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Level 3 Economics, 2018

91399 Demonstrate understanding of the efficiency of market equilibrium

2.00 p.m. Friday 30 November 2018
Credits: Four

Achievement	Achievement with Merit	Achievement with Excellence
Demonstrate understanding of the efficiency of market equilibrium.	Demonstrate in-depth understanding of the efficiency of market equilibrium.	Demonstrate comprehensive understanding of the efficiency of market equilibrium.

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 2–10 in the correct order and that none of these pages is blank.

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

TOTAL

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QUESTION ONE: IMPACT OF A SUBSIDY

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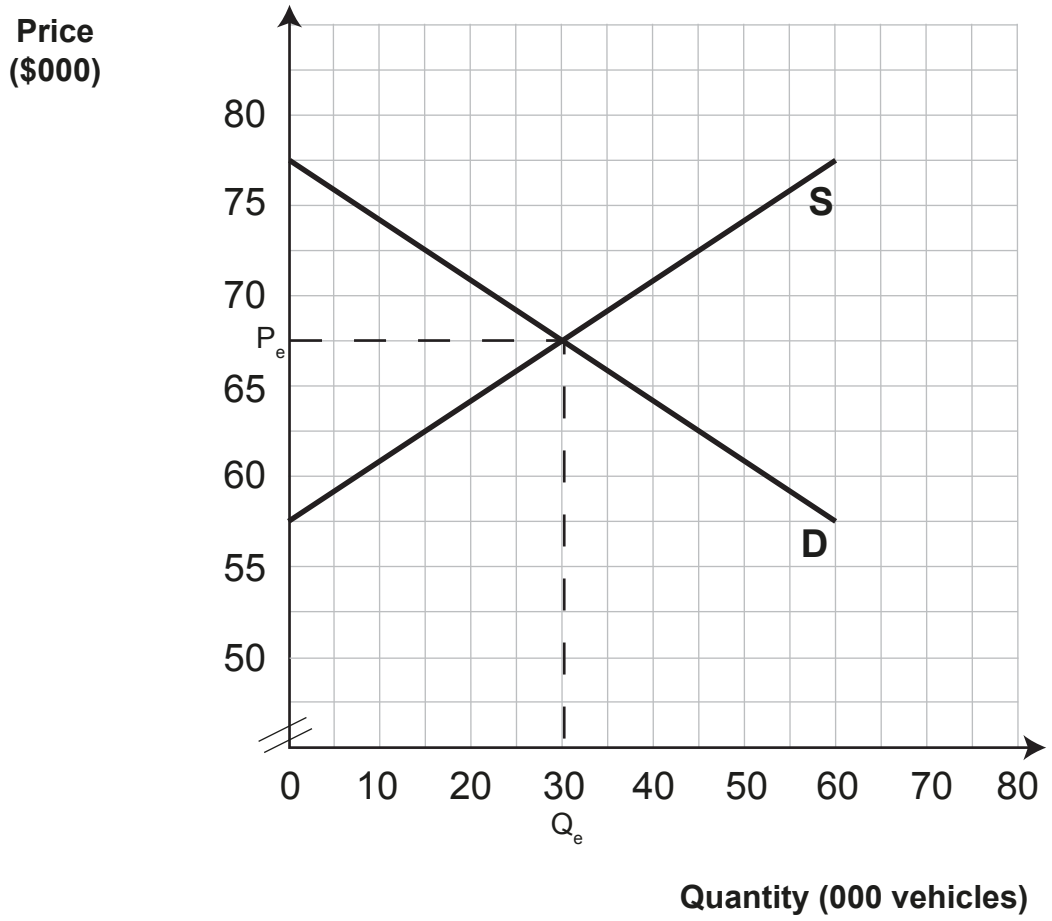
Driving a fully electric vehicle results in 80 per cent less carbon emission than driving a petrol vehicle. Transport contributes around 17 per cent of New Zealand's total carbon emissions.

Source (adapted): https://www.national.org.nz/bold_new_electric_vehicle_target_for_government.

To reduce carbon emissions, one option is for the government to subsidise the purchase of electric vehicles, by paying a subsidy to the suppliers for each vehicle sold.

Graph One: Market for electric vehicles – impact of a subsidy



(a) On Graph One, the original equilibrium price is $\mathbf{P_e}$ and the original equilibrium quantity is $\mathbf{Q_e}$. Show the impact of a subsidy of $10 000 per vehicle on the market for electric vehicles, by clearly labelling the new equilibrium price $\mathbf{P_1}$ and the new equilibrium quantity $\mathbf{Q_1}$.

(b) Referring to Graph One, complete Table One below by calculating the following values as a result of the government subsidising electric cars.

Table One

	$ value
Change in consumer surplus (specify increase or decrease)	
Change in producer surplus (specify increase or decrease)	
Total cost of subsidy	
Deadweight loss	

(c) Referring to Graph One AND Table One, compare and contrast the impact of a subsidy on the market for electric vehicles. In your answer, include the impact on:

- consumer surplus and producer surplus
- government
- allocative efficiency.

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QUESTION TWO: TARIFFS AND PRICE ELASTICITIES OF DEMAND

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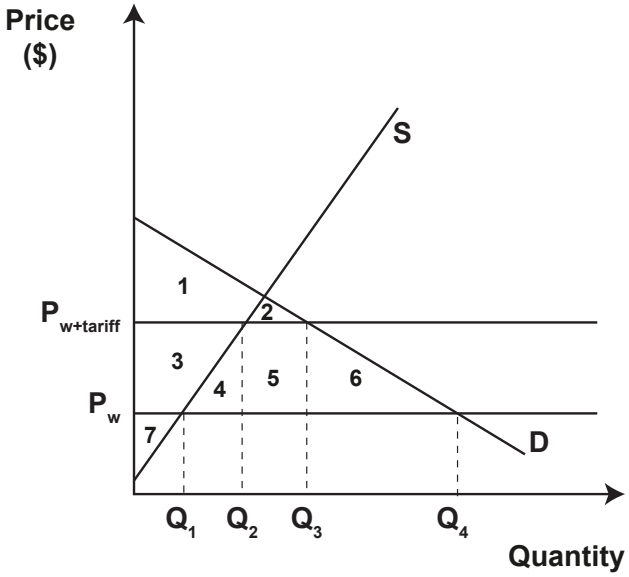
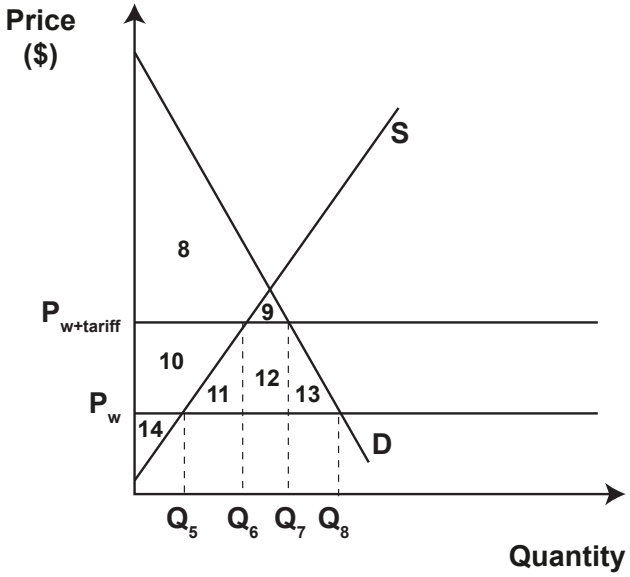
The imposition of tariffs on goods imported into New Zealand will have varying impacts depending on the price elasticities of demand of the imported goods. Graphs Two and Three show an import tariff imposed on two different imported goods.

Graph Two: Imported good that is price elastic



Graph Three: Imported good that is price inelastic



(a) On both Graph Two AND Graph Three, complete the following to show the impact of the tariff on imported goods with different price elasticities of demand:

- label the area of change in consumer surplus, using the letters **A**, **B**, **C**, and **E**
- shade in the change in producer surplus
- shade in the tariff revenue .

(b) Referring to Graph Two (Imported good that is price elastic), fully explain the impact of the tariff on imported goods that are price elastic. In your answer, include the impact on:

- consumer surplus
- producer surplus
- allocative efficiency.

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(c) Referring to Graphs Two AND Three, compare and contrast the impact of the imposition of tariffs on consumer surplus and allocative efficiency when the imported goods have different price elasticities of demand. Fully explain any difference in the impact on consumer surplus and allocative efficiency.

QUESTION THREE: MARKET FORCES AND MINIMUM PRICE CONTROL

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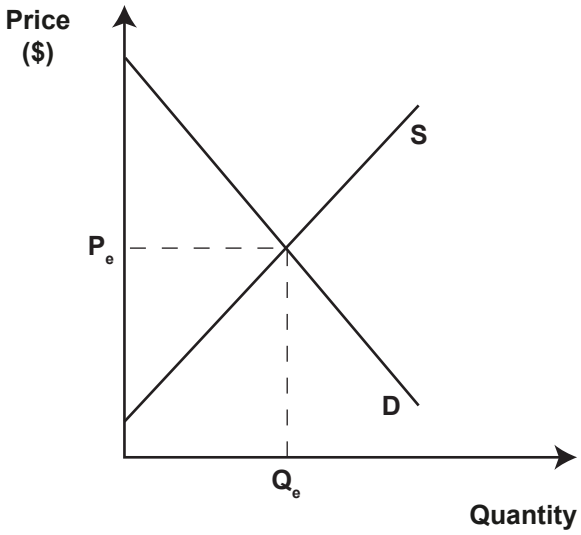
New Zealand wool prices fall because of high seasonal supply ...

Source (adapted): https://www.nbr.co.nz/article/nz-wool-prices-fall-high-seasonal-supply-strong-currency-bd-167334.

A falling price of wool is caused by many factors, one of the most significant being a seasonal increase in supply.

Graph Four: New Zealand wool market – increasing market supply



(a) (i) On Graph Four, show the impact on the market for New Zealand wool as a result of increasing supply. Clearly label the new equilibrium price $\mathbf{P_1}$ and the new equilibrium quantity $\mathbf{Q_1}$.

(ii) Explain in detail, using market forces, how equilibrium in the New Zealand wool market will be restored. In your answer, refer to the changes you made to Graph Four.

The volatile nature of the price of wool could be overcome by a minimum price control.

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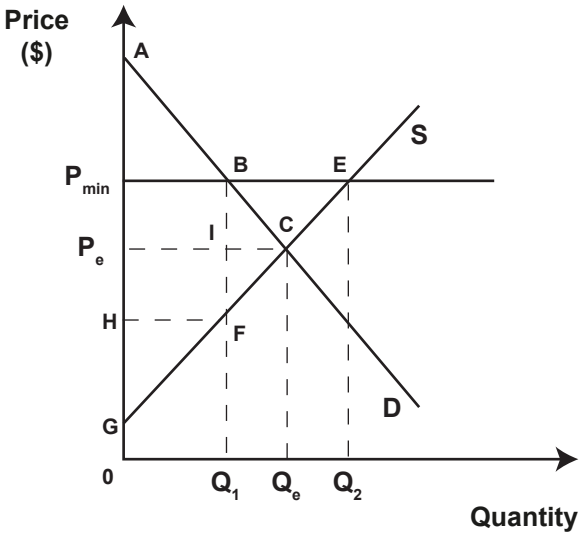
Graph Five below shows a minimum price (P_{min}) for wool set above the equilibrium price of P_e.

Graph Five: New Zealand wool market – minimum price control



(b) (i) Complete Table Two below by identifying the relevant labels from Graph Five showing the changes resulting from imposing a minimum price control on wool.

Table Two

	Labels from Graph Five
Consumer surplus **before** minimum price control	
Consumer surplus **after** minimum price control	
Producer surplus **before** minimum price control	
Producer surplus **after** minimum price control	
Deadweight loss	

(ii) Referring to both Graph Five AND Table Two, compare and contrast the impact of a minimum price control on wool buyers, wool farmers, and allocative efficiency in the New Zealand wool market. In your answer, explain in detail the change in:

- consumer surplus
- producer surplus
- allocative efficiency.

More answer space is available on the next page.

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

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