# ECONOMICS 

LEVEL 1

## ACHIEVEMENT STANDARD AS90986

## CREDITS - 5 <br> 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 | - Demonstrate in-depth | - Demonstrate comprehensive |
| of how consumer, producer | understanding of how | Dnderstanding of how <br> and/or government choices <br> affect society, using market <br> equilibrium. |
|  | consumer, producer and/or |  |
| government choices affect | consumer, producer and/or <br> government choices affect |  |
|  | society, using market | society, using market <br> 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)
- 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 quite 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:

${ }^{4}$ Identify market equilibrium, excess supply and excess demand.
${ }^{4}$ ) Show how the market reacts to excess supply and excess demand to reach equilibrium.
$\stackrel{4}{4}$ 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 market equilibrium.
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.

MARKET DEMAND AND SUPPLY SCHEDULE FOR SHOES

| $P(\$)$ | MARKET DEMAND <br> $(000 ' s)$ | MARKET SUPPLY <br> $(000 ' s)$ |
| :---: | :---: | :---: |
| 20 | 12 | 2 |
| 25 | 10 | 4 |
| 30 | 8 | 6 |
| 35 | 6 | 8 |
| 40 | 4 | 10 |
| 45 | 2 | 12 |


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


| MARKET DEMAND AND SUPPLY SCHEDULE FOR COLA |  |  |
| :---: | :---: | :---: |
| $\mathrm{P}(\$)$ | 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 |

## SURPLUS (EXCESS SUPPLY)

If the quantity supplied is greater than the quantity demanded at any price market forces will ensure that price and quantity return to equilibrium. A surplus occurs when the price is too high; suppliers will have to drop their price down to equilibrium.


MARKET FOR GUMBOOTS

Quantity demanded and quantity supplied will go back to equilibrium.


Equilibrium Point.

## Surplus of 18000 boots

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.

THE MARKET FOR THNEEDS

a) Fully label the diagram above.
b) At what price does a shortage of 12000 THNEEDS occur? $\qquad$ \$8
c) What will happen to the price in this market? Why? At a price of $\$ 8$ there is a shortage of 12000 thneeds in the market. Consumers will bid the price up. As the price increases, the quantity demanded deceases from 20000 to 14 000 , and the quantity supplied increases from 8000 to 14000 . The market will return to the equilibrium price of \$16 and equilibrium quantity of 14000
2. Use the following information to create a market supply and demand graph for light bulbs. The grid is on the following page.

Market demand and supply schedule for light bulbs.

| $\mathbf{P ( \$ )}$ | 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 |

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? 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 8000 to 5000 light bulbs, and the quantity supplied will increase from 5000 to 6000 . The market will return to the equilibrium price of $\$ 0.80$ and equilibrium quantity of 6000 light bulbs.

3.

THE MARKET FOR SOXS

a) Fully label the diagram above.
b) At what price does a surplus of 12000 Soxs occur? \$12
c) What will happen to the price in this market? Why? There is a surplus of 12000 Soxs. Producers will decrease the price to try and get rid of excess stock. As the price decreases the quantity demanded will increase from 8000 to 14000 , and the quantity supplied will decrease from 20000 to 14000 . The market will return to the equilibrium price of $\$ 8$ and equilibrium quantity of 14000
4. Use the following information to create a market supply and demand graph for dinkies.

Market demand and supply schedule for dinkies.

| $\mathbf{P ( \$ )}$ | 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 |


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? $\qquad$ Surplus
C) What will happen in this market?

There is a surplus of 4000
Dinkies in the market. Producers will decrease the price to get rid of excess
stock. As the price decreases the quantity demanded increases from 6000 to 8500 , and the quantity supplied decreases from 10000 to 8500 . The market will return to the equilibrium price of $\$ 5.80$ and equilibrium quantity of 8500 dinkies.

MARKET FOR gPARTYONDUDE DOLLS

| Price $(\$)$ | Market Supply | Market Demand |
| :---: | :---: | :---: |
| $\$ 10$ | 200 | 400 |
| $\$ 12$ | 250 | 350 |
| $\$ 14$ | 300 | 300 |
| $\$ 16$ | 350 | 250 |
| $\$ 18$ | 400 | 200 |
| $\$ 20$ | 450 | 150 |

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.
6. Name the price at which a surplus of 200 dolls occurs. \$18 $\qquad$
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.
$14 \times 300=4200$

## 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
cs The quantity demanded will increase.
cs The quantity supplied will decrease.
cs A shortage will be created in the market.
cs Queues will form as buyers line up to purchase the good.
cs 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 $\$ 2$.

Market For Bread
$P(\$)$

a) After the maximum price is there a shortage or a surplus in the market? $\qquad$ Shortage
How much is it? 15000 loaves
b) Why can't the price go to the equilibrium price? There is a minimum price so the price is not allowed to increase above $\$ 2$.
c) Why might the government set a maximum price? To help low income households to a be able to afford to buy bread.
d) What are the consequences of the maximum price being imposed? $\qquad$
There will be a shortage in the market, some households will miss out, a black market may develop.
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

The price is UNABLE to
FALL back to equilibrium


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
cos The quantity demanded will decrease.
cs The quantity supplied will increase.
$\cos A$ 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 $\$ 1200$.

f) After the minimum price is there a shortage or a surplus in the market? $\qquad$ Surplus
How much is it? 35000
g) Why can't the price go to the equilibrium price? $\qquad$
Because there is a minimum price, the price is not allowed to go below $\$ 1200$.
h) Why might the government set a minimum price? $\qquad$ To help protect a firm from cheap overseas competition.
i) What are the consequences of the minimum price being imposed? $\qquad$ There is a surplus in the market, loss of profit for firms, a lot of unsold seat, 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? No effect - the price would return to the equilibrium price and quantity.

## 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.
cs Direct taxes - these are taxes on households incomes and affect demand. They are paid direct to the government from the tax payer.
cs 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
cs Decrease the demand for a good and shift the demand curve to the left.
cs Decrease the price.
cs 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.

The supply curve will shift by the vertical amount of the tax. In this case $\$ 4$. So the distance between the two supply curves will be $\$ 4$.

An Indirect Tax Increases by $\$ 4$


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
$\$ 6 \times 12000=\$ 72000$
Producer revenue before the tax was
$\$ 8 \times 15000=\$ 120000$
NOTE: The tax is not an increase in the cost of production and so we do not label the new supply curve S' or S 2 but Supply + tax.

## QUESTIONS:


a) The above graph shows the market for Cola. Clearly label it.
b) Clearly show what will happen if there is a $\$ 2$ tax put on cola.
c) How much will the government make from the tax? $\qquad$
$17000 \times \$ 2=\$ 34000$
d) What is the new price consumers have to pay? $\qquad$ \$4. 10
e) What is the price producers will receive? _ \$4. $10-\$ 2=\$ 2.10$.
f) What is the change in revenue of producers? $\qquad$
Before $\$ 2.80 \times 23000=\$ 64400$
After $\quad \$ 2.10 \times 17000=\$ 35700$
Change is \$28 700 less revenue.
2. Use the diagram below to answer the questions.


Which letter/s on the above diagram represents the following?
i) The price before tax is $\qquad$ q
ii) The price after tax $\qquad$ s $\qquad$
iii) The quantity sold before the tax $\qquad$
iv) The quantity sold after the tax $\qquad$
v) Per unit amount of the indirect tax X
vi) Price received by the producer after tax. $\qquad$ p
vii) Total government revenue from the tax. suwp
3. Use the following market schedule to draw a market demand and supply graph for Baldrick turnips.

## MARKET SCHEDULE FOR BALDRICK TURNIPS.

| $\mathbf{P ( \$ )}$ | $\mathbf{Q D}(\mathbf{0 0 0} \mathbf{\prime} \mathbf{s})$ | $\mathbf{Q S}(\mathbf{0 0 0} \mathbf{\prime} \mathbf{s})$ |
| :---: | :---: | :---: |
| 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

12500
e) The quantity sold after the tax

10000
f) Per unit amount of the indirect tax
g) Price received by the producer after tax.
\$0.20
h) Total government revenue from the tax. $\overline{\$ 0.20 \times 10000=\$ 2000}$

## Market For Cars

4. 


a) Fully label the diagram and show the impact of an increase in an direct tax.
b) What has happened to both the price and the quantity sold?

Both the price and quantity have decreased.

## 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.

A Subsidy of $\$ 4$ is introduced

## The supply curve will shift by the vertical amount of the subsidy. In this case $\$ 4$. So the distance between the two supply curves will be \$4.



This introduction of the subsidy has decreased the price from $\$ 10$ to $\$ 8$.
The quantity sold has increased from 12000 to 15000
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
$\$ 4 \times 15000=\$ 60000$.
The price producers now receive is $\$ 8+\$ 4$ subsidy $=\$ 12$ per unit.

Producers Revenue after the subsidy is $\$ 12 \times 15000=\$ 180000$

Producer revenue before the subsidy was
$\$ 10 \times 12000=\$ 120000$
Total consumer spending is now
$\$ 8 \times 15000=\$ 120000$
A subsidy will
cs Increase supply.
cs 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.

## 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 $\qquad$ u
j) The price after the subsidy $\quad$ q
k) The quantity sold before the subsidy __ $\quad \mathbf{x}$
I) The quantity sold after the subsidy $\quad z$
m) Per unit amount of the subsidy
$z-q$
n) Price received by the producer after the subsidy.__z $z$
o) Total government spending on the subsidy. $\quad \mathbf{Z p y q}$
2. $P(\$)$

a) The above graph shows the market for Medicine. Clearly label it.
c) Clearly show what will happen if there is a $\$ 3$ subsidy put on medicine.
d) How much will the government spend on the subsidy? $\$ 3 \times 29000=\$ 57000$
e) What is the new price consumers have to pay? \$0.90
f) What is the price producers will receive?
$\$ 0.90+\$ 3.00=\$ 3.90$
g) What is the change in revenue of producers?

Before: $\$ 2.90 \times 23000=\$ 66700$
After: $\$ 3.90 \times 29000=\$ 113100$
Change = \$46 400 increase.

## MARKET FOR DOCTORS VISITS.

| $\mathbf{P ( \$ / H O U R )}$ | 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_ 16000
s) The quantity sold after the subsidy

18000
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. $\$ 3 \times 16000=\$ 48000$

## 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.


Name the factors that could cause an increase in demand
Good advertising, increase in income, increase in the price of a substitute, decrease in the price of a complement, decrease in income tax.

## QUESTIONS:

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

MARKET FOR BUBBLES FIZZY

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

| $\mathbf{P}(\$)$ | 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

3. Construct a market graph for Honey from the following information.

Market Demand and Supply Schedule For Honey

| $P(\$)$ | MARKET DEMAND <br> (000's of litres) | MARKET SUPPLY <br> (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 |

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.
MARKET FOR CD's


1. Name the factors that can cause a shift to the left of the demand curve $\qquad$
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.

MARKET FOR CD's

a. Name the factors that could lead to a shift to the left of the supply curve $\qquad$ Increase in the cost of production, decrease in productivity, increase in indirect tax, stricter regulations, environmental factors, etc.

## 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.


McDonalds is shown to cause cancer.


A decrease in an indirect tax.


Good advertising.


Merit good is subsidised.

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

Market Demand and Supply Schedule For Lemons

| $\mathbf{P}(\$ / \mathrm{kg})$ | MARKET DEMAND <br> (000's of kg's) | MARKET SUPPLY <br> (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 |

Twe: MARKEi FOR Lomons

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. $\qquad$ 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 7000 kg '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.
c) Explain the effect on both price and quantity for lemons in New Zealand $\qquad$
Because lemons are found to cure cancer demand has increased from D to D2. This has created a shortage in the market. Consumers will bid the price up.
As the price increases the quantity demanded will decrease and the quantity supplied will increase.
The price will increase from $\$ 4$ to $\$ 5$ and the market quantity will increase from 5000 to 7000 kg's of lemons.
3. From the following market demand and supply schedule construct a graph.

Market Demand and Supply Schedule For Filo Burgers

| $P(\$ /$ burger $)$ | MARKET DEMAND <br> $(000 ' s$ | MARKET SUPPLY <br> $(000 ' s)$ |
| :---: | :---: | :---: |
| 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 |


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. $\qquad$ Supply has decreased from S to S2.
This has created a shortage in the market of 2000 burgers.
Consumers will bid up the price.
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 $\qquad$
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.

