ECONOMICS

LEVEL 1

ACHIEVEMENT STANDARD AS90986

CREDITS – 5 External

Demonstrate understanding of how consumer, producer and/or government choices affect society, using market equilibrium

Achievement Criteria

Achievement	Achievement with Merit	Achievement with Excellence
 Demonstrate understanding of how consumer, producer and/or government choices affect society, using market equilibrium. 	 Demonstrate in-depth understanding of how consumer, producer and/or government choices affect society, using market equilibrium. 	• Demonstrate comprehensive understanding of how consumer, producer and/or government choices affect society, using market equilibrium.

Notes available: www.economics.school.nz

Nature of a Market

A market is any place or situation where buyers and sellers interact to exchange goods and services.

A market in may be a place such as a shop where buyers and sellers meet to exchange goods and services, or it may also be a situation – such as the internet where buyers and sellers can interact to exchange good and services.

Market as a place		
-	Shop (gamesman)	
-	Supermarket	
	(woolworths)	
-	auction yard (turners)	
	tandar contro	

tender centre.

Market as a situation

- the internet (trademe)
- telephone
- marketing.
- The stock exchange.

Markets differ in many ways. They may be small and localised, such as a stall at a local flea market or they may be world-wide involving multi-national corporations that do business with millions of people in many different countries, such as the market for oil. The number of buyers and sellers involved, the amount of regulation, whether they are dominated by any powerful buyers and sellers, and the types of goods and services sold will all differ.

TYPES OF MARKETS

- Auction (Turners car actions, trademe.co.nz)
- Tender (the tender centre)
- Private sale.
- -Dealership or shop.

Exchange

Specialised producers have to exchange their surplus and trade it for what they no longer produce for themselves. Exchange usually occurs with the aid of money, but barter, which does not use money, can be used instead.

Barter

This is the simplest means of exchange. Barter is the swapping of goods for other goods. As a means of exchange, it suffers from the problem of **requiring a double coincidence of wants**. You have to find someone who has what you want, and who also wants what you have. This can be very awkward, and time consuming. Another problem is the difficulty in establishing the value of goods and services. How many oranges do we swap for a pig?

However there are modem arrangements that enable an improved barter system, such Green Dollar Exchanges.

Green dollar exchanges use a system of credits for goods produced or work done. For instance, baby-sitting clubs have been set up where parents can earn a "credit" whenever they baby-sit at a member's home. This credit can be "debited" (or spent) whenever the parents need babysitting services. No money has changed hands yet a fair exchange has been established. Green dollar exchanges can be guite sophisticated, with computerised recording of credits and debits. Where these exchanges involve a whole range of goods and services they can be called "Local Employment and Trading Systems" (LETS).

MARKET EQUILIBRIUM

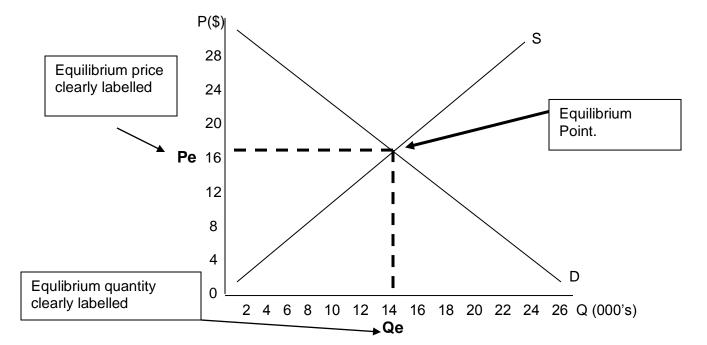
OBJECTIVES:

- ✤ Identify market equilibrium, excess supply and excess demand.
- Show how the market reacts to excess supply and excess demand to reach equilibrium.
- Use supply and demand analysis to explain and predict changes in price and quantity.

We have looked at supply and demand individually. We will now combine both market supply and market demand together to make <u>market equilibrium</u>. In the market there is only one price at which both the consumer and producer will agree on the quantity demanded and the quantity supplied. If prices are set above or below equilibrium the market will always bring the price back to the equilibrium point.

When analysing the market for a product the market supply and market demand curves are put onto one graph. At the point where the curves cross over is the market equilibrium, this is where the quantity supplied is equal to the quantity demanded.

At the equilibrium price everything that is supplied to the market is sold.



MARKET FOR GUMBOOTS

Pe and Qe mark the point of equilibrium price and equilibrium quantity. You need to clearly highlight these points by drawing a line from the equilibrium point to the axis.

Remember to put a title in for graph and clearly label all axis and lines (T.A.L.L.)

Market equilibrium is where the market is in balance – what consumers are willing to pay and what price producers are willing to take are equal.



If for any reason the market is not at equilibrium, and there are no restrictions on the market then market forces will come into action to return price to equilibrium. **Market Forces** are the forces of demand and supply. These forces will automatically lead to equilibrium.

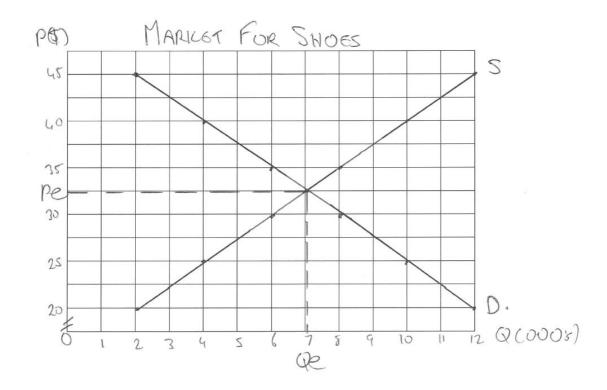


QUESTIONS:

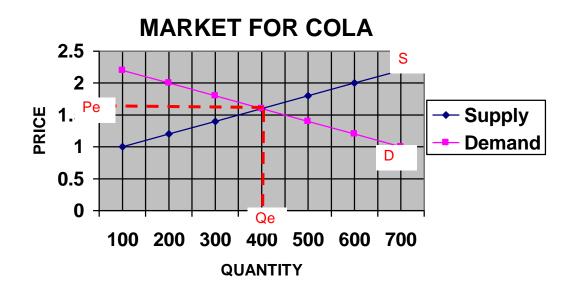
1. From the following market demand and supply schedules construct a graph for the market for shoes.

P(\$)	MARKET DEMAND	MARKET SUPPLY
	(000's)	(000's)
20	12	2
25	10	4
30	8	6
35	6	8
40	4	10
45	2	12

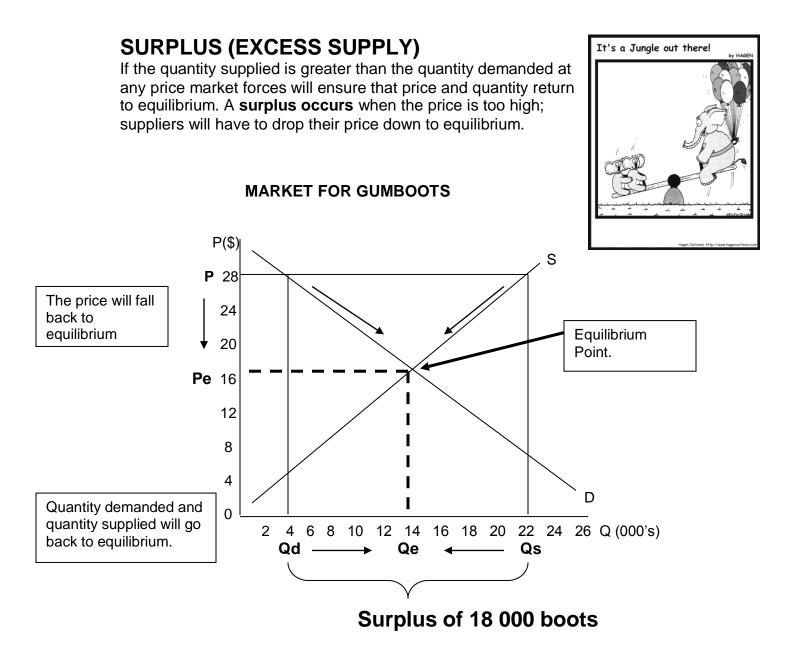
MARKET DEMAND AND SUPPLY SCHEDULE FOR SHOES



2. Fully label the graph below and then use it to construct a market supply and demand schedule for Cola.



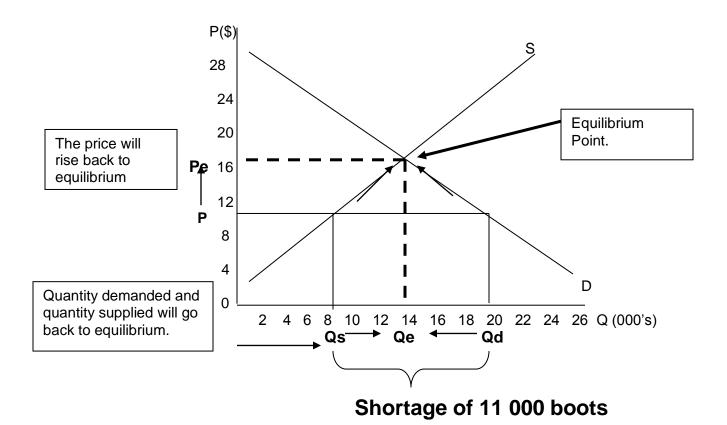
P(\$)	QD	QS
1.00	700	100
1.20	600	200
1.40	500	300
1.60	400	400
1.80	300	500
2.00	200	600
2.20	100	700



In the above example the price is too high and producers can't sell all their stock so they will have a surplus. To get rid of their excess stock they will have to lower the price – back to where the market will clear – the equilibrium price. This will mean that the quantity supplied will decrease with the decrease in price and the quantity demanded will increase.

SHORTAGE (EXCESS DEMAND)

If the quantity supplied is **LESS** than the quantity demanded at any price market forces will ensure that price and quantity return to equilibrium. A **shortage occurs** when the price is too low; suppliers will raise their price up to equilibrium.

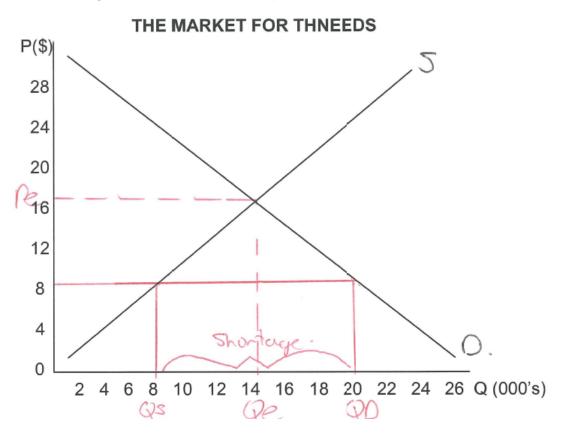


MARKET FOR GUMBOOTS

In the above example the price is too low and consumers can't buy enough stock so they will be a shortage. Producers won't have enough stock and so prices will rise as the producer will see the opportunity to make more profit. As the price rises the quantity demanded will decrease and the quantity supplied will increase back to the equilibrium price and quantity.

QUESTIONS:

1. Use the diagram below to answer the questions which follow.

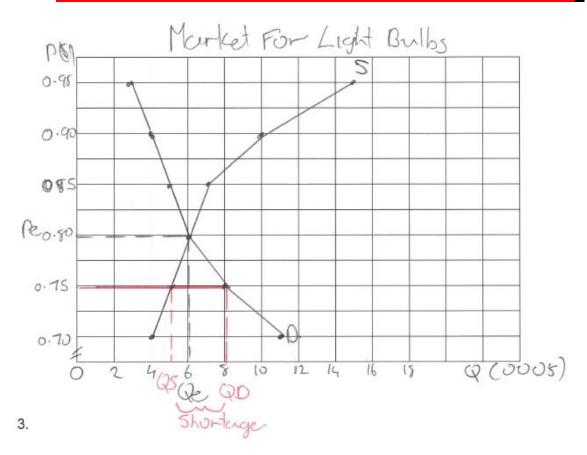


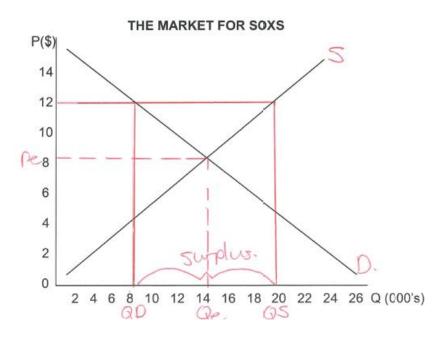
- a) Fully label the diagram above.
- b) At what price does a shortage of 12 000 THNEEDS occur? \$8
- c) What will happen to the price in this market? Why? <u>At a price of \$8 there is a shortage of 12 000 thneeds in the market. Consumers will bid the price up.</u> <u>As the price increases, the quantity demanded deceases from 20 000 to 14 000, and the quantity supplied increases from 8 000 to 14 000. The market will return to the equilibrium price of \$16 and equilibrium quantity of 14 000</u>
- 2. Use the following information to create a market supply and demand graph for light bulbs. The grid is on the following page.

P(\$)	QS (000's)	QD (000's)
0.70	4	11
0.75	5	8
0.80	6	6
0.85	7	5
0.90	10	4
0.95	15	3

Market demand and supply schedule for light bulbs.

- a) On your graph clearly show what will happen if the price is set at \$0.75.
- b) What kind of situation is this called? A Shortage.
- c) What will happen in this market? <u>At the price of \$0.75 there is a shortage of 3000 light bulbs. Consumers will bid the price up. As the price increases the quantity demanded decreases from 8 000 to 5 000 light bulbs, and the quantity supplied will increase from 5 000 to 6 000. The market will return to the equilibrium price of \$0.80 and equilibrium quantity of 6 000 light bulbs.</u>





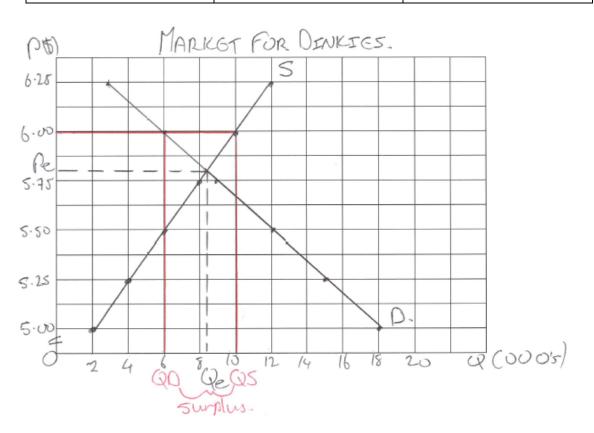
- a) Fully label the diagram above.
- b) At what price does a surplus of 12 000 Soxs occur? \$12

c) What will happen to the price in this market? Why? <u>There is a surplus of 12 000</u> <u>Soxs. Producers will decrease the price to try and get rid of excess stock. As the</u> <u>price decreases the quantity demanded will increase from 8 000 to 14 000, and</u> <u>the quantity supplied will decrease from 20 000 to 14 000. The market will return</u> <u>to the equilibrium price of \$8 and equilibrium quantity of 14 000</u>

4. Use the following information to create a market supply and demand graph for dinkies.

P(\$)	QS (000's)	QD (000's)
5.00	2	18
5.25	4	15
5.50	6	12
5.75	8	9
6.00	10	6
6.25	12	3

Market demand and supply schedule for dinkies.

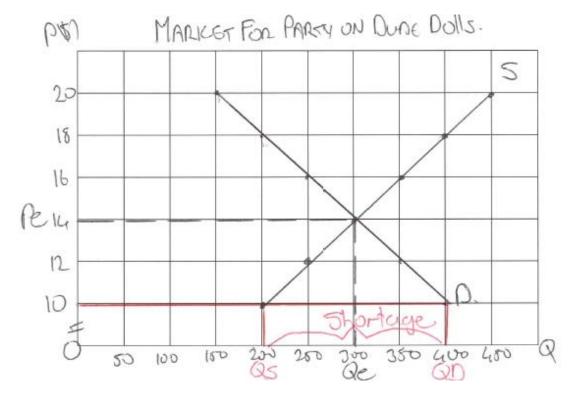


- a) On your graph clearly show what will happen if the price is set at \$6.00.
- b) What kind of situation is this called? <u>Surplus</u>
- C) What will happen in this market? <u>There is a surplus of 4 000</u> <u>Dinkies in the market. Producers will decrease the price to get rid of excess</u> <u>stock. As the price decreases the quantity demanded increases from 6 000</u> to 8 500, and the quantity supplied decreases from 10 000 to 8 500. The market will return to the equilibrium price of \$5.80 and equilibrium quantity of 8 500 dinkies.

MARKET TOR Y ARTIONDODE DOLLO		
Price (\$)	Market Supply	Market Demand
\$10	200	400
\$12	250	350
\$14	300	300
\$16	350	250
\$18	400	200
\$20	450	150

MARKET FOR gPARTYONDUDE DOLLS

5. Using the information in the above schedule and the grid below, construct a graph and plot both market supply and market demand for Partyondude Dolls.



a) On the graph clearly label both equilibrium price and quantity.

- b) At the price of \$10, identify on the graph:
- i) the quantity supplied and label it Qs.
- ii) the quantity demanded and label it QD.
- iii) What is the situation called that results in setting the price at \$10? **Shortage**

iv) How will the market respond to this situation?

There is a shortage of 200 dolls. Consumers will bid the price up. As the price increases the quantity demanded decreases from 400 to 300, and the quantity supplied increases from 200 to 300 dolls. The market will return to the equilibrium price of \$14 and equilibrium quantity of 300 dolls.

Name the price at which a surplus of 200 dolls occurs.
 \$18

a) Explain why the surplus will not last long in this market.

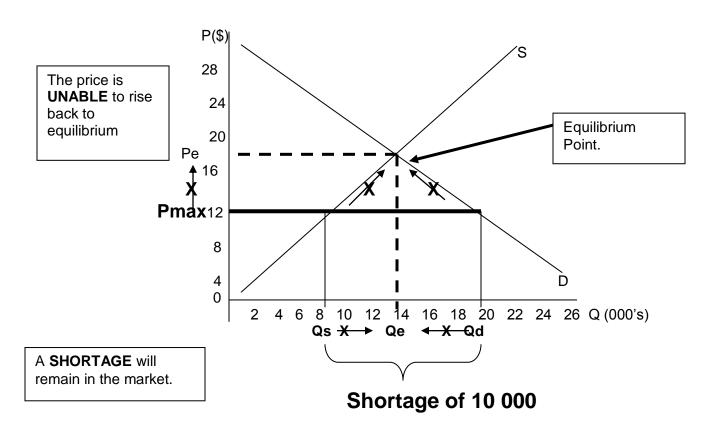
There is a surplus of 200 Dolls in the market. Producers will decrease the price to get rid of excess stock. As the price decreases the quantity demanded increases from 200to 400, and the quantity supplied decreases from 400 to 200. The market will return to the equilibrium price of \$14 and equilibrium quantity of 300 dolls.

b) Calculate the revenue for producers at the equilibrium price for Partyondude Dolls.

14 x 300 = 4200

THE EFFECT OF A MAXIMUM PRICE IN THE MARKET.

A maximum price means the price is unable to go **ABOVE** that price. The government has placed a price on the good and it is not allowed to go above that price. A maximum price is often used to help people on low incomes to be able to afford essential goods. In the past the government in NZ has placed maximum prices on milk and bread.



MAXIMUM PRICE

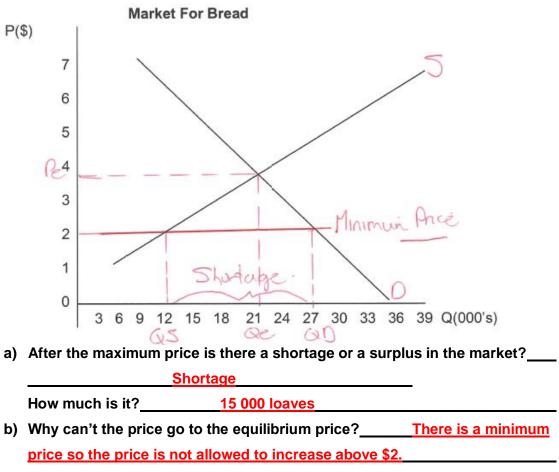
A maximum price means the price cannot go above that point so in the above diagram price is stuck at Pmax or below, there is no movement toward equilibrium because the price cannot increase.

A maximum price will cause

- **G** The quantity demanded will increase.
- **CS** The quantity supplied will decrease.
- A shortage will be created in the market.
- G Queues will form as buyers line up to purchase the good.
- s Illegal, Black markets may form as sellers sell the good to the person who is prepared to pay the most.

Questions:

1. Clearly label the graph below and then show what will happen if there is a maximum price set at \$2.

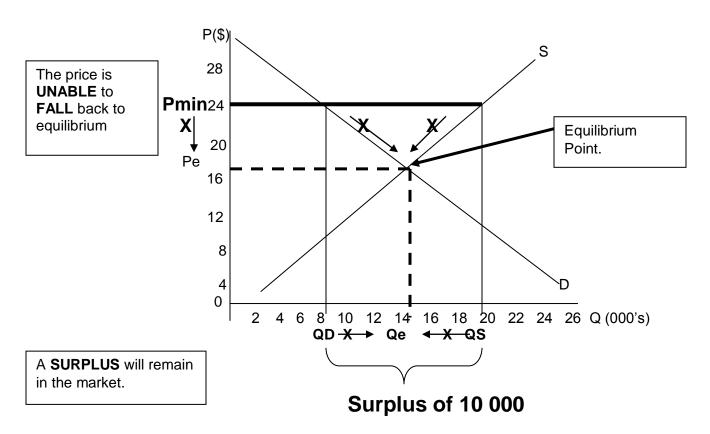


- c) Why might the government set a maximum price? <u>To help low income</u> households to a be able to afford to buy bread.
- d) What are the consequences of the maximum price being imposed? <u>There will be a shortage in the market, some households will miss</u> <u>out, a black market may develop.</u>
- e) What effect would there be on the market if the maximum price was set at \$5?
 There would be no effect. The price is set above the

equilibrium price – so it will return to the equilibrium price and quantity.

THE EFFECT OF A MINIMUM PRICE IN THE MARKET.

A minimum price means the price is unable to go **BELOW** that price. The government has placed a price on the good and it is not allowed to go below that price. A minimum price is often used to support industries, especially against cheap imports. In New Zealand a minimum price was paid to farmers to help give them support from low sheep prices. The were given a minimum price for the sheep they provided.



MINIMUM PRICE

A minimum price means the price cannot go below that point so in the above diagram price is stuck at Pmin or above, there is no movement toward equilibrium because the price cannot decrease.

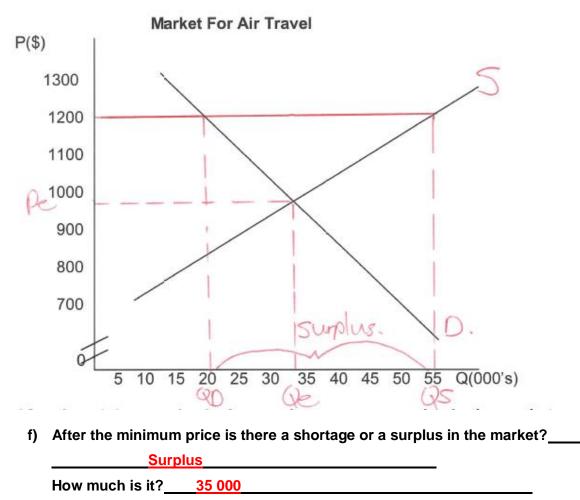
A minimum price will cause

- **G** The quantity demanded will decrease.
- **G** The quantity supplied will increase.
- **GS** A surplus will be created in the market.

Minimum prices are not really used in New Zealand anymore, but they are used overseas to help support farmers in other countries.

Questions:

2. Clearly label the graph below and then show what will happen if there is a minimum price set at \$1200.



g) Why can't the price go to the equilibrium price?

Because there is a minimum price, the price is not allowed to go below \$1200.

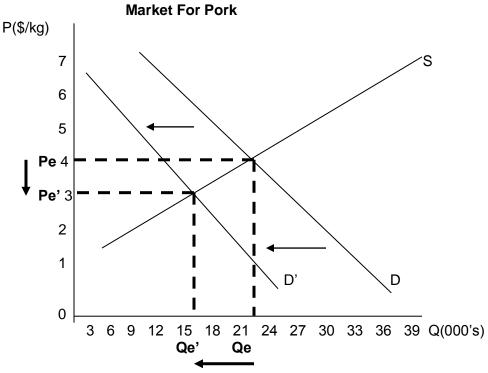
- h) Why might the government set a minimum price? <u>To help protect a</u> <u>firm from cheap overseas competition.</u>
- What are the consequences of the minimum price being imposed?
 <u>There is a surplus in the market, loss of profit for firms, a lot of unsold seat,</u> consumers who cannot afford the higher prices will miss out.
- j) What effect would there be on the market if the minimum price was set at \$800? <u>No effect – the price would return to the equilibrium price and</u> <u>quantity.</u>

TAXATION AND THE MARKET

A tax is a compulsory payment to government. Most of a government's revenue comes from taxation. There are two main categories of tax.

- I Direct taxes these are taxes on households incomes and affect demand. They are paid direct to the government from the tax payer.
- Indirect taxes these are taxes that are paid to the government by a third party such as a business. GST (Goods and Services Tax) is an example of this. Indirect taxes are an increased cost to the firm and affect the supply curve.

IMPACT OF A DIRECT TAX.

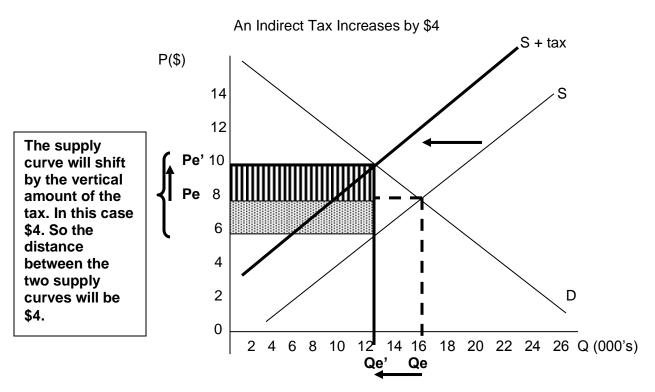


A direct tax will

- Solution of the demand for a good and shift the demand curve to the left.
- cos Decrease the price.
- Cos Decrease the quantity supplied.
- CS Decrease the quantity sold in the market.

IMPACT OF AN INDIRECT TAX

For an increase in an indirect tax the supply curve will shift to the left by the vertical distance of the tax. What is many if you cannot have nothing.



This introduction of the indirect tax has increased the price from \$8 to \$10. Some of the tax has been passed onto consumers in the form of a higher price. Some of the tax has been absorbed by producers in the form of lower profits.

The amount of tax received by the government is $4 \times 12000 = 48000$.

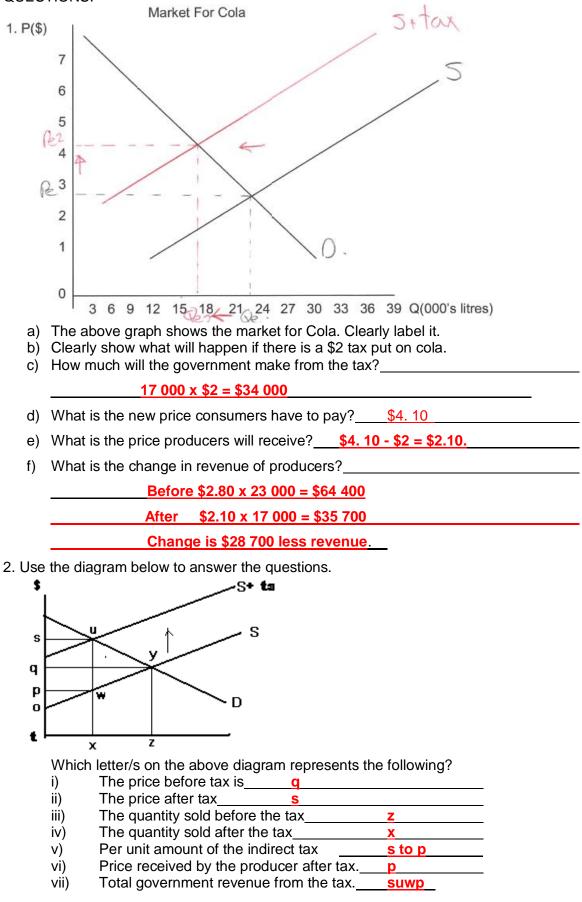
The price producer now receive is \$10 - \$4 tax = \$6 per unit.

Producers Revenue after the tax is \$6 x 12 000 = \$72 000

Producer revenue before the tax was \$8 x 15 000 = \$120 000

NOTE: The tax is not an increase in the cost of production and so we do not label the new supply curve S' or S2 but Supply + tax.

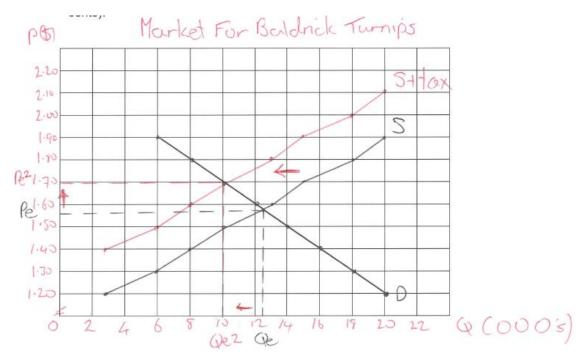
QUESTIONS:



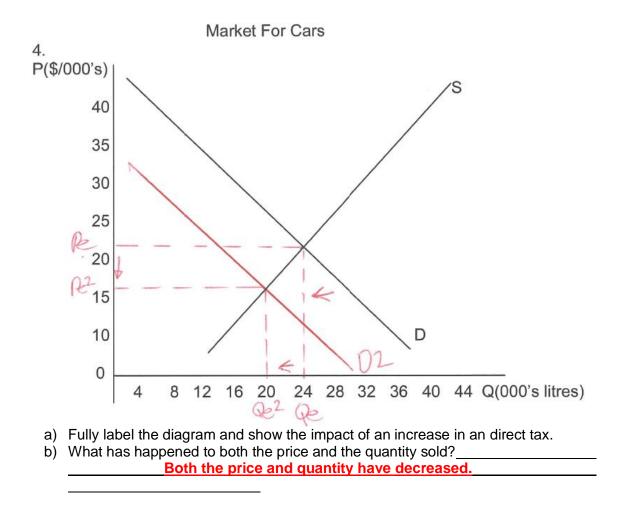
3. Use the following market schedule to draw a market demand and supply graph for Baldrick turnips.

P(\$)	QD(000's)	QS(000's)
1.20	20	3
1.30	18	6
1.40	16	8
1.50	14	10
1.60	12	13
1.70	10	15
1.80	8	18
1.90	6	20

- a) On your graph clearly show the equilibrium price and quantity of Turnitups.
- b) On the graph show what will happen if the government increases GST by \$0.20 (20 cents).



- c) What is the new equilibrium price? \$1.70
- d) The quantity sold before the tax <u>12 500</u>
- e) The quantity sold after the tax <u>10 000</u>
- f) Per unit amount of the indirect tax \$0.20____
- g) Price received by the producer after tax. \$1.50
- h) Total government revenue from the tax. <u>\$0.20 x 10 000 = \$2000</u>

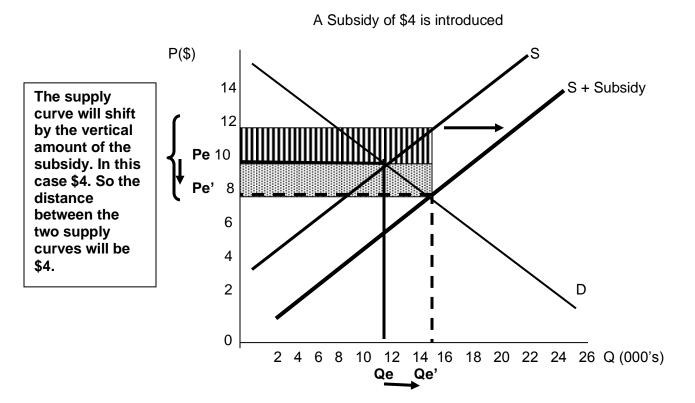


SUBSIDIES

A subsidy is a payment by government to producers in order to reduce the cost of production.

A subsidy will shift the supply curve to the right and increase supply.

The supply curve will shift by the vertical amount of the subsidy.



This introduction of the subsidy has decreased the price from \$10 to \$8. The quantity sold has increased from 12 000 to 15 000 Some of the subsidy has been passed onto consumers in the form of a lower price. Some of the subsidy has been absorbed by producers in the form of higher profits.

The amount spent by the government is $4 \times 15\ 000 = 60\ 000$.

The price producers now receive is \$8 + \$4 subsidy = \$12 per unit.

Producers Revenue after the subsidy is \$12 x 15 000 = \$ 180 000

Producer revenue before the subsidy was \$10 x 12 000 = \$120 000

Total consumer spending is now \$8 x 15 000 = \$120 000

A subsidy will or Increase supply.

- os Decrease the price.
- cs Increase the amount sold in the market.

Subsidies are paid by the government to try and keep prices lower for households. In New Zealand prescription medicines, doctors visits and public transport are all subsidized by the government.

Doctors visits for children under 6 are heavily subsidized in NZ and in most cases the visits are free.

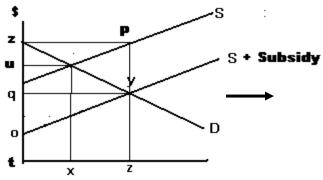
Dentists are also heavily subsidized in NZ with basic dental visits being free up until18.

NOTE: The Subsidy is not a decrease in the cost of production and so we do not label the new supply curve S' or S2 but Supply + subsidy.

q

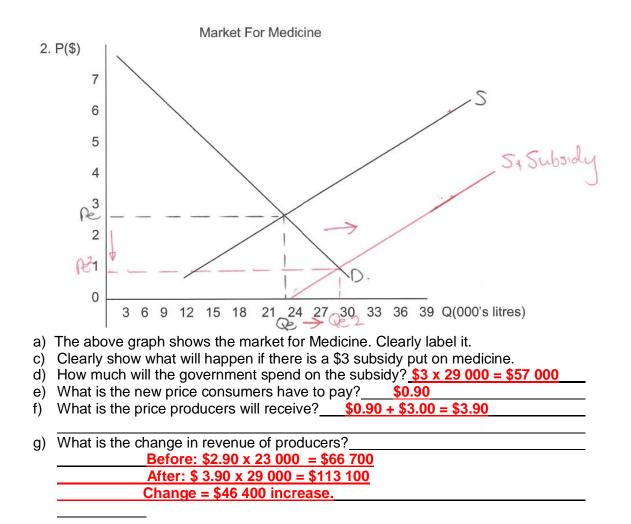
Questions:

1. Use the diagram below to answer the questions.



Which letter/s on the above diagram represents the following?

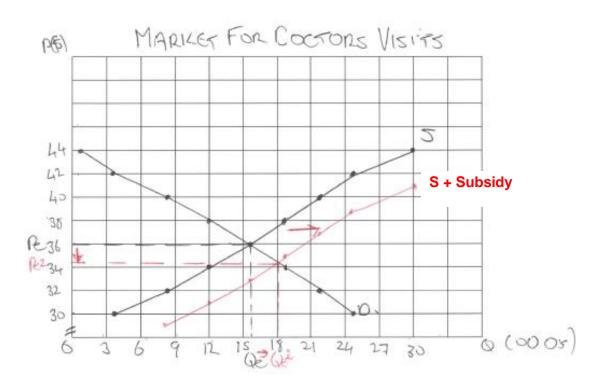
- i) The price before the subsidy is **u**
- j) The price after the subsidy____
- k) The quantity sold before the subsidy x
- I) The quantity sold after the subsidy z
- m) Per unit amount of the subsidy <u>z q</u>
- n) Price received by the producer after the subsidy. z
- o) Total government spending on the subsidy. Z p y q



MARKET FOR DOCTORS VISITS.

P(\$/HOUR)	QD(000's)	QS(000's)
30	25	4
32	22	8
34	19	12
36	16	16
38	12	19
40	8	22
42	4	25
44	1	30

- o) On your graph clearly show the equilibrium price and quantity of doctors visits.
- p) On the graph show what will happen if the government introduces a subsidy of \$3.

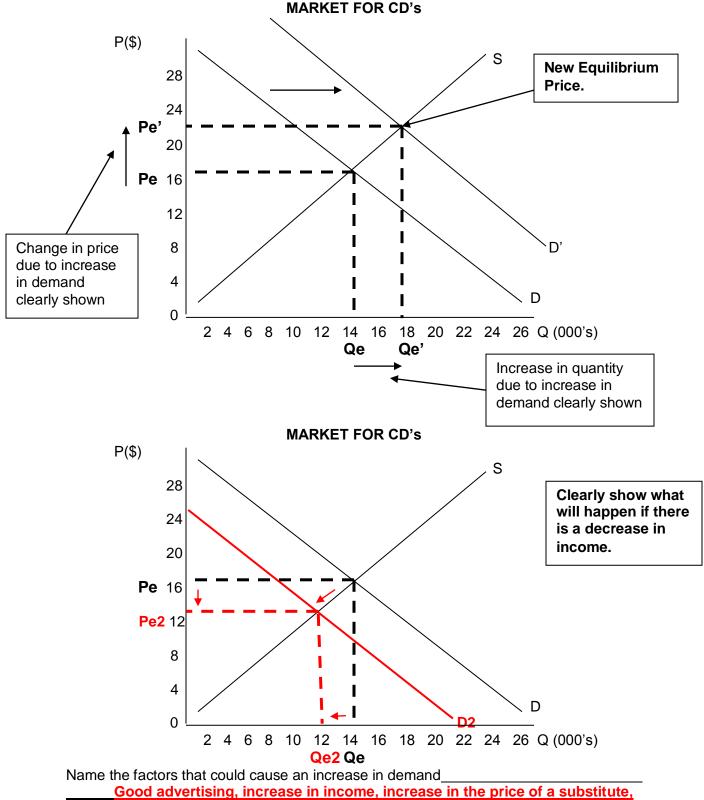


- q) What is the new equilibrium price? \$34.50
- r) The quantity sold before the subsidy <u>16 000</u>
- s) The quantity sold after the subsidy 18 000
- t) Per unit amount of the subsidy? _____\$3
- u) Price received by the producer after the subsidy. \$37.50
- v) Total government spending on the subsidy. \$3 x 16 000 = \$48 000

THE MARKET AND SHIFTS IN THE DEMAND CURVE.

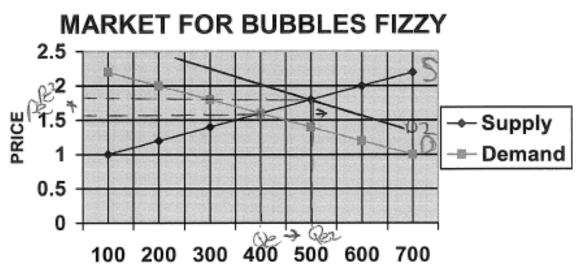
A shift of the demand curve caused by such things as an increase / decrease in income or an advertising campaign will affect the equilibrium price and quantity.

AN INCREASE IN DEMAND DUE TO AN INCREASE IN INCOME.



QUESTIONS:

1. Show what will happen if there is a good advertising campaign for Bubbles fizzy.



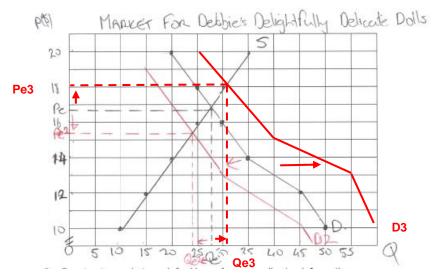
QUANTITY

2. Construct a market diagram for Debbie's Delightfully Delicate Dolls from the following market Schedule.

Market Demand and Supply Schedule For Debbie's Delightfully	Delicate Dolls

P(\$)	MARKET DEMAND	MARKET SUPPLY
10	50	10
12	45	15
14	35	20
16	30	25
18	25	30
20	20	35

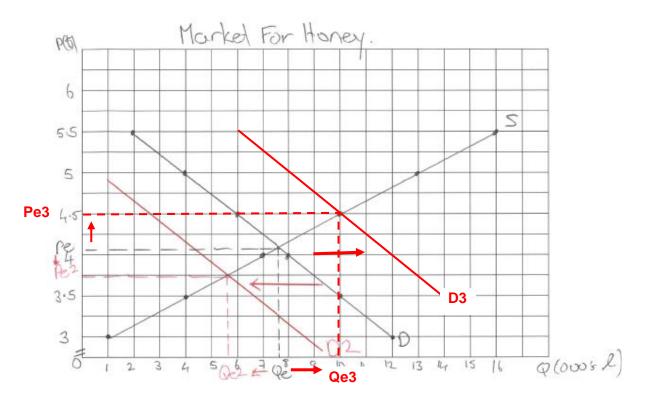
- a) On your diagram clearly show what will happen if there is a increase in income tax. = D2
- b) Show what will happen if there is an increase in the price of Barbie Dolls (a substitute for Debbie's Dolls). = D3



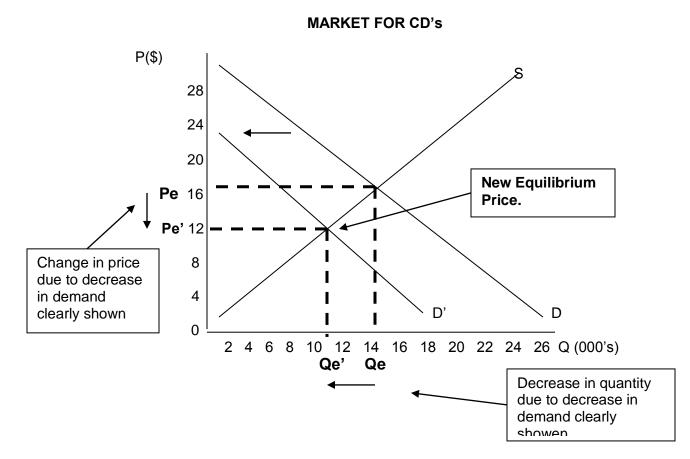
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- MARKET SUPPLY MARKET DEMAND P(\$) (000's of litres) (000's of litres) 3.00 12 1 3.50 10 4 4.00 8 7 4.50 6 10 5.00 4 13 5.50 2 16
- 3. Construct a market graph for Honey from the following information.

- a) On your graph clearly show what will happen if the price of bread (a complimentary good) increases. **= D2**
- b) On the same graph show what will happen honey is found to cure cancer and so becomes popular. = D3

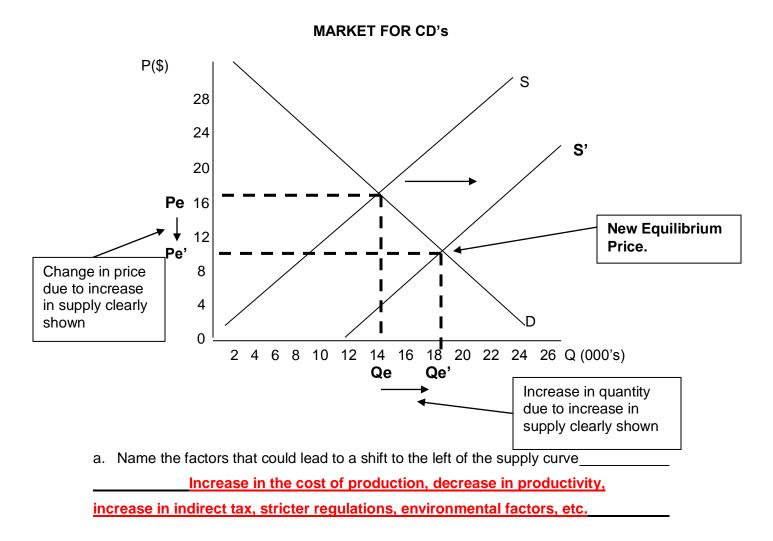


A DECREASE IN DEMAND DUE TO A DECREASE IN INCOME.

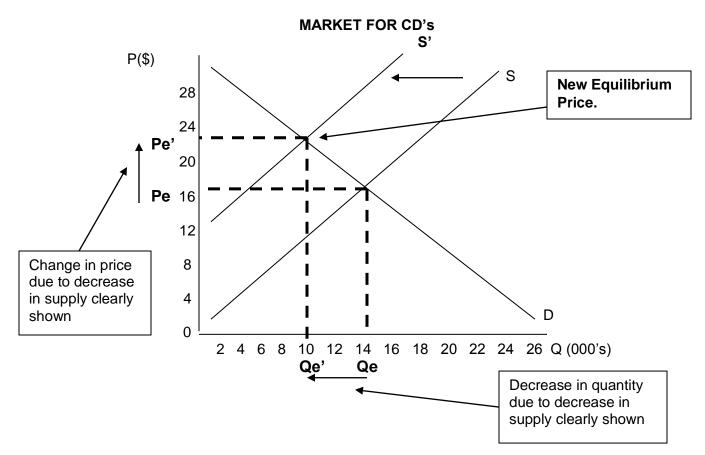


1. Name the factors that can cause a shift to the left of the demand curve Bad advertising, decrease in income, decrease in the price of a substitute, increase in the price of a complement, increase in income tax.

AN INCREASE IN SUPPLY DUE TO A DECREASE IN THE COST OF PRODUCTION.



A DECREASE IN SUPPLY DUE TO AN INCREASE IN THE COST OF PRODUCTION.

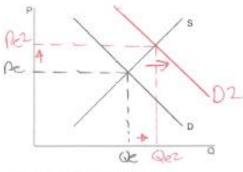


1. Name the factors that could lead to a shift to the right of the supply curve_

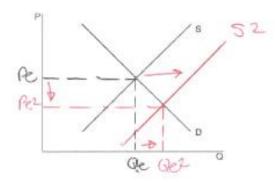
Decrease in the cost of production, subsidy, decrease in indirect tax, increase in productivity, new capital / investment.

Activities:

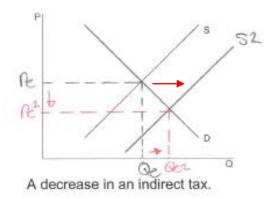
1.

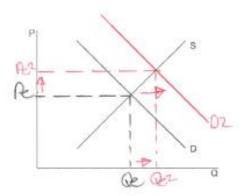


An increase in income.

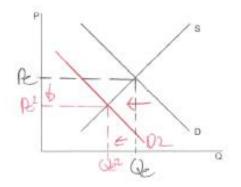


A decrease in the cost of production.

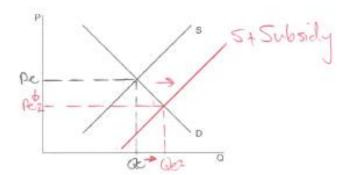




Good advertising.



McDonalds is shown to cause cancer.

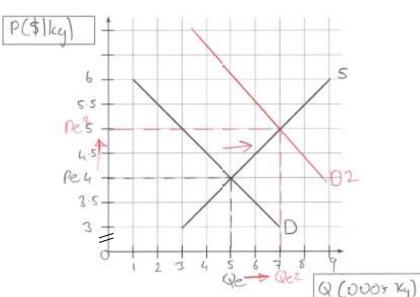


Merit good is subsidised.

1. From the following market demand and supply schedule construct a graph.

P(\$/kg)	MARKET DEMAND	MARKET SUPPLY
	(000's of kg's)	(000's of kg's)
3.00	7	3
3.50	6	4
4.00	5	5
4.50	4	6
5.00	3	7
5.50	2	8
6.00	1	9

Market Demand and Supply Schedule For Lemons



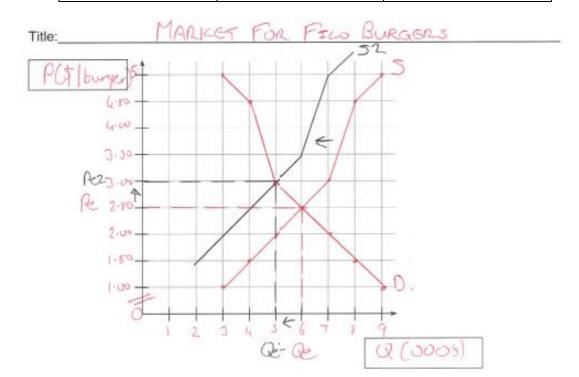
Title: MARICES FOR LEMONS

- a) On your graph show what will happen if lemons are found to cure cancer.
- b) Explain how the market will reach equilibrium after the change. With the increase in demand from D to D2, at the old equilibrium price of \$4 there is now a shortage in the market of 3800 kg's of lemons. Consumers will bid the price up. As the price increases the quantity demanded will decrease from 8800 kg's to 7000kg's and the quantity supplied will increase from 5000 kg's to 7000 kg's. The market will go to the new equilibrium price of \$5 and equilibrium quantity of 7000 kg's of lemons.

- 3. From the following market demand and supply schedule construct a graph.

P(\$/burger)	MARKET DEMAND	MARKET SUPPLY
	(000's	(000's)
1.00	9	3
1.50	8	4
2.00	7	5
2.50	6	6
3.00	5	7
4.50	4	8
5.00	3	9

Market Demand and Supply Schedule For Filo Burgers



a) On your graph show what will happen if filo burgers faces an increase in its cost of production due to petrol price rises.

b) Explain how the market will reach equilibrium after the change.
 <u>Supply has decreased from S to S2.</u>
 <u>This has created a shortage in the market of 2 000 burgers.</u>
 <u>Consumers will bid up the price.</u>

As the price increases the quantity demanded will decrease from 6000 to 5000 burgers and the quantity supplied will increase from 4000 to 5000 burgers. The market will go to the new equilibrium price of \$3 and equilibrium quantity of 5000 burgers.

c) Explain the effect on both price and quantity for burgers in New Zealand

Because of the increase in the cost of production, supply has decreased from S to S2. This has created a shortage in the market of 2000 burgers. The price will increase from \$2.80 to \$3 and the market quantity will decrease from 6000 to 5000 burgers.

d) What are the implications of this change?_____

Due to increase in production costs supply has decreased.

There is less production and a fall in profits for the firm.

Less workers needed as production falls so employment falls ,some workers may lose job.

Business may lose some customers due to the higher prices.