



National Certificate of Educational Achievement
TAUMATA MĀTAURANGA Ā-MOTU KUA TAEA

Exemplar for Internal Achievement Standard Economics Level 2

This exemplar supports assessment against:

Achievement Standard 91226

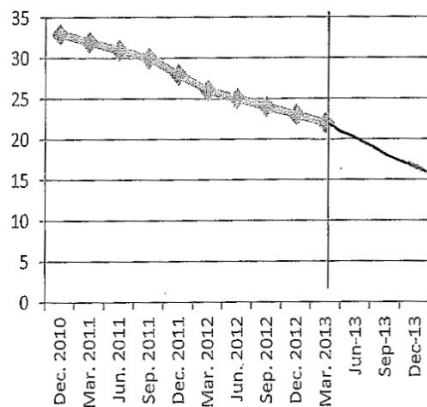
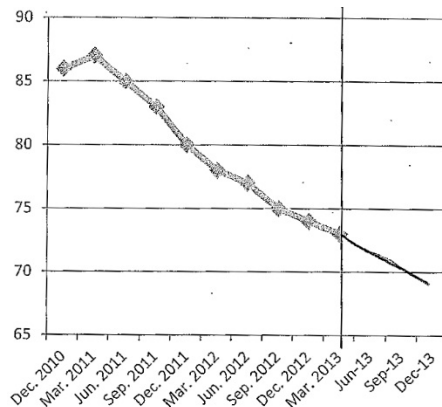
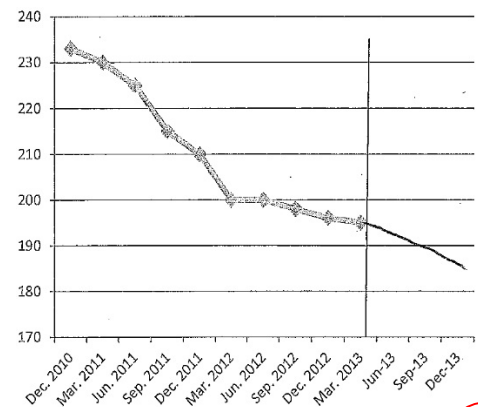
Analyse statistical data relating to two contemporary economic issues

An annotated exemplar is an extract of student evidence, with a commentary, to explain key aspects of the standard. It assists teachers to make assessment judgements at the grade boundaries.

New Zealand Qualifications Authority

To support internal assessment

	Grade Boundary: Low Excellence
1.	<p>For Excellence, the student needs to analyse statistical data comprehensively relating to two contemporary economic issues.</p> <p>This involves making a justified forecast for one contemporary economic issue, using extrapolated statistical data from both of the contemporary economic issues.</p> <p>The student has extrapolated statistical data about the New Zealand economy, and made a forecast that the economy is heading into a recession in the second half of 2013 (1).</p> <p>The student has explained in detail how and why the extrapolated data supports the forecast of a recession, using the language of the AS/AD model e.g. AD, AS, PL and Y to support the justification, and to link it to the economic issues of inflation and unemployment (2).</p> <p>For a more secure Excellence, the student could add additional information from the analysis to support and fully link the justification back to both economic issues.</p> <p>For example, the student could note there appears to be an inverse relationship between the inflation and unemployment rates (Dec. 10 to Dec. 13), suggesting that when the rate of inflation slows down, there will also be increasing unemployment. Additionally, the student could use the AS/AD model to help explain this inter-relationship (3).</p>

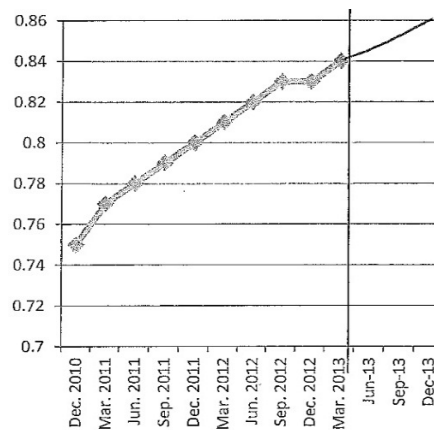
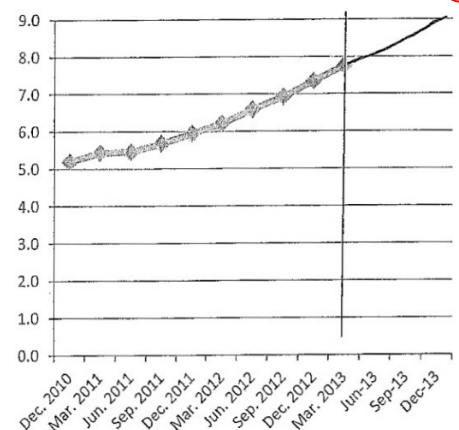
Extrapolations:**BUSINESS CONFIDENCE INDEX****CONSUMER CONFIDENCE INDEX****HOUSE PRICE INDEX**

1

Forecast:

I think the economy is heading into a **recession** for the second half of 2013.

[Student processed and presented data, and explained in detail the relationships and inter-relationships in the inflation and unemployment statistical data using economic concepts and models].

EXCHANGE RATE (\$NZ/\$US)**UNEMPLOYMENT RATE (%)**

1

The business confidence index is decreasing at an alarming rate. It began at 33 in Dec'10 and continued to decrease, ending at 22 in Mar'13. I extrapolated a continual decreasing trend due to these observations. **A decrease in business confidence means that firms are uncertain about the future, so they reduce their capital expenditure (purchasing machinery, buildings, etc.) and for projects. This will lead to a decrease in investment spending (I), because (I) is part of the AD equation $[AD = C+I+G+(X-M)]$, then AD will also decrease, therefore shifting the AD curve inwards. Firms will produce less goods and services because of a decrease in business confidence.**

2

The Consumer Confidence Index is decreasing steadily; it began at 86 in Dec'10 and continued to decrease, ending at 73 in Mar'13. I extrapolate a continual decreasing trend due to these observations. **A decrease in consumer confidence (either because they are uncertain about their job security or they have lost their jobs) means that consumers are less willing to spend. This decrease consumption spending (C) which almost makes up two-thirds of the AD equation $[AD = C+I+G+(X-M)]$. This will lead to an overall decrease in AD, which shifts the AD curve inwards to AD1, therefore lowering Real GDP from Y to Y1, and this also shows a decrease in price level (PL to PL1).**

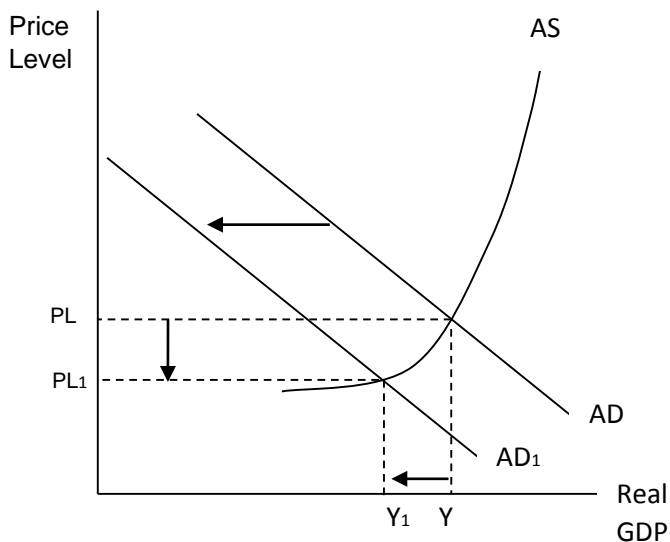
3

The decrease in inflation is another factor that is reflected in the model...

The Exchange Rate began at 0.75 (\$NZ/\$US) in Dec'10 and increased steadily, ending at 0.84 in Mar'13. I extrapolated a continual increasing trend due to these observations. An increase in the Exchange Rate of \$NZ/\$US means that the demand for \$NZ has increased because it is more profitable for foreign investors to buy \$NZ and decreases the supply of \$NZ, because existing owners will not want to exchange \$NZ for another currency because holding it is more profitable. **This increases the value of \$NZ, which leads to a decrease in export receipts (X) because the foreign currency exporters earn in now converts to less \$NZ, and increases import payments (M) because the cost of importing has decreased, making importing more profitable. This decreases (X-M) and (as NZ relies on its exports overseas as one of its main sources of income) decreases AD, which shifts the AD curve inwards, so Real GDP decreases considerably to Y1, and price level from PL to PL1.**

2

This also affects AS, because the cost of importing raw materials has decreased this will then decrease a firm's COP. This increases AS, shifting the AS curve outwards to AS1 and increasing Real GDP. However,



because NZ is reliant on exports rather than imports for income, this would only be a minor increase in Real GDP, but the increase returns us from Y1 to Y2, and further reduces price level, PL1 to PL2, reducing cost-push inflation.

The House Price Index is decreasing at a fast rate. It began at 233 in Dec'10 and continued to decrease drastically, ending at 195 in Mar'13. I extrapolated a continual decreasing trend due to these observations. A decrease in the House Price Index will affect two groups of society, existing homeowners and first-time buyers. Because the value of houses decreases, existing homeowners will be wary about their spending and will refrain from it, therefore not spending their disposable income. This decreases

consumption spending (C) therefore decreasing AD and shifting the AD curve inwards to AD1, lowering the level of Real GDP from Y to Y1, and PL to PL1.

However, this can be countered by the spending of first-time homebuyers. Because the value of houses has decreased, they will take advantage of this opportunity to purchase a new home or pay off their mortgages. This will increase their discretionary income and gives them a sense of wealth; they feel inclined to spend more. This increases consumption spending and AD, moving the AD curve outwards and increasing Real GDP back towards Y by a fraction. However, because the number of existing homeowners is considerably larger than the number of first-time homebuyers Real GDP will be more affected by the decrease in consumption spending.

The Unemployment Rate is increasing at an alarming rate. It began at 5.2% in Dec'10 and continued to increase, ending at 7.8% in Mar'13. I extrapolated a continual increasing trend due to these observations. When unemployment is high, less goods and services are being produced in the economy. This means less workers are needed and some lose their jobs. This decreases their disposable income (because they are unwilling to spend and save instead), which decreases consumption spending (C). This decreases AD and AD shifts inwards towards AD1, lowering the Real GDP towards Y1 and PL to PL1.

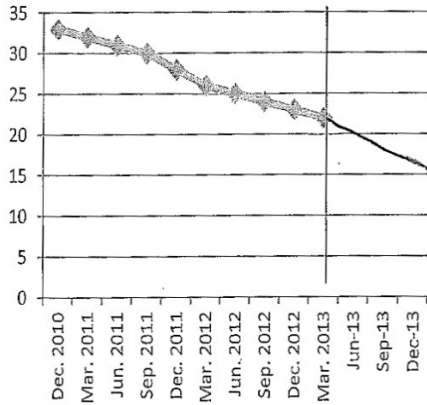
A firm's competition to hire skilled workers has decreased, as workers are readily available (idle capacity), they could lower the wage rate to attract people who are desperate to find a job. This would decrease a firm's cost of labour, and there is a movement down the AS curve to a flatter part meaning growth is easier in the future. Although, at this stage of the business cycle, firms will not be interested in hiring new workers, as they would like to keep the employees they currently have, or have had to lay off workers.

The decrease of Real GDP shows this country is heading towards the recession stage of the business cycle. The economy has been in a downturn for almost 2 years, so it will inevitably reach the recession stage of the business cycle.

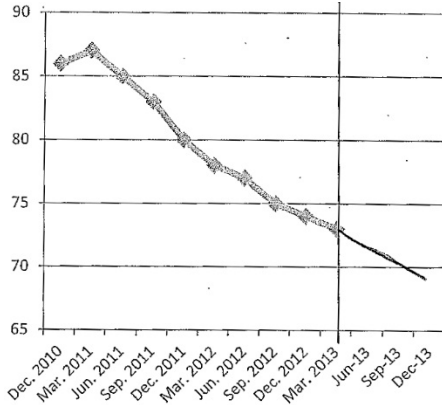
	Grade Boundary: High Merit
2.	<p>For Merit, the student needs to analyse statistical data in depth relating to two contemporary economic issues.</p> <p>This involves:</p> <ul style="list-style-type: none"> • providing detailed explanations of relationships in statistical data for each of the two contemporary economic issues • providing detailed explanations of the inter-relationships between statistical data for these two contemporary economic issues using economic concepts and/or models. <p>The student has provided an in-depth analysis of statistical data about the New Zealand economy, relating to inflation and unemployment. Further, the student has extrapolated the statistical data, and made a forecast (4) which approaches Excellence.</p> <p>The student has analysed and provided a detailed explanation of how and why the extrapolated data supports the forecast of a downturn. Additionally, the student has used the AS/AD model to support the explanations (5).</p> <p>To reach Excellence, the student could provide more explanation of the extrapolated unemployment rate, using economic concepts and/or models (6), and explain in detail the links to both economic issues. For example, adding the changes to PL when using the AS/AD model would support the justification and link the explanation back to inflation.</p>

Extrapolations:

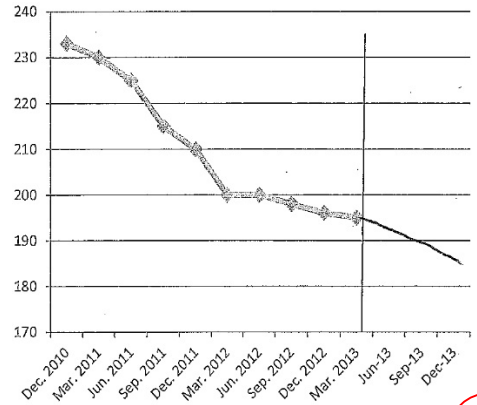
BUSINESS CONFIDENCE INDEX



CONSUMER CONFIDENCE INDEX



HOUSE PRICE INDEX



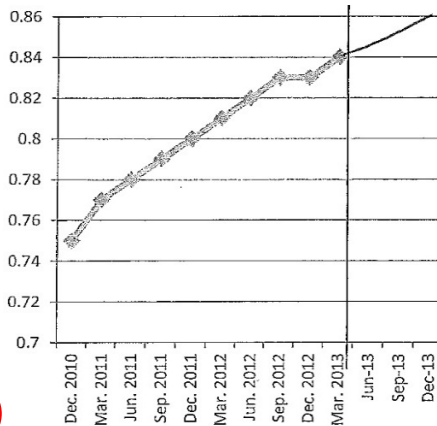
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Forecast:

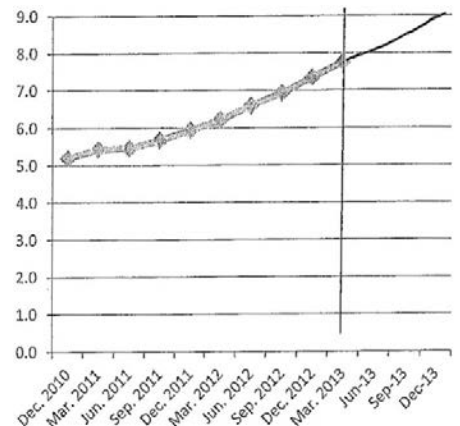
I think the economy is heading into a **downturn** for the second half of 2013.

[Student processed and presented data, and explained in detail the relationships and inter-relationships in the inflation and unemployment statistical data using economic concepts and models].

EXCHANGE RATE (\$NZ/\$US)



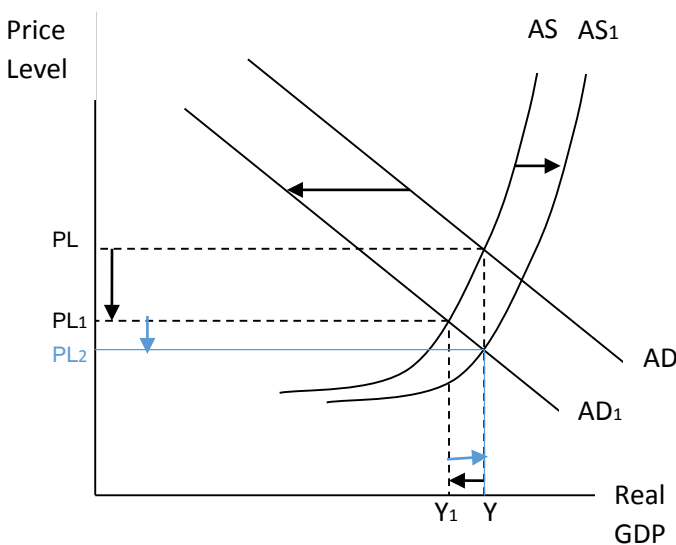
UNEMPLOYMENT RATE (%)



4

I have projected that the Business Confidence Index will continue to decrease. With the decrease in the Business Confidence Index AD is affected as 'I' (investment spending) will change. The AD equation is $AD = C + I + G + (X - M)$ and if a component of AD changes AD will have a corresponding change. The decrease in business confidence will cause a decrease in the number of planned new projects a business has, due to this, investment spending will fall as less projects are being implemented. The fall in 'I' will decrease AD which reduces the economy's real GDP or the amount of g/s the economy produces, the decrease in the real GDP is common within the downturn stage of the business cycle. The decrease in

AD to AD1 on the model has reduced our real GDP from Y to Y1.



The Consumer Confidence Index will continue to decrease. This will also affect AD negatively as from $AD = C + I + G + (X - M)$, 'C' will be affected which will cause an overall decrease within AD. Since consumer confidence has decreased, there will be a decrease in their willingness to spend, as there has been a fall in their job security so they will not be sure if they will have a job in the future economy. This will decrease consumption spending which decreases AD and reduces our real GDP, again common in a downturn, as is seen on the model above as a shift left of AD and a decrease in real GDP from Y to Y1.

5

5

The Exchange Rate from \$NZ to \$US will continue to increase, and again AD is affected as net exports (X-M) which is export receipts minus import payments will decrease. The increase in the exchange rate

(\$NZ/\$US) is also an increase in the value of the \$NZ and causes a decrease in export receipts (X) as the foreign currency exporters earn converts to less \$NZ. However, it will increase import payments (M) as it is now more profitable to import raw materials. This reduces the cost of imported raw materials, which decreases a firms COP. This increases AS to AS1 and increases our GDP from Y1 back to Y. This is more common with an upturn in the business cycle, but with the other extrapolated data, it is more evident that our economy is moving into the downturn stage of the business cycle.

5

I have predicted the House Price Index will continue to decrease. This means that the mortgages for first homebuyers is decreased as the cost of buying a house has decreased. This will decrease consumption spending by existing homeowners though, and as 'C' is a component of the AD equation, it will cause a decrease in AD towards AD1, decreasing Y to Y1. This is more common in a downturn as less g/s are being produced as shown in the decrease of real GDP.

I have predicted the Unemployment Rate to continue increasing in the future. Less workers are needed to produce g/s because there is less consumption spending. The demand for labour is a derived demand and as less workers are hired by employers and firms lay off staff this will increase the unemployment rate...

6

	Grade Boundary: Low Merit
3.	<p>For Merit, the student needs to analyse statistical data in depth relating to two contemporary economic issues.</p> <p>This involves:</p> <ul style="list-style-type: none"> • providing detailed explanations of relationships in statistical data for each of the two contemporary economic issues • providing detailed explanations of the inter-relationships between statistical data for these two contemporary economic issues using economic concepts and/or models. <p>The student has analysed statistical data about the New Zealand economy in depth. Using the data, economic concepts and models, the student has explained trends and relationships for inflation and unemployment in detail (7).</p> <p>The student has explained in detail the inter-relationship between the inflation rate and unemployment rate, and has briefly explained an inter-relationship between the exchange rate and the participation rate, using the AS/AD model (8).</p> <p>For a more secure Merit, the student could include unemployment statistical data to support a detailed explanation of the second inter-relationship.</p> <p>For example, the student could note that as AD decreases this affects the participation rate and the percentage change in the number of people employed, supported by the trends in the unemployment data (graphs 3 and 4).</p>

Student processed and presented the statistical data, and explained the trends and relationships in the inflation and unemployment data in detail in the analysis.

7

Inter-relationships

Interpret the trends and explain the inter-relationships between the inflation data (graphs 1 and 2) and the unemployment data (graphs 3 and 4).

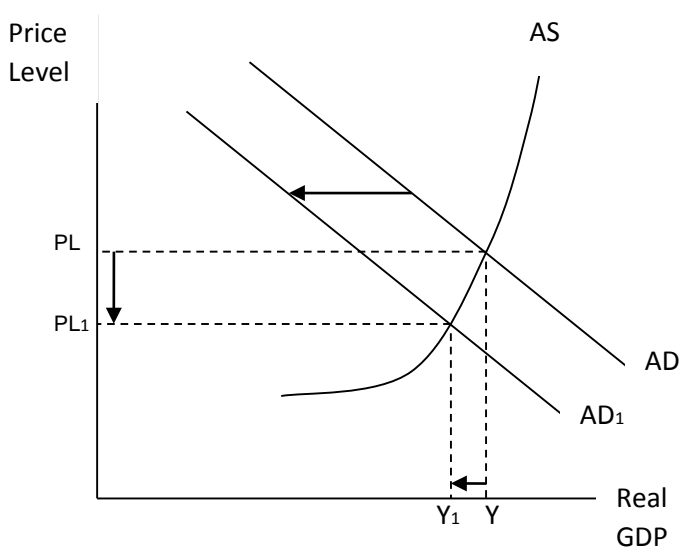
The inflation rate (graphs 1 and 2) trends downwards from 0.9% in Dec 2010 to 1.0% in Dec 2011. Then decreases down to 0.4% in Mar 2013. The percentage change in the money supply (graph 1) trends downwards from 3.0% in Dec 2010 to 1.2% in Mar 2012, and decreasing to 0.6% in Dec 2013.

8

The quantity theory of money which uses the Equation of Exchange ($MV=PQ$) can help explain the relationship, because the decrease in the money supply (M) has a direct effect on the rate at which the level of prices (P) change. When the rate of change in M decreases, the rate of change in P (i.e. inflation rate) also decreases assuming no change in V and Q .

The decreasing inflation rate and the increase in the exchange rate will cause an increase in demand for \$NZ because foreign investors see \$NZ providing an attractive return, and supply of \$NZ decreases as existing holders do not want to exchange it for \$US because holding it is more profitable. The exchange rate (graph 2) trends upwards from 0.75 (\$NZ/\$US) on Dec 2010 and reaches 0.80 (\$NZ/\$US) in Dec 2011, increasing to 0.84 (\$NZ/\$US) in Mar 2013. As the exchange rate increases, the inflation rate decreases because when the \$NZ is strong this decreases ($X-M$) because what foreign currency exporters earn now converts to less \$NZ, and it is a component of AD , this causes a shift of the AD curve inwards to AD_1 , causing less demand-pull inflation (PL to PL_1). Additionally, exporting firms will therefore demand less workers and so this also affects the participation rate in the labour market and the number of workers employed will decrease and we will see more involuntary unemployment.

8



The unemployment rate (graphs 3 and 4) trends upwards from 5.2% in Dec 2010 to 6.2% in Mar 2012, increasing to 7.8% in Mar 2013. As the unemployment rate increases this decreases the inflation rate. When unemployment is increasing this means disposable income decreases causing (C) consumption spending to decrease, and decreasing AD because (C) is a component of $AD = C+I+G+(X-M)$.

8

A decrease in AD will cause a decrease in price level (i.e. rate of inflation). This can be illustrated by the AD/AS model. AD moves inwards to AD_1 and this causes a decrease in PL to PL_1 causing less demand-pull inflation, and real GDP decreases, meaning there are less goods and services being produced. Therefore, there will be

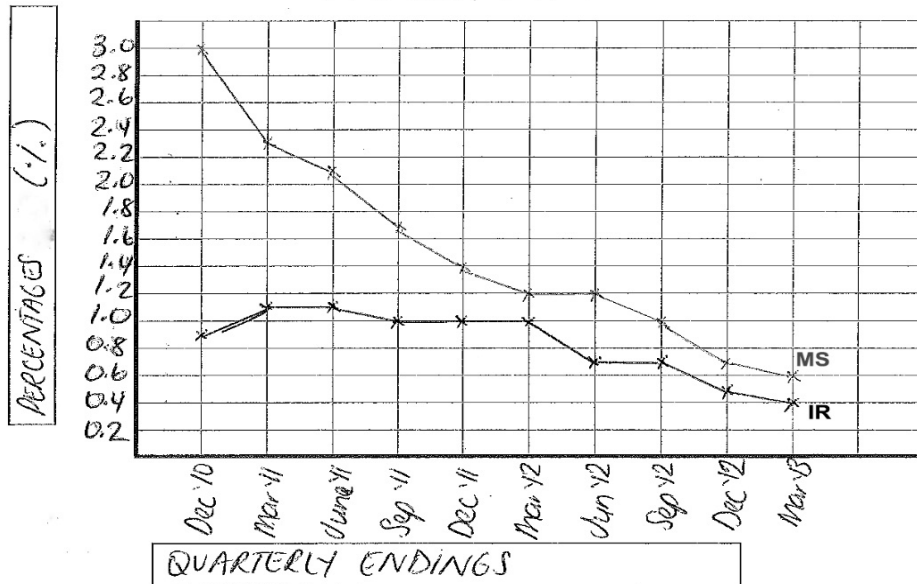
less demand for labour from employers and unemployment will increase, because demand for labour is derived from demand for final goods and services (Y to Y_1 , a decrease in real output).

	Grade Boundary: High Achieved
4.	<p>For Achieved, the student needs to analyse statistical data relating to two contemporary economic issues.</p> <p>This involves:</p> <ul style="list-style-type: none"> • processing and presenting statistical data for two contemporary economic issues to show trends. • providing explanations of relationships in statistical data for each of the two contemporary economic issues using economic concepts and/or models • provide explanations of inter-relationships between statistical data for these two contemporary economic issues using economic concepts and/or models. <p>The student has analysed statistical data about the New Zealand economy. Statistical data for inflation and unemployment has been processed and presented to show trends (9).</p> <p>The student has explained some of the trends and relationships shown in the data in detail, using relevant figures and dates and the AS/AD and Labour Market models (10).</p> <p>The student has explained the inter-relationship between the inflation rate and the unemployment rate, using the AS/AD model (11).</p> <p>The student has explained a second inter-relationship between the exchange rate and the percentage change in the number of people employed, using specific data and the AS/AD model (12).</p> <p>To reach Merit, the student could explain the inter-relationships in more detail, using other relevant inflation and unemployment data from the analysis.</p>

Student processed and presented inflation and unemployment statistical data.

9

Graph 1: INFLATION RATE & PERCENTAGE CHANGE IN MONEY SUPPLY



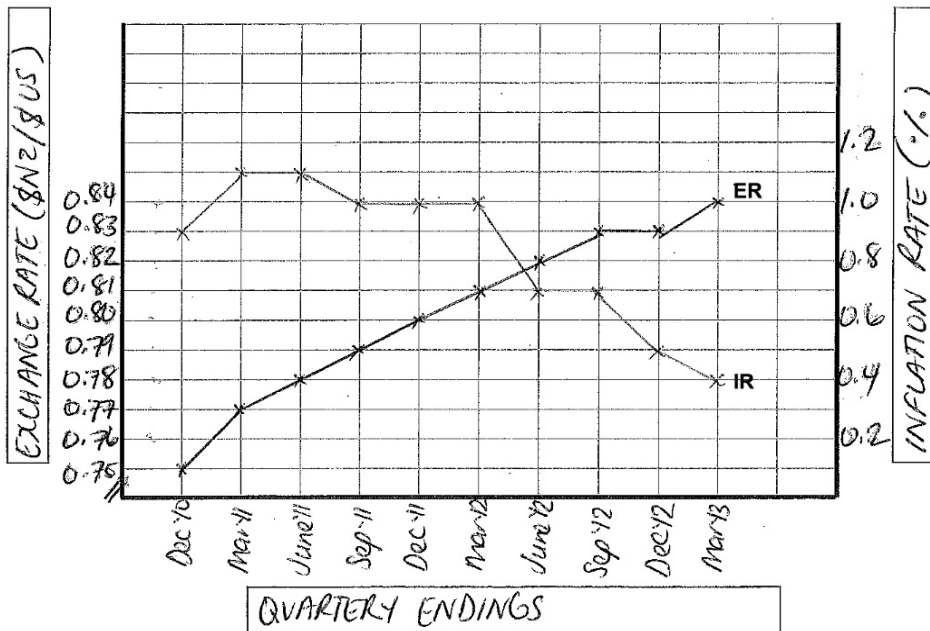
Graph 1 Interpret the trends:
 The inflation rate trends upwards from 0.9% in Dec 2010 to 1.1% in March 2011 where it remains constant until June 2011. After June 2011, the inflation rate generally trends downwards ending at 0.4% in March 2013. Initially we see the percentage change in money supply trend downwards from 3.0% in December 2010 to 1.2% in March 2012. Between March 2012 and June 2012 the percentage change in money supply is constant, after that it continues to trend downwards to 0.6% in March 2013.

10

Identify and explain the relationship: As the inflation rate decreases so does the percentage change in money supply, which suggests that there is a positive relationship between the two data sets.

This relationship can be explained by the quantity theory of money equation $MV=PQ$. M is the level of money supply and P is the level of prices, the equation states that if M increases then so will P, which causes inflation, if V and Q stay constant.

Graph 2: EXCHANGE RATE (\$NZ/\$US) & INFLATION RATE



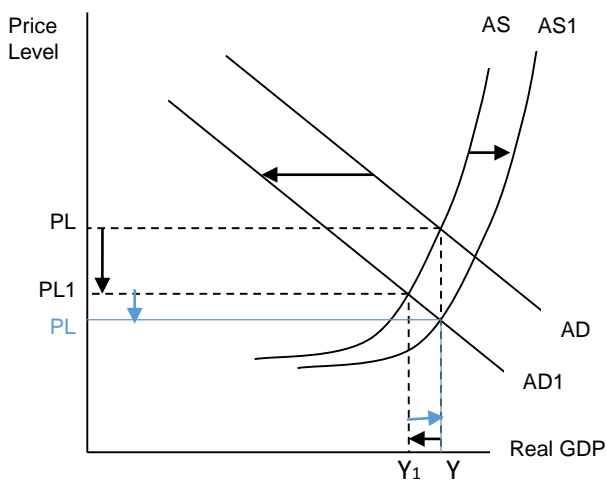
Graph 2 Interpret the trends:
 The exchange rate trends upwards from 0.75 (\$NZ/\$US) in December 2010 up until March 2013 at 0.84 (\$NZ/\$US). The inflation rate trends upwards from 0.9% in Dec 2010 to 1.1% in March 2011 where it remains constant until June 2011. After June 2011, we see the inflation rate trend downwards ending at 0.4% in March 2013.

10

Identify and explain the relationship: As the exchange rate increases the inflation rate decreases which suggests that there is an inverse relationship between the two data sets.

This relationship can be explained by the AD/AS model where $AD = C+I+G+(X-M)$ when the value of the \$NZ appreciates this decreases export receipts (X) because the amount of foreign money that exporters earn in NZ now converts to less \$NZ. This causes a decrease in (X-M) and shifts the AD curve to AD1, and Y to Y1 and PL to PL1. Because of the decrease in the price level, this means there is less money flow in the economy and therefore there is less demand-pull inflation occurring.

10



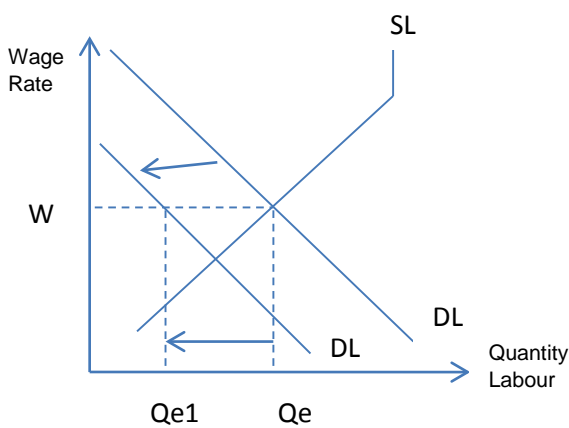
When the value of the \$NZ is high due to a high exchange rate this leads to an increase in competitiveness between firms for raw materials because with a stronger dollar NZ importers are able to buy more materials which decreases the firms COP. Therefore, causing an increase in AS shifting the curve right to AS1 increasing real GDP from Y1 back towards Y, and less inflationary pressure.

10

Graph 3 Interpret the trends: Initially the unemployment trends upwards from 5.2% in December 2010 to 5.7% in Sept 2011. After Sept 2011, unemployment rates trend upwards to 6.2% in March 2012 and then continue to trend upwards reaching 7.8% in March 2013. The percentage change in the

number of workers employed trends downwards from 1.4% in December 2010 to 0.3% in March 2013.

Identify and explain the relationship: As the percentage change in the number of workers decreases the unemployment rate increases which suggests that there is an inverse relationship between the two data sets. This relationship is explained by both the AD/AS model and the Labour market model.



The demand for workers is derived from the real GDP produced in an economy, so when there is a decrease in AD to AD1 as seen in the model, because Y shifts to Y1 and output of goods and services has reduced. Then DL also shifts left to DL1, meaning demand for workers falls to Qe1 (assuming the wage cannot fall due to a minimum wage rate) Qe to Qe1 lose their jobs and now there is involuntary unemployment.

10

Graph 4 Interpret the trends: Initially the unemployment trends upwards from 5.2% in December 2010 to 5.7% in Sept 2011. After Sept 2011, unemployment rates trend upwards to 6.2% in March 2012 and then continue to

trend upwards reaching 7.8% in March 2013. Initially the participation rate trends upwards slightly from 72.56% in December 2010 to 72.78% in March 2011. After March 2011, the participation rate trends downwards, ending at 66.97% in March 2013.

10

Identify and explain the relationship: This relationship shows that as the unemployment rate increases the participation rate decreases, which suggests that there is an inverse relationship between the two data sets. When unemployment is high, this causes a decrease in the willingness of people to go out and look for a job. It encourages people to further their studies and become tertiary-educated so that when they have completed their studies finding employment should not be as hard because they now have the qualifications to fit the available job vacancies.

Inter-relationships

The inter-relationship between the inflation rate and unemployment rate is inverse because as the inflation rate decreases, the unemployment rate increases. As unemployment increases consumption spending (C) decreases, because people have no money to spend because they are unemployed.

$AD = C + I + G + (X - M)$, and C accounts for two-thirds of the entire equation, therefore if C decreases then so too will AD, seen as a shift left to AD1, causing a decrease in demand-pull inflation (PL-PL1).

11

The less employed workers a firm has the less their costs of production will be, because they will have less workers on their payroll, as they have had to lay off workers. This is seen on the model as a movement down the AS curve.

The exchange rate, when the value of the \$NZ appreciates this decreases export receipts (X) because the amount of foreign money that exporters earn in now converts to less \$NZ. This causes a decrease in (X-M) and shifts the AD curve to AD1, and Y to Y1 and PL to PL1. This affects the participation rate and the percentage change in the number of people employed because there is less demand for labour. The percentage change in the number of workers began at 1.4% in Dec 2010, continually decreasing to 0.3% in Mar 2013, so even though the number of workers employed increased each quarter, there is a declining rate of employment, and an increasing rate of unemployment between Dec 2010 and Mar 2013.

12

	Grade Boundary: Low Achieved
5.	<p>For Achieved, the student needs to analyse statistical data relating to two contemporary economic issues.</p> <p>This involves:</p> <ul style="list-style-type: none"> • processing and presenting statistical data for two contemporary economic issues to show trends. • providing explanations of relationships in statistical data for each of the two contemporary economic issues using economic concepts and/or models • provide explanations of inter-relationships between statistical data for these two contemporary economic issues using economic concepts and/or models. <p>The student has analysed statistical data about the New Zealand economy. Statistical data for inflation and unemployment has been processed and presented to show trends (13).</p> <p>The student has explained the trends using relevant figures and dates, and explained some of the relationships shown in the inflation and unemployment data, using the AS/AD and Labour Market models (14).</p> <p>The student has explained the inter-relationship between the inflation rate and the unemployment rate, using trends shown in the data and the AS/AD model (15).</p> <p>The student has provided partial evidence in the analysis of another inter-relationship explanation (16).</p> <p>For a more secure Achieved, the student could provide more explanation (how or why) of the inflation relationship (17), and the inter-relationships, using relevant inflation and unemployment data from the analysis.</p>

13

Student processed and presented inflation and unemployment statistical data.

Interpret the trends: On Graph 1 initially the inflation rate trends upwards in Dec 2010 from 0.9% to 1.1% in March 2011. After June 2011, the inflation rate trends downwards at each quarter to 0.4% in March 2013. The percentage change in money supply initially trends downwards from 3.0% in Dec 2010 to 1.2% in the quarter year of March 2012 and June 2012. After June 2012, the percentage change in money supply trends downwards to 1.0% in Sept 2012 and 0.6% in March 2013.

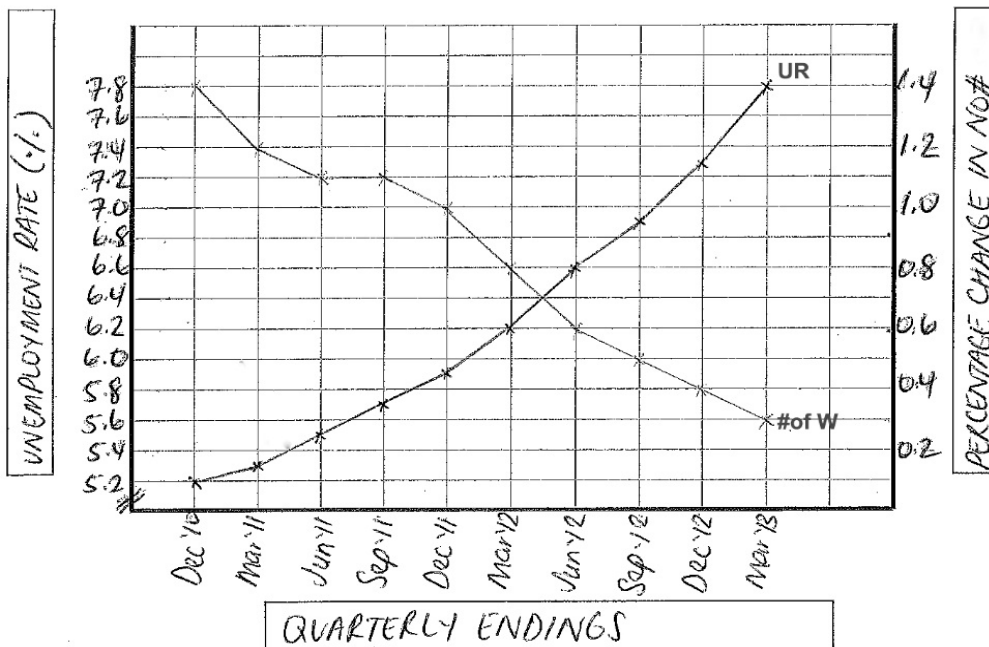
14

Identify and explain the relationship: On the graph, the inflation rate and the percentage change in money supply shows a positive relationship between the two data sets as they both trend downwards. This can be represented by the Quantity Theory of Money. It refers to the equation $MV=PQ$, knowing that M =money supply and P =price level. Therefore, if M decreases P decreases at the same value of the percentage in money supply.

17

Decreasing money supply could cause the AD curve to decrease, which therefore causes a decrease in the PL (price level). This could also decrease demand-pull inflation shown on the graph that when AD decreases AD-AD1, this decreases PL to PL1.

Graph 3: UNEMPLOYMENT RATE & PERCENTAGE CHANGE IN NUMBER OF WORKERS...



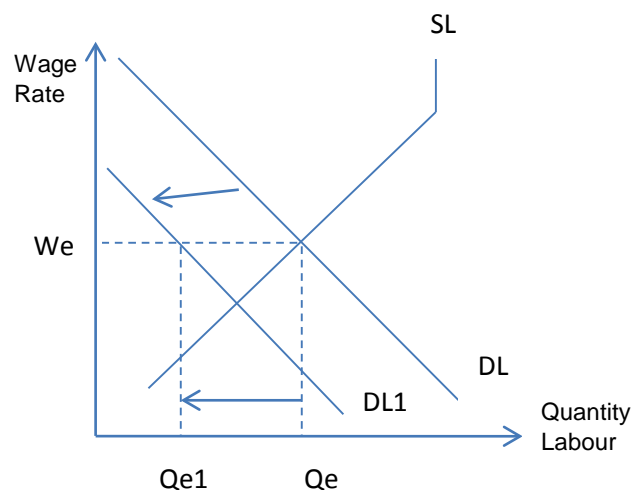
Interpret the trends: The unemployment rate in Graph 3 trends upwards throughout the quarterly periods between Dec 2010 and March 2013 from 5.2% to 7.8%. The percentage change in number of workers employed trends downwards from 1.4% in Dec 2010 to 0.3% in March 2013.

14

Identify and explain the relationship: On Graph 3, the relationship between the two sets of data shows a negative relationship, the unemployment rate increases and the percentage change in number of workers

14

employed decreases. The increase in the unemployment rate could be a result of the AD curve moving inwards, therefore causing the inflation rate to decrease (PL-PL1) and Real GDP to decrease (Y-Y1). The DL curve moves inwards on the Labour Market model (DL-DL1). A decrease in the DL curve causes the quantity of workers to decrease from Q_e to Q_{e1} creating involuntary unemployment, therefore causing the number of employed workers to decrease.



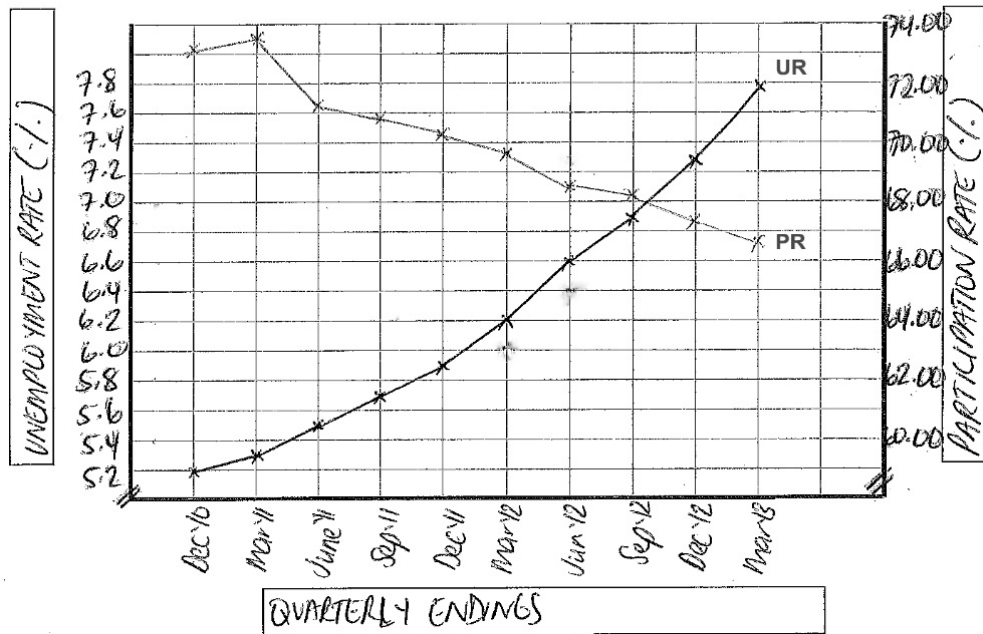
Interpret the trends: The exchange rate in Graph 2 trends upwards from 0.75 (\$NZ/\$US) in December 2010 up to 0.84 (\$NZ/\$US) in March 2013.

The inflation rate trends upwards from 0.9% in Dec 2010 to 1.1% in March 2011 where it remains constant until June 2011. After June 2011, we see the inflation rate trend downwards ending at 0.4% in March 2013.

Identify and explain the relationship: The exchange rate increases and the inflation rate decreases showing that there is a negative relationship between the two data sets. An increase in the exchange rate could cause the AD curve to move inwards because exporters earning in foreign currency receive less when it is converted to \$NZ, and importers buy more imported goods, therefore causing (X-M) to decrease which then leads to a decrease in the AD curve. As it is illustrated on the model, AD curve would decrease to AD1, which gives us a new price level (PL to PL1), which is a decrease in demand-pull inflation. Less goods and services would be produced as it is represented by (Y to Y1) a decrease in real GDP.

14

Graph 4: UNEMPLOYMENT RATE & PARTICIPATION RATE



Interpret the trends: The unemployment rate in Graph 4 trends upwards throughout the quarterly periods between Dec 2010 and March 2013 from 5.2% to 7.8%. The participation rate trends upwards from Dec 2010 from 72.56% to 72.78% in March 2011. After March 2011, the participation rate trends downwards to 66.97% in March 2013.

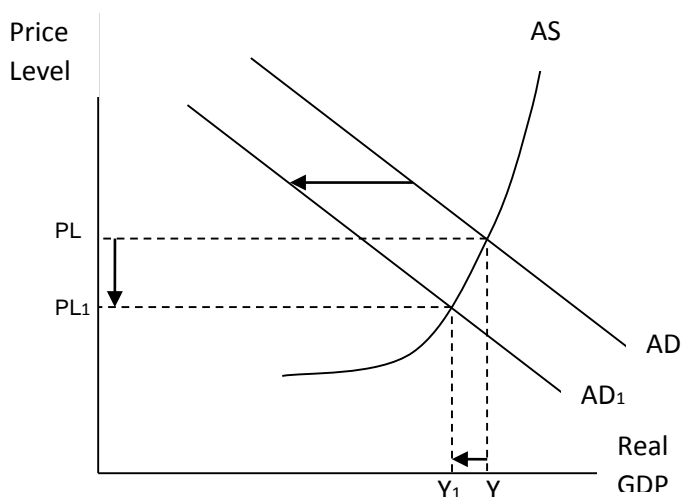
14

Identify and explain the relationship: This relationship shows that as the unemployment rate increases the participation rate decreases, indicating that there is a negative

relationship between the two data sets. When the unemployment rate is high this could have an effect on the willingness of the working age population to go out and look for a job, because there is less opportunity to find a job, it encourages people to get tertiary educated so the labour force decreases and the participation rate decreases. An increase in the unemployment rate could result from less economic activity and a decrease in the competition amongst firms to employ workers leads to a movement down the AS curve as less workers means less labour cost.

14

Inter-relationships



The inter-relationship between the inflation rate and unemployment rate is negative because as the inflation rate decreases, the unemployment rate increases. As unemployment increases consumption spending (C) decreases, because people have no money to spend because they are unemployed. $AD = C + I + G + (X - M)$, therefore if C decreases then so too will AD, causing a decrease in demand-pull inflation (PL-PL1). The model shows that Real GDP decreases from Y to Y1 so less goods are produced and it also causes the inflation rate to decrease, PL to PL1 decreasing the price level. When the unemployment rate increases the inflation rate decreases.

15

The exchange rate, when the value of the \$NZ appreciates this decreases export receipts (X) because the amount of foreign money that exporters earn in now converts to less \$NZ. This causes a decrease in (X-M) and shifts the AD curve to AD1, and Y to Y1 and PL to PL1. This affects the participation rate and the percentage change in the number of people employed because there is less demand for labour.

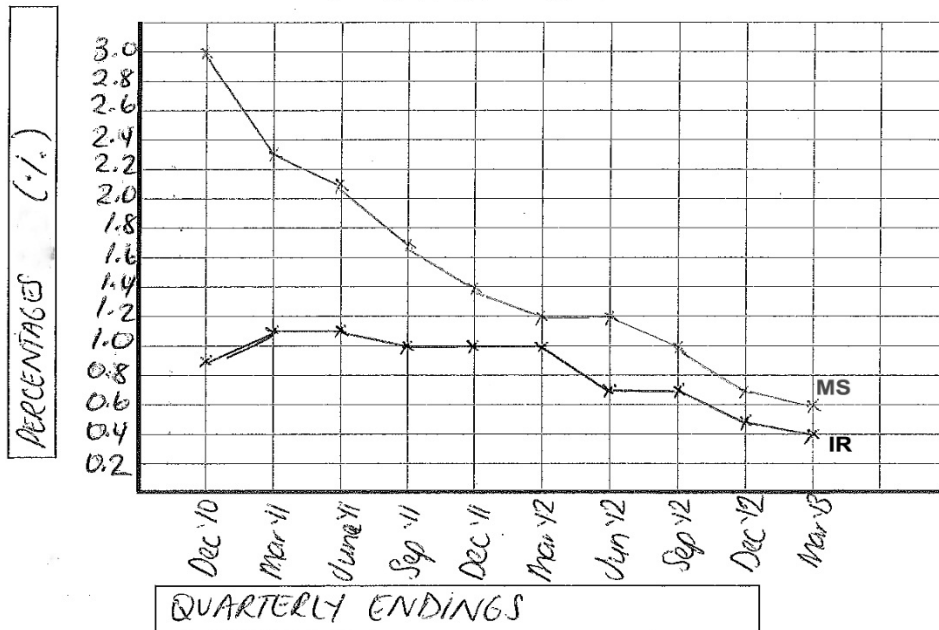
16

	Grade Boundary: High Not Achieved
6.	<p>For Achieved, the student needs to analyse statistical data relating to two contemporary economic issues.</p> <p>This involves:</p> <ul style="list-style-type: none"> • processing and presenting statistical data for two contemporary economic issues to show trends. • providing explanations of relationships in statistical data for each of the two contemporary economic issues using economic concepts and/or models • provide explanations of inter-relationships between statistical data for these two contemporary economic issues using economic concepts and/or models. <p>This student has worked with statistical data about the New Zealand economy. Statistical data for inflation and unemployment has been processed and presented to show trends, and the student has explained the trends using relevant figures and dates (18).</p> <p>The student partially explained some of the relationships shown in the inflation and unemployment data, using the AS/AD and Labour Market models (19).</p> <p>The student has identified the trends for the inter-relationship between the inflation rate and the unemployment rate (20).</p> <p>To reach Achieved, the student could use 'increase' and 'decrease' more accurately in the explanations (21). The student could explain two inter-relationships by expanding on the information from the analysis, using relevant data and economic concepts and/or models.</p>

Student processed and presented inflation and unemployment statistical data.

18

Graph 1: INFLATION RATE & PERCENTAGE CHANGE IN MONEY SUPPLY



Interpret the trends: On Graph 1 initially the inflation rate trends upwards in Dec 2010 from 0.9% to 1.1% in March 2011. The inflation rate remains the same for June 2011. After June 2011, the inflation rate trends downwards at each quarter to 0.4% in March 2013. The percentage change in money supply initially trends downwards from 3.0% in Dec 2010 to 1.2% in the quarter year of March 2012 and June 2012. After June 2012, the percentage change in money supply trends downwards to 1.0% in Sept 2012 and 0.6% in March 2013.

19

Identify and explain the relationship: On the graph, the inflation rate and the percentage change in money supply shows a positive relationship between the two data sets as they both trend downwards. This can be represented by the Quantity Theory of Money, which uses the equation of exchange $MV=PQ$ to show that a decrease in the money supply (M) can also lead to a decrease in the rate of inflation, price level (P). Money supply (M) and price level (P) have the same effect on each other, leaving V and Q.

21

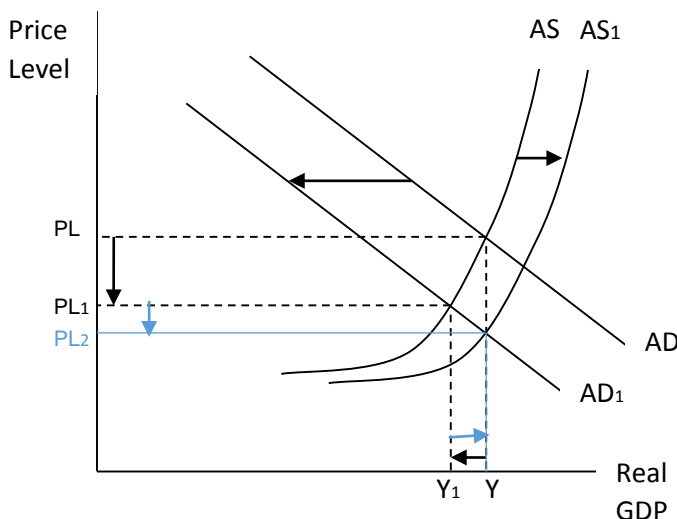
Interpret the trends: The exchange rate in Graph 2 trends upwards from 0.75 (\$NZ/\$US) in December 2010 up to 0.83 in Sept 2012. The exchange rate stays the same for Dec 2012. After Dec 2012, the exchange rate continues to trend upwards finishing at 0.84 (\$NZ/\$US) in March 2013.

19

On Graph one initially the inflation rate trends upwards in Dec 2010 from 0.9% to 1.1% in March 2011. The inflation rate remains the same for June 2011. After June 2011, the inflation rate trends downwards at each quarter to 0.4% in March 2013.

Identify and explain the relationship: The exchange rate increases and the inflation rate decreases showing that there is a negative relationship between the two data sets. The \$NZ decreases, this leads to a decrease in export receipts (X) because foreign currency exporters earn in converts to less \$NZ, and a

21



decrease in the \$NZ leads to an increase in import payments (M), because a stronger \$NZ can buy more imports. This leads to a decrease in $(X-M)$ which decreases AD because $(X-M)$ is a component of AD causing less demand-pull inflation. This can be seen on the AD/AS model (AD-AD1).

20

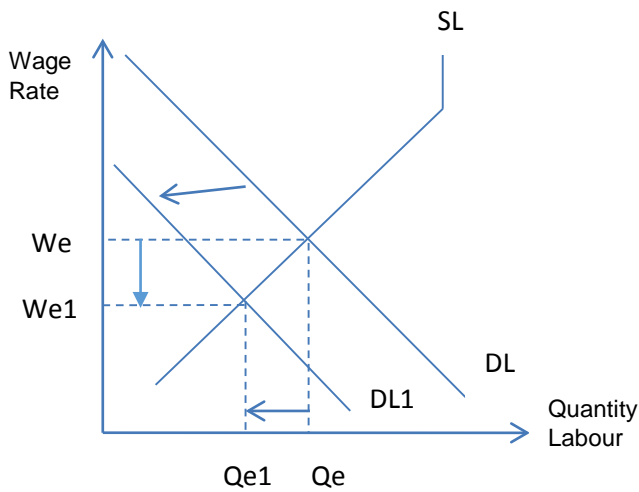
An increase in the \$NZ leads to a decrease in the cost of imported materials which leads to a decrease in COP leading to an increase in AS causing less cost-push inflation. This is seen on the AD/AS model (AS-AS1).

Interpret the trends: The unemployment rate in Graph 3 trends upwards starting at 5.2% in Dec 2010, to 7.8% in March 2013.

The percentage change in number of workers employed trends downwards from 1.4% in Dec 2010 to 1.1% in June 2011 and stays the same for Sept 2011. After Sept 2011, it trends downwards finishing at 0.3% in March 2013.

19

Identify and explain the relationship: On Graph 3, the relationship between the two sets of data shows a negative relationship, the unemployment rate increases and the percentage change in number of workers employed decreases.



If there were less workers employed then there would be more unemployed individuals. A decrease in unemployment can cause the DL curve to move inwards, we can illustrate this on the Labour Market model by shifting the DL curve inwards showing a decrease in unemployment ($Qe - Qe1$) and a decrease in the wage rate ($We - We1$) and no involuntary unemployment.

21

20

A decrease in unemployment can cause the AD curve to move inward showing a decrease in real GDP ($Y - Y1$) and a decrease in the price level ($PL - PL1$).

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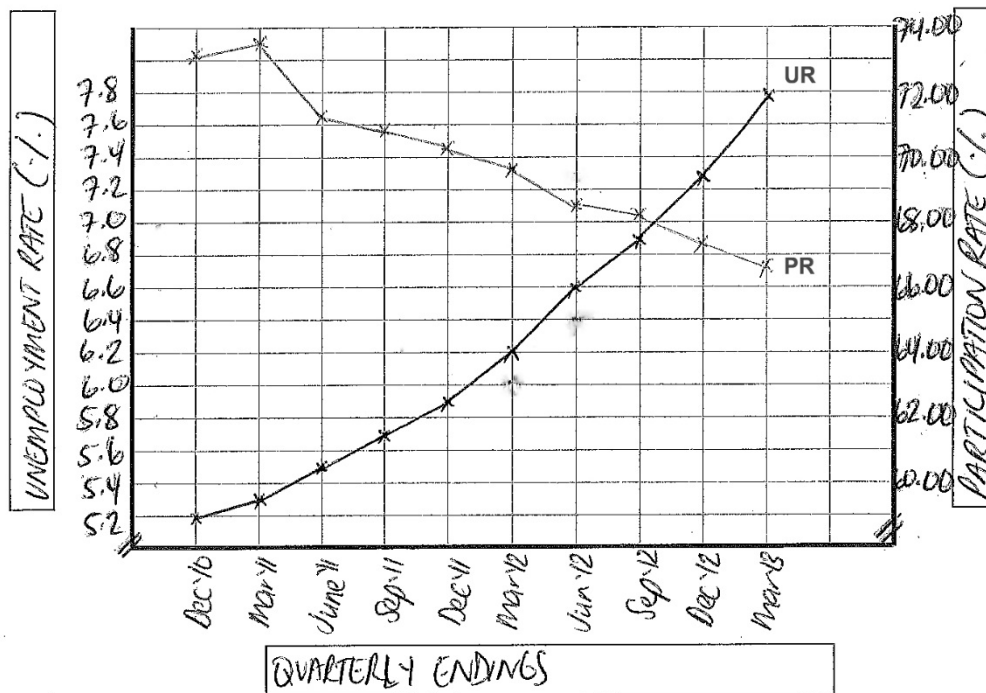
Interpret the trends: The unemployment rate in Graph 4 trends upwards starting at 5.2% in Dec 2010, to 7.8% in March 2013.

The participation rate trends upwards from Dec 2010 from 72.56% to 72.78% in March 2011. After March 2011, the participation rate trends downwards to 66.97% in March 2013.

The participation rate trends upwards from Dec 2010 from 72.56% to 72.78% in March 2011. After March 2011, the participation rate trends downwards to 66.97% in March 2013.

19

Graph 4: UNEMPLOYMENT RATE & PARTICIPATION RATE



Identify and explain the relationship: This relationship shows that as the unemployment rate increases the participation rate decreases, indicating that there is a negative relationship between the two data sets.

If there were a higher unemployment rate then there would be less willingness in the population to join the labour force, which decreases the participation rate as individuals lose confidence in the labour force.

21

Inter-relationships

Interpret the trends and explain the inter-relationships between the inflation data (graphs 1 and 2) and the unemployment data (graphs 3 and 4).

20

The inflation rate trends upwards in Dec 2010 from 0.9% to 1.1% in March 2011. The inflation rate remains the same for June 2011. After June 2011, the inflation rate trends downwards at each quarter to 0.4% in March 2013. The unemployment rate trends upwards starting at 5.2% in Dec 2010, to 7.8% in March 2013.