

3

91399



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Level 3 Economics 2022

91399 Demonstrate understanding of the efficiency of market equilibrium

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 2–16 in the correct order and that none of these pages is blank.

Do not write in any cross-hatched area (///). This area may be cut off when the booklet is marked.

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

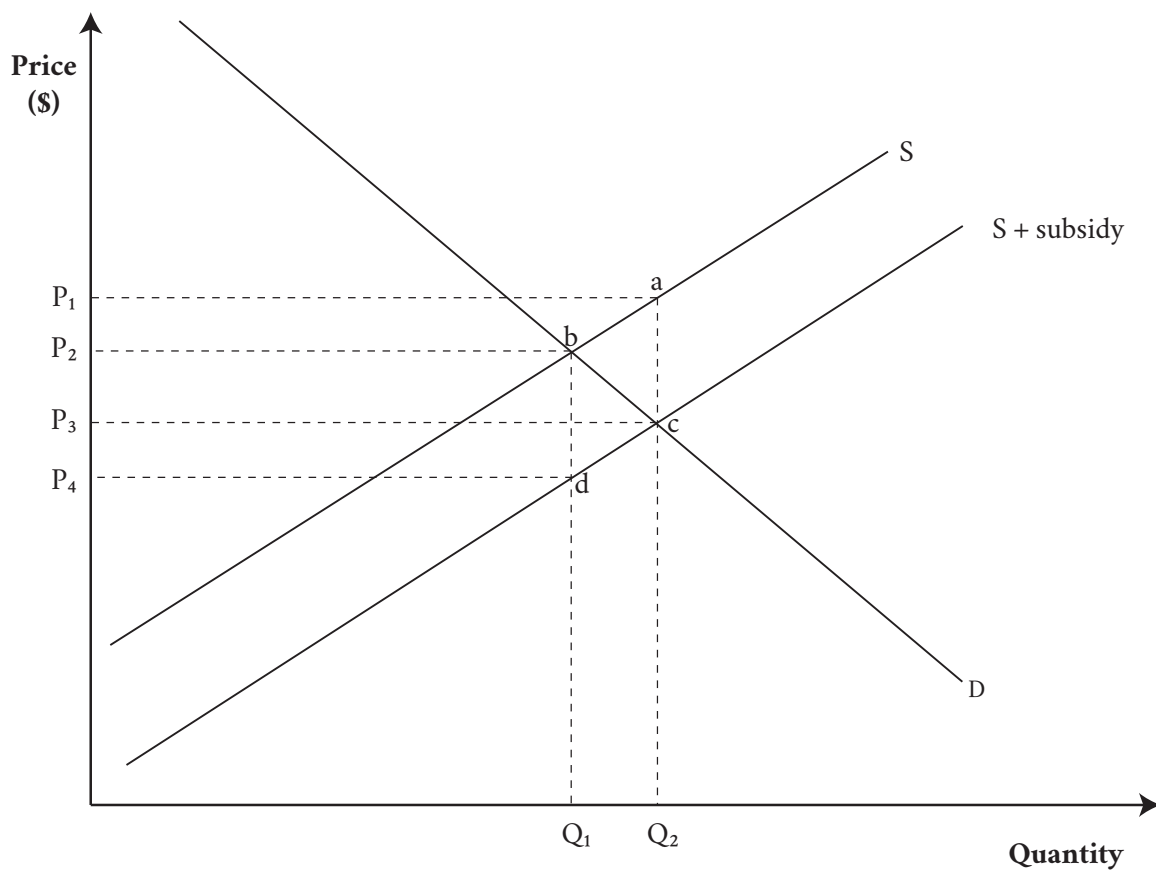
QUESTION ONE: Impact of a subsidy and an indirect tax

Electric vehicles will help to reduce climate-damaging [redacted] drive towards a net-zero emissions economy.

Source (adapted): <https://www.transport.govt.nz/area-of-interest/environment-and-climate-change/electric-vehicles-programme/>

One way to encourage more consumers to choose electric vehicles instead of petrol is to provide a subsidy or rebate for the purchase of electric vehicles.

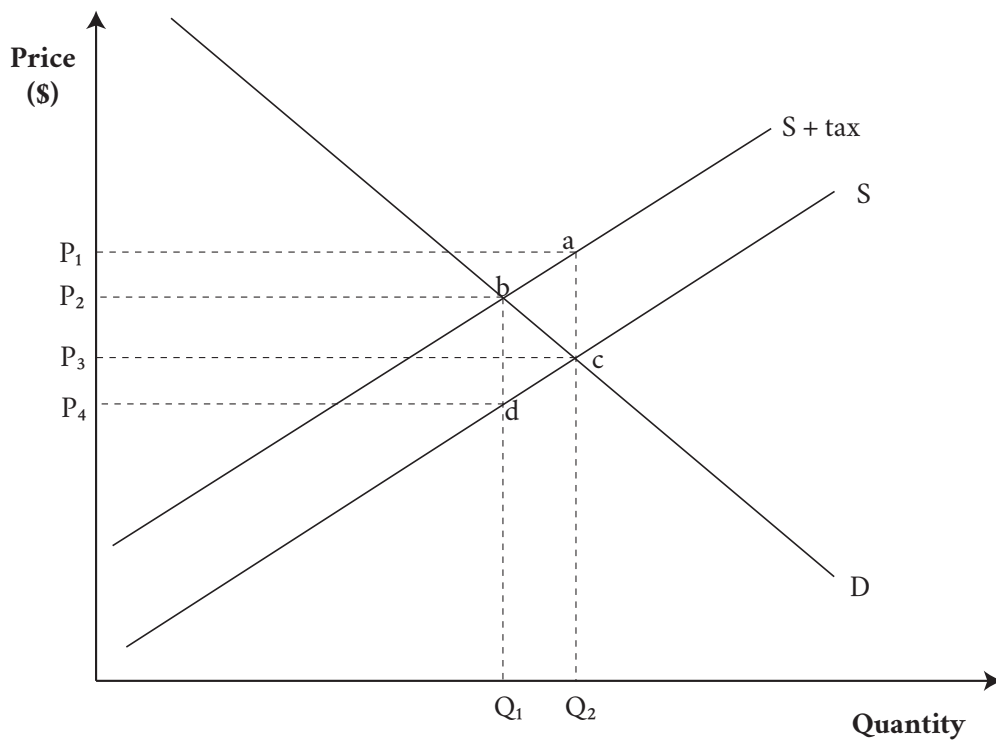
Graph One: The market for electric vehicles – impact of a subsidy



- (a) Use the labels from Graph One to identify the:
- (i) change in consumer surplus: _____
 - (ii) change in producer surplus: _____
 - (iii) total cost to the Government: _____
 - (iv) deadweight loss: _____

Another way to encourage more consumers to switch to electric vehicles is to place an indirect tax on petrol vehicles.

Graph Two: The market for petrol vehicles – impact of a tax



- (b) Use the labels from Graph Two to identify the:
- (i) change in consumer surplus: _____
 - (ii) change in producer surplus: _____
 - (iii) total tax revenue collected by the Government: _____
 - (iv) deadweight loss: _____
- (c) Compare and contrast the impacts of a subsidy on the market for electric vehicles with a tax on the market for petrol vehicles. Refer to Graph One and Graph Two in your answer, and explain:
- (i) How each of the two policies would impact consumer surplus.

Answer space continues on the next page ►

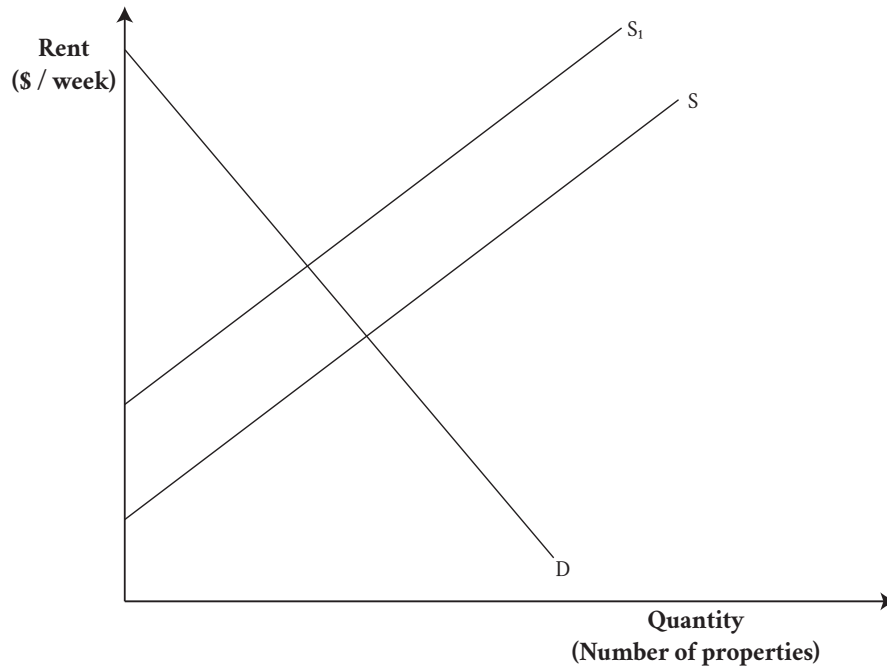
(ii) How each of the two policies would impact allocative efficiency.

(iii) How each of the two policies would impact the Government.

- (iv) Why a combination of the two policies might be more financially sustainable in helping the Government's goal of encouraging more consumers to buy electric instead of petrol vehicles.

QUESTION TWO: Impact of a maximum price

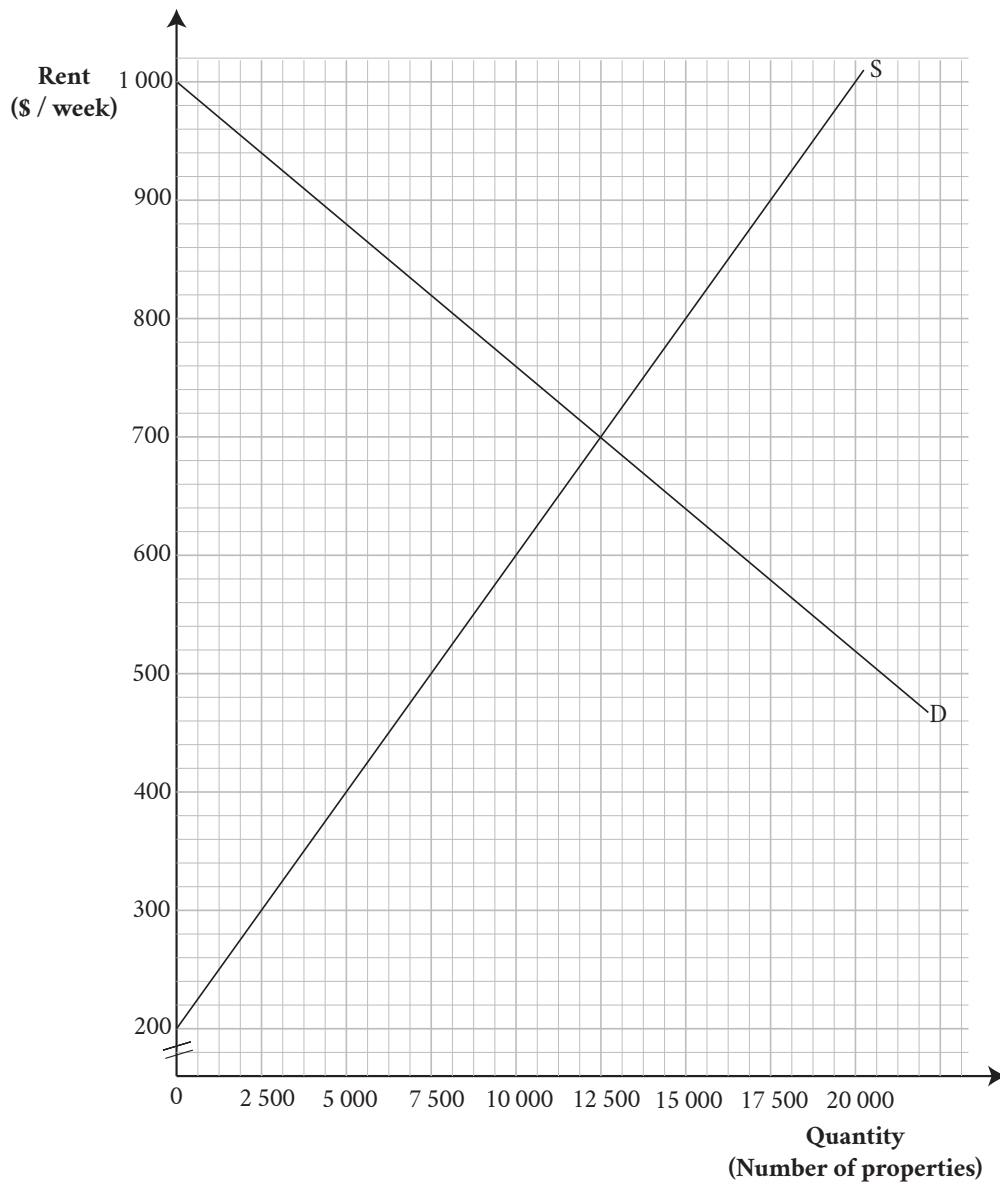
The cost of renting a home in New Zealand has continued to rise. The decrease in supply of homes to rent has made this increase worse.

Graph Three: The New Zealand rental housing market with a decrease in supply

- (a) (i) On Graph Three above, use dotted lines and labels to show the:
- original equilibrium price (P_e) and the original equilibrium quantity (Q_e)
 - new equilibrium price (P_1) and the new equilibrium quantity (Q_1)
 - shortage or surplus resulting from the decrease in supply at the original price.
- (ii) How would equilibrium be restored in the rental housing market? Refer to the relevant labels from Graph Three and the concept of market forces in your explanation.

One way the Government could stop rents from rising is by imposing a maximum price or rent control.

Graph Four: The New Zealand rental housing market with a maximum price



- (b) (i) On Graph Four above, show a maximum price (rent) control set at \$500 per week. Label the price (rent) P_{MAX} .
- (ii) Use data in Graph Four to complete Table One, below.

Table One

	Value before maximum price (\$)	Value after maximum price (\$)	Value of change (\$) (state increase or decrease)
Consumer surplus			
Producer surplus			
Deadweight loss			

(c) Compare and contrast the impacts this maximum price (rent) control has on consumers, producers, and allocative efficiency. Refer to Graph Four and Table One, and explain:

(i) How the maximum rent control impacts consumer surplus.

(ii) How the maximum rent control impacts producer surplus.

(iii) How the maximum rent control impacts allocative efficiency.

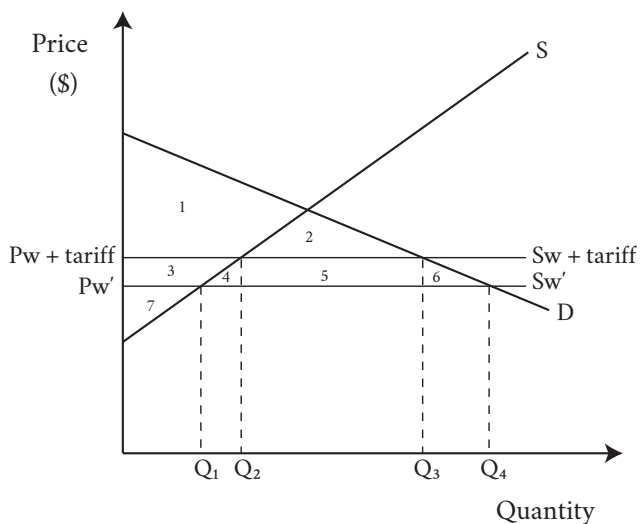
QUESTION THREE: Impact of a tariff removal

Import tariffs of 5% and 10%

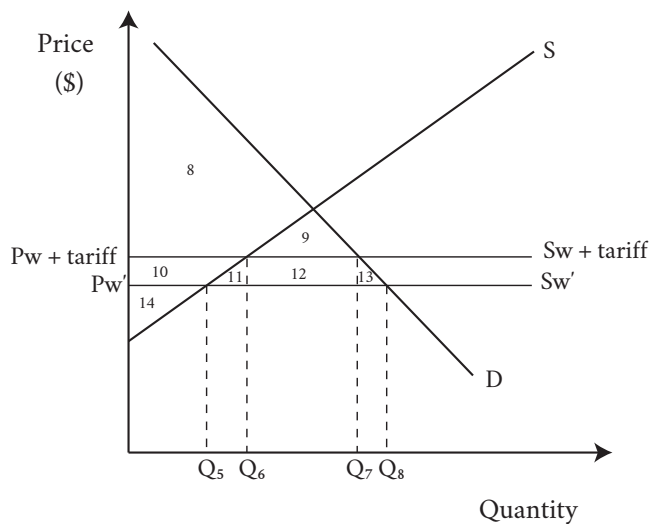
This increases overall efficiency.

Sources (adapted): <https://www.mbie.govt.nz/business-and-employment/business/trade-and-tariffs/tariffs-in-new-zealand/>
<https://www.mbie.govt.nz/assets/5a90aac8bd/cabinet-paper-import-tariff-levels-after-2017.pdf>

Graph Five: The New Zealand market for an elastic good – impact of tariff removal



Graph Six: The New Zealand market for an inelastic good – impact of tariff removal



(a) Use the labels from Graph Five and Graph Six to complete Table Two, below.

Table Two

	Graph Five Elastic good	Graph Six Inelastic good
Increase in consumer surplus		
Decrease in producer surplus		
Loss of Government tariff revenue		
Gain in allocative efficiency		

(b) Compare and contrast the impact on producers and consumers of removing the tariff on goods that are price elastic. Refer to Graph Five and explain:

(i) How the removal of the tariff impacts consumer surplus.

(ii) How the removal of the tariff impacts producer surplus.

(iii) How the removal of the tariff impacts the Government.

- (c) Compare and contrast the impact on allocative efficiency of removing the tariff from goods that are price elastic rather than inelastic. Refer to Graph Five and Graph Six, and explain:
- (i) Why there are gains in allocative efficiency when tariffs are removed from imported goods regardless of their price elasticity of demand.

- (ii) Why removing tariffs from price elastic goods rather than inelastic goods would lead to higher allocative efficiency gains.

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

QUESTION
NUMBER

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