a focus on the midpoint of 2%. Currently, the rate of inflation in New Zealand is 2.2%, which fits the policy target agreement level of being between 1% to 3%. However, if the immigration ~~is~~ <sup>is</sup> substantial then there will be an increase in the



## QUESTION TWO: Fiscal policy and economic growth

Rising inflation has led to calls to change the tax brackets in New Zealand to reduce bracket creep and help with the rising cost of living. A report states New Zealanders would be paying up to \$6 000 less tax a year if tax brackets had been adjusted with inflation. Considering only those employed in the economy, this could lead to over \$17.5b less tax being paid. This could also lead to a larger increase in economic growth due to the multiplier effect.

**Model One: A circular flow model of the New Zealand economy**



- (a) Use Model One and the multiplier formula  $[1/(1 - MPC)]$  to calculate and explain the final effect on real GDP and economic growth.

In your answer, assume changing tax brackets could lead to a \$17.5b tax cut and that the marginal propensity to consume is 0.83.

*due to changes in tax brackets*  
 A decrease in income tax ~~cuts~~ <sup>would</sup> result in the decrease of the direct tax flow from households to the government which means that household disposable income would increase, especially for <sup>and higher income</sup> mobile income earners who ~~would~~ are more likely to be ~~not~~ affected by the changes in the tax brackets. Increases in household disposable income will mean that there is an increase in the consumption spending flow ~~at~~ from households to producers, thereby increasing the revenue and profits for producers. ~~At~~ Producers



will see increased business confidence and will increase their investment spending flow and will also increase their ~~resources~~ income flow to households ( $Y$ ). ~~This is the~~  
The 17.5 billion dollar tax cut, which if tax would be a withdrawal is now within the circular flow of the economy.

The multiplier effect is based on the premise where an initial injection into the economy will have an even greater impact on Real GDP, where by one person's income which is spent becomes another's <sup>extra</sup>

Rather than providing tax cuts, the \$17.5b could be spent on infrastructure, such as improved transport, education, and healthcare facilities. This could allow the economy to accommodate a larger population and also lead to a much larger increase in real GDP and economic growth.

- (b) (i) Explain how infrastructure spending of \$17.5b will result in a larger increase in real GDP and economic growth. Refer to Model One in your answer.

Infrastructure spending worth ~~\$17.5~~ billion will be ~~the~~ <sup>added</sup>  
as a form of government spending where there will be an increase in the government to produce  $G_i$  flow. Producers will want to acquire more labour to fulfil these goods thereby increasing the derived demand for labour and will increase the (labour) resource flow from households to ~~consumers~~ producers along with an increase in the income money flow from producers to the households, thereby ~~furthermore, there is also~~ increasing household disposable income which will be able to impact increase consumption spending flow. Also, producers will want to increase their investment spending for capital goods which means that there will also be an increase in the 'I' money flow from financial institutions to producers. As this impacts  $C$ ,  $I$ , and  $G_i$ , along with the added effects on the economy based on the multiplier effect where one person's income spent becomes another's income so on and so forth, the initial ~~spending~~ infrastructure spending of \$17.5 billion will result in a greater increase in Real GDP and will result in economic growth. ~~Also compared to the tax cuts which only impact one factor of AD ( $C$ ), the infrastructure spending impacts  $C$ ,  $I$ , and  $G_i$ , which would lead to a greater economic growth. Furthermore, <sup>in the case of the tax cut, some of the tax cut will be saved so the multiplier effect of the tax cut will be smaller.</sup>~~

Question Two (b) continues on the next page ➔



- (ii) Explain why increasing spending on infrastructure could also create a larger (more sustainable) increase in economic growth in the long run, compared to tax cuts. Refer to Model One and the resource material in your answer.

The increased spending on infrastructure will increase the total productive capacity of the economy as it will allow the economy to sustain ~~more~~ a larger population, which can make the economy less likely to be impacted by higher prices ~~with~~ inflation due to the increase in the ~~availability of~~ productivity of many firms; ~~along~~ Furthermore, the government spending on hospitals and education means that workers are likely to be more skilled and are also less likely to become ill for extended periods, which will not be immediate but a long term positive impact on sustainable economic growth. ~~Even though the~~ While the tax cut increases disposable income and leads to an increase in the consumption spending flow, there is also MPS of 0.17, which means that some of the tax cut will ~~go~~ still go ~~leave~~ the circular flow as a withdrawal. ~~Finally, the decrease in the~~ Government investment ~~instead impacts~~ consumption flow, investment flow, and <sup>instead increases</sup> the government spending flow. These improvements in infrastructure, if done in tourist areas could also allow for more export receipts ~~are~~, and may attract increased migrants as the investment supports a larger population. Finally, the tax cuts will reduce the government operating balance by \$17.5 billion which could ~~not~~ reduce the government's ability to undertake future government spending measures, ~~without~~ and if they do so then there will be an increase in the government's debt as they may run a budget deficit, which can be harmful. Tax cuts ~~only impact the consumption flow, while along with the~~ government investment flow, investment flow, and consumption flow, and potentially export receipt flow is positively impacted. Also, there will be an increase in net social welfare from the government's projects by improving health care and educational outcomes which means that overall infrastructure spending could be ~~more~~ result in more sustainable economic growth compared to tax cuts.



New Zealand has recently signed a free trade agreement (FTA) with the European Union. While FTAs like this can lead to increased economic growth, they can also lead to increased spending on imports, reducing the multiplier effect of domestic fiscal policy.

- (c) Explain how increased imports could reduce the impact of the multiplier and, as a result, the final impact either tax cuts or infrastructure spending could have on real GDP and economic growth. In your answer, refer to Model One and the multiplier effect.

New Zealand free trade agreement with the EU will mean that there are reduced barriers to free trade by the removal of tariffs, for example, which will increase the price competitiveness of importing firms within New Zealand which ~~will~~ will increase demand for imports, therefore increasing import payments. Import payments are a withdrawal from the circular flow model as the money flow goes from 'producers' to 'overseas'. ~~But as for tax cuts,~~ an increase in household disposable income may not contribute to domestic consumption spending. Instead, the households, especially after the FTA, will have increased demand for ~~export~~ imports, increasing import payments, and like savings are a withdrawal from the circular flow so they will overall have a reduced MPC, as consumption spending ~~will be~~ will be relatively less compared to import payments, ~~which will lead to an increase in~~ For infrastructure spending, firms would benefit from decreased cost of production from raw materials imports if they come from the EU but they will reduce their domestic consumption for raw materials which means that there will be less income for the other domestic firms as well which will lead to an overall decrease in the MPC, and therefore the multiplier will not be as big of an impact on the increase in the real GDP and therefore economic growth. ~~However, as there~~ ~~gain~~ However, there will still be increases in ~~small economic growth~~ the Real GDP as export receipts will increase more compared to import payments as the EU has a larger population ~~for~~ than NZ so demand for NZ exports increase and firms will utilise economies of scale, therefore there will be an ~~overall greater~~ increase in Real GDP and economic growth, ~~even if the multiplier is decreased slightly due to increases in import payments.~~

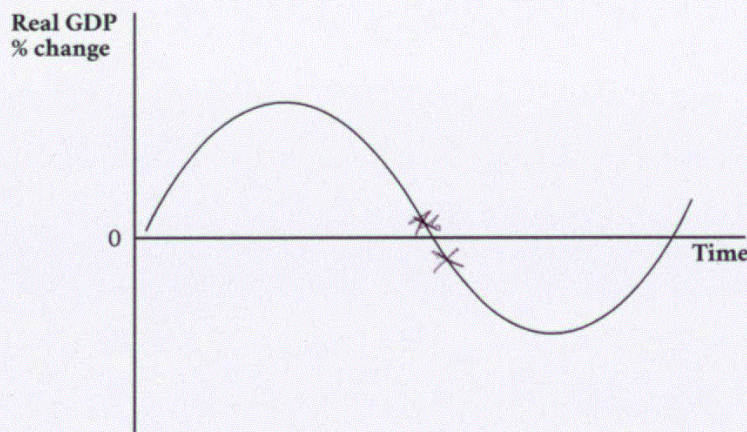


### QUESTION THREE: Internal influences on inflation and employment

Economic activity declined in New Zealand for three out of four quarters from December 2022 to September 2023. On a per capita basis, economic activity fell for all four quarters.

- (a) (i) Based on the resource information above, identify and mark with an X on Model Two the likely position of the New Zealand economy in September 2023.

Model Two: The business cycle



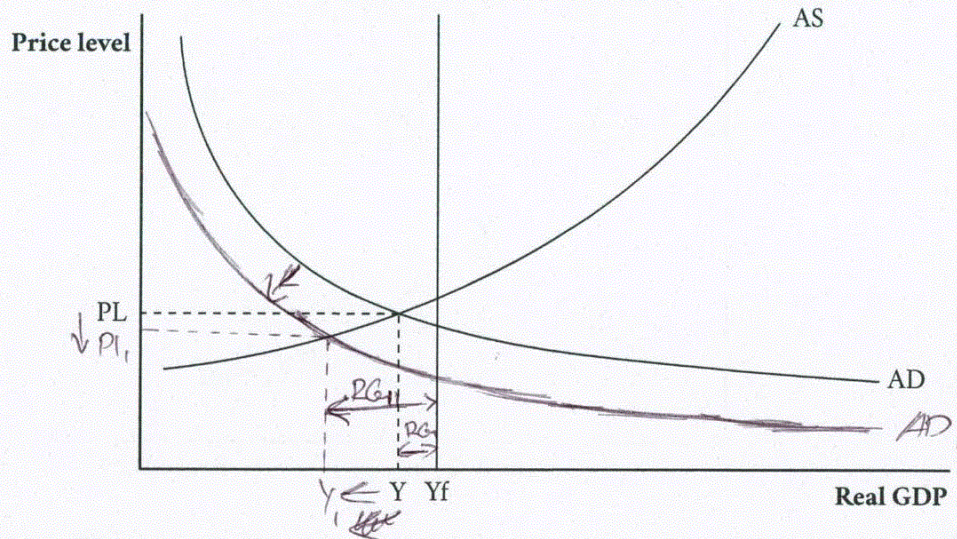
- (ii) Explain your choice of location of the New Zealand economy on Model Two.

The location of the New Zealand economy was in an economic downturn phase as there was 3 out of four quarters which had decreased economic growth which means that there were at least two consecutive quarters of a decrease in economic activity which means that there was a recession. A recession is characterised by low business profits so low business confidence along with a decrease in ~~economic~~ employment and therefore a decrease in ~~economic~~ consumer confidence, thus the New Zealand economy is in a downturn phase.



There is a "backfiring of the wealth effect underway" whereby lower house prices are leading to lower household spending.

**Graph Two: The New Zealand economy with falling house prices**



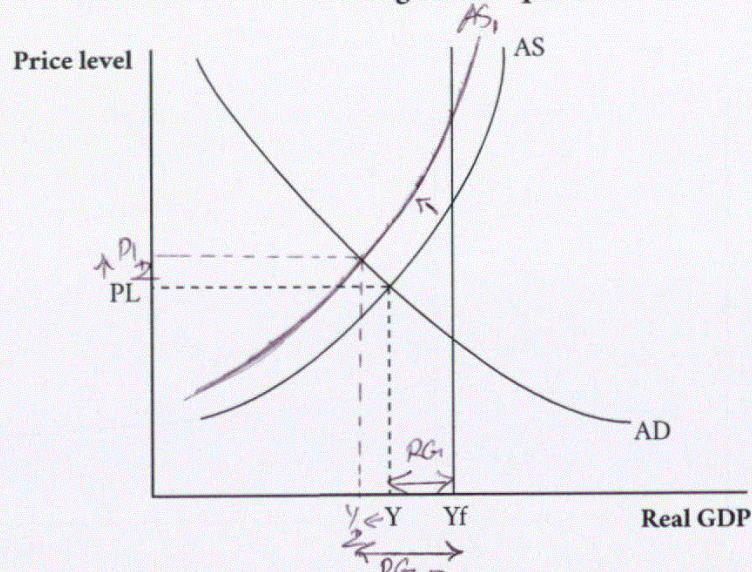
- (b) (i) On Graph Two above, show the effect of falling house prices by shifting one curve. Label all changes, including to the recessionary gap.
- (ii) Explain, using the changes you made to Graph Two above, the effect of falling house prices on inflation and employment.

Falling house prices mean that wealthy economic actors will not be able to borrow as much against the value of their house, which is decreasing, to purchase other assets such as houses or for other goods. This results in a decrease in consumption spending ( $C$ ), which as a component of  $AD$ , will result in a decrease in  $AD$  from  $AD$  to  $AD_1$ , which <sup>causing a decrease in economic growth</sup> will result in a decrease in Real GDP from  $Y$  to  $Y_1$ . As there is less real output, firms have less ~~for~~ derived demand for labor which causes an increase in unemployment from  $Y_f - Y$  to  $Y_f - Y_1$ . Also, as this reduces ~~the price level~~ from  $PL$  to  $PL_1$ , and ~~there will be~~ as the economy has an increase in the operating capacity from  $RG$  to  $RG_1$ , ~~therefore~~ <sup>the price level</sup> there is less competition for scarce resources and inflation is decreasing, and depending on the economic situation the result can be either disinflation or deflation.



Fuel prices have risen since the fuel tax discount ended.

**Graph Three: The New Zealand economy with higher fuel prices**



- (c) (i) On Graph Three above, show the effect of rising fuel prices by shifting one curve. Label all changes, including to the recessionary gap.
- (ii) Explain, using the changes you made to Graph Three above, the effect of rising fuel prices on inflation and employment.

An increase in the fuel prices due to the removal of the fuel levy increases the cost of production for firms which means they have reduced profits revenue and therefore profits. To maintain profits firms will reduce production resulting in a decrease in AS from AS to  $AS_1$ , which causes a decrease in the real GDP from  $Y_f$  to  $Y_1$ , showing a decrease in economic growth. As the decrease in real GDP shows less derived demand for labour as firms are producing less thus there is an increase in unemployment from  $RG_1$  ( $Y_f - Y_1$ ) to  $RG_2$  ( $Y_f - Y_2$ ). The increases in the costs of production result in an increase in the price level from  $P_1$  to  $P_2$ , which shows cost-push inflation. Thus, rising fuel prices result in a decrease in employment and an increase in inflation.



- (d) Explain which of falling house prices or higher fuel prices will have a greater impact on inflation and employment. In your answer, refer to the changes you made to Graph Two and Graph Three.

~~Inflation has the greater~~ Higher fuel prices have a greater impact on both inflation and ~~the~~ employment compared to falling house prices. Falling house prices affect <sup>only</sup>  $C$ , which is the largest component of AD therefore AD decreases ~~to~~ <sup>from  $X$  to  $X'$</sup>  from  $AD$  to  $AD_1$ . ~~As~~  $AS$  ~~remains~~  $AS$  real GDP decreases and firms have less derived demand for labour, employment will decrease. However, fuel prices affect all businesses as they experience transport costs which means that the impact ~~on~~ the cost of production for all firms will be greater such that the decrease of  $AS$  to  $AS_1$  is greater than the decrease of  $AD$ . This means that the ~~decrease~~ in employment for the fuel prices is greater as  $RG_1$  is ~~greater~~ on graph 3 is greater than the  $RG_1$  on graph three which means that the fuel prices will have a greater impact on the employment. Also, fuel prices ~~are~~ is a necessarily required and a strategic goal ~~with~~ ~~the~~ which makes it ~~irrelevant~~ ~~thus~~ ~~a~~ ~~substantially~~ ~~more~~ ~~the~~ impact all goods within the economy compared to the falling house prices which is based on a "wealth effect" which means that overall ~~only~~ the consumption spending decrease, while being the biggest component of AD, will not be as significant at decreasing the Price level as the ~~case~~ a majority of the decrease in the consumption will come from the higher income earners <sup>with</sup> ~~who have~~ ~~are~~, with numerous assets such that they impact the wealth effect, but only make up a small proportion of the economy in total. ~~Thus~~ ~~the~~ ~~comparison~~, fuel ~~impacts~~ ~~and~~ Thus, the ~~in~~ cost-push inflation associated with the fuel prices can also be a greater worry as it could ~~go~~ negatively impact price stability which is to maintain inflation



Extra space if required.  
Write the question number(s) if applicable.

QUESTION  
NUMBER

### Question One

- b) price level and therefore the rate of inflation such that the inflation rate could increase over the PTA's upper limit of 3%, which would not meet the government goal of price stability. Currently, the OER set by the reserve bank is at 4.75%, and if the reserve bank believes that the migration surge will be substantial such that there will be an overall increase in the price level which could go above the 3% top band, then they may increase the OER, which will then increase the cost of borrowing and increasing the demand for savings so that ~~the~~ households and firms would be discouraged from consumption spending (C) and investment spending (I), along with the ~~increase in~~ appreciation of NZD, which would ~~discourage~~ discourage export, while making cost of production somewhat cheaper.

→ continued on next page  
(page 13)

### Question Two

- a) persons income such that, which is also spent so on so forth. Thus, for a marginal propensity to consume of 0.83, that of the initial \$17.5 billion income, \$14.525 billion becomes income for other economic actors. Thus, for the total effect of the multiplier can be calculated by  $\frac{1}{1-MPC}$ , where  $\frac{1}{1-0.83}$  means the multiplier is approximately 5.88, which means that the initial injection of \$17.5 billion will result ~~the~~ in the <sup>real</sup> GDP growing by a total of ~~the~~ \$102.94 billion, which will result in ~~economy~~ an increase in economic growth.



Extra space if required.  
Write the question number(s) if applicable.

QUESTION  
NUMBER

Question 3

- d) between the 1% to 3% over the long term. An increase in fuel prices which impact the cost of production for a lot of goods will mean that the increase of the price level from  $P_1$  to  $P_2$  is cost-push inflation which could risk not meeting the government goals of inflation due to its 'volatility' as it is based on international markets would be a greater concern for the New Zealand government compared to the smaller decrease in the price level from  $P_1$  to  $P_1$ , in ~~the~~ from the fall in house prices. Overall the ~~decrease in the employment and increase~~ <sup>unemployment</sup> shown by  $RG_2$  <sup>→ graph 3</sup> and the increase in the price level from  $P_1$  to  $P_2$  <sup>→ graph 3</sup> due to cost-push inflation is more impactful and significant compared to the unemployment shown by  $RG_1$  in graph 2 and the slight decrease in inflation shown by ~~graph~~ from  $P_1$  to  $P_1$ , in graph 2, such that the ~~rise~~ <sup>so</sup> fuel prices increasing has a greater impact on inflation and employment compared to falling house prices.

Question One (continued from page 12)

- b) As AD decreases and AS increase slightly, there will be a small decrease in Real output ~~to the~~ and a large decrease in inflation, thereby potentially making houses ~~more affordable~~ and other goods more affordable, thereby achieving its purpose of making the economy closer to being price stable (improving price stability).



### Acknowledgements

Material from the following sources has been adapted for use in this assessment:

#### Question One

Puller-Strecker, T. (2023, November 30). Immigration surge threatens smooth path to lower interest rates. *The Post*. <https://www.thepost.co.nz/business/350121386/immigration-surge-threatens-smooth-path-lower-interest-rates>.

#### Question Two

Walker, R & Sothcott, J. (2023, February). *Inflation and personal tax bracket creep – a bigger picture*. <https://www.deloitte.com/nz/en/services/tax/perspectives/inflation-and-personal-tax-bracket-creep-a-bigger-picture.html>.

Stuff. (2023, February 10). *Stuff*. Here's how much you'd save in tax if brackets had moved with inflation.

<https://www.stuff.co.nz/business/money/300803072/heres-how-much-you-d-save-in-tax-if-brackets-had-moved-with-inflation>.

Stats NZ. (2023, November 1). *Labour market statistics: September 2023 quarter*. <https://www.stats.govt.nz/information-releases/labour-market-statistics-september-2023-quarter/>, CC BY-SA 4.0.

#### Question Three

Stats NZ. (2023, December 14). *Gross domestic product: September 2023 quarter*. <https://www.stats.govt.nz/information-releases/gross-domestic-product-september-2023-quarter/>, CC BY-SA 4.0.

Cann, G. (2023, March 29). What happens when housing's 'wealth effect' dries up? *Stuff*. <https://www.stuff.co.nz/business/131611087/what-happens-when-housings-wealth-effect-dries-up>.



**Subject:** Economics

**Standard:** 91403

**Total score:** 22

Q	Grade score	Marker commentary
One	E8	<p>The response was awarded an E8 because the candidate:</p> <ul style="list-style-type: none"><li>• completed the graph fully correct</li><li>• identified the Increase in C with examples and the impact on AD</li><li>• explained the increase in skilled workforce decreases COP and its impact on AS</li><li>• explained the increase in both AD and AS leading to an increase in Y to Y<sub>1</sub> being an increase in real GDP so there will be economic growth</li><li>• stated the increase in AD was greater than the increase in AS so there will be an increase in PI causing inflation greater than 3%</li><li>• stated PTA (Policy Target Agreement)</li><li>• explained that the Reserve Bank increases OCR and the consequences on AD to reduce demand pull inflation.</li></ul>
Two	E7	<p>The response was awarded an E7 because the candidate:</p> <ul style="list-style-type: none"><li>• identified the multiplier and calculated the increase in Real Gross Domestic Product (RGDP)</li><li>• explained the concept of the multiplier and applied it to the reduced tax scenario</li><li>• referred to the model</li><li>• identified infrastructure as a government injection into the CFM</li><li>• recognised that the injection in infrastructure will not have the savings leakage that the tax cut will have as it goes directly into the producer sector.</li></ul> <p>The candidate also referred to the resource material and correctly identified:</p> <ul style="list-style-type: none"><li>• the increased capacity and wider impact (G, I, T, further jobs, and Y and C ongoing) of infrastructure compared to tax cuts, which only impact consumers initially</li><li>• that better education and health care improve quality of workforce</li><li>• that an increase in desirability of an area increases the population and the potential workforce</li><li>• the increase in stimulation from tourism etc., the increase is ongoing</li></ul> <p>The candidate also:</p> <ul style="list-style-type: none"><li>• compared tax cuts, which reduce Government spending (G), with ongoing issues</li><li>• for part (c), recognised that import payments will increase and are a withdrawal and therefore there is a reduction in the impact of the multiplier.</li><li>• correctly explained that cheaper imported raw materials could decrease COP with ongoing advantages</li><li>• explained that increasing export receipts could also improve the economy</li></ul>
Three	E7	<p>The response was awarded an E7 because the candidate:</p> <ul style="list-style-type: none"><li>• correctly marked X</li><li>• completed the graph correctly and marked the change in real GDP</li></ul>



		<ul style="list-style-type: none"> <li>• identified that the fall in credit spending caused a fall in C and therefore fall in AD, leading to fall in Y to <math>Y_1</math>, decreased derived demand for labour, a fall in PI, and reduced inflation</li> <li>• explained an increase in COP and reduced profitability with examples: an increase in price level, so inflation and derived demand fall resulting in an increase in unemployment.</li> </ul>
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