



TE MĀTAURANGA AHUWHENUA, AHUONE
AGRICULTURE AND HORTICULTURE



AGS301
MARKETS AND MARKETING
NCEA LEVEL 3



AGRICULTURE AND HORTICULTURE

NCEA LEVEL 3

Expected time to complete work

This work will take you about 26 hours to complete.

You will work towards the following standard:

Achievement Standard 90651 (Version 2) AHS 3.3

Explain how market forces affect supply and demand of primary products

Level 3, External

Credits 4

In this booklet you will:

- find out what a market is
- compare market types
- look at the effect of market forces on supply
- look at the effect of market forces on demand
- learn how to draw and interpret supply and demand graphs
- explain interactions between supply and demand
- learn about supply and market trends.

Assessment

Your teacher will look at how well you:

- complete the self-marking activities
- complete the assessment tasks.

CONTENTS

- 1 Marketing
- 2 Types of marketing
- 3 Market forces affecting supply
- 4 More market forces affecting supply
- 5 Supply curves
- 6 Market forces affecting demand
- 7 More market forces affecting demand
- 8 Demand curves
- 9 Supply and market trends
- 10 Assessment
- 11 Answer guide

HOW TO DO THE WORK

When you see



Check the answer guide.



Your teacher will assess this work.



Contact your learning advisor.

You will need:

- lined refill
- pens and pencil
- ruler and eraser
- calculator
- graph paper
- access to a phone or email account.

Resource overview

You can do this work either one session or part of a session at a time.

Write your answers on lined refill and use graph paper where indicated.

When all the activities in the booklet have been completed, attach the cover sheets to your refill with a staple in the top left-hand corner.

Ensure your name and student ID number are on the cover sheets.

1 | MARKETING

In NCEA Level 3 Agriculture you will learn about the profitable production and marketing of primary products.

In booklets AGS301 and AGS302 you will look at marketing primary products. In this session you will find out about **direct selling** and **indirect selling**.

WHY IS THE MARKETING OF PRIMARY PRODUCTS IMPORTANT?

Few farmers and crop growers would produce a product if there were little or no demand for it. They would be unable to sell it, or to sell it at a profit. Growers need to know what products the consumer wants so they can adjust their production practices to suit the market.



Supermarket vegetable shoppers.

WHAT IS A MARKET?

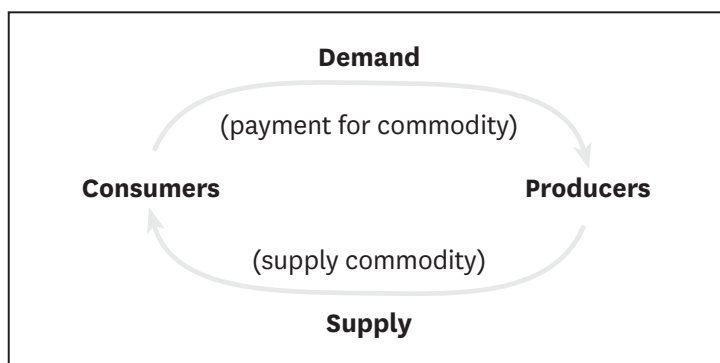
A market is the exchange of goods and services between two or more people.

- **Goods** are things we consume.
- **Commodity** is another term for goods and services.
- **A service** is a job that is done for you for example, a doctor selling you their medical knowledge.

In a market, the buyers want a commodity while others supply the commodity. In economic terms, buyers are called **consumers** and the people supplying the commodity are **producers** or **growers**.

PRODUCERS AND CONSUMERS

Producers (growers) are the people who supply commodities in a market. **Consumers** are the people who are able to pay for the commodity. A demand is made when the consumers want a commodity. The diagram shows the simple link between the consumers and the producers.



MARKETING

In everyday language the word 'market' is often used to describe a place. You may be familiar with some marketplaces, such as a supermarket, farmers market, garage sale and online stores. The marketplaces for agricultural and horticultural produce include:

- gate sales and pick-your-own
- auctions
- wholesale market
- processors
- retail market
- farmers markets



Most milk is sold to dairy factories.

Now you will find out about direct selling and indirect selling, and how markets for agricultural and horticultural produce fit in to these categories.

DIRECT SELLING

Direct selling is where the producers sell directly to consumers, as in gate sales at roadside stalls and pick-your-own sales. The producer and the consumer meet. Gate sales and pick-your-own sales can be a very good way for a producer to sell the produce quickly. Successful shops are usually:

- near a large population
- near a popular holiday area
- have a main highway passing the door.

The main advantages for the consumer are:

- the produce is usually grown on the property
- the produce tends to cost less than in a supermarket
- there are no harvesting costs with pick-your-own making the produce cheaper to purchase and very low costs with gate sales as there are no extra costs such as transport
- the produce tends to be fresher.

The main advantages for the producer are:

- the produce requires less expensive packaging
- there are no transport costs to the markets
- gate sales and pick-your-own can be used as a means of providing a cash flow (money available for immediate use)
- there are fewer costs, for example staff, with pick-your-own.

INDIRECT SELLING

Indirect selling is where the producers sell to at least one person (an intermediary or middleman) who then sells the produce to the retail market.

The retail market is where the consumer buys the produce.

Indirect selling is the flow of produce from the producer, through the intermediary (or middlemen) to the consumer. In indirect selling, the producer and the consumer do not meet. Time, place and the intermediaries separate them. Examples of these are:

- auctioneers
- wholesalers
- retailers.

Each of these intermediaries work in a different type of market:

- auctioneers at auctions
- wholesalers in the wholesale market
- retailers in retail shops.

The main disadvantages of indirect selling (or using an extended distribution chain) are:

- possibly higher prices for the consumer
- produce that is less fresh for the customer.

The main advantages are:

- more consistent quality of the products
- wider distribution of produce to consumers who do not live near the producers
- out of season produce available through modern storage and better transportation methods.

DISTRIBUTION

Distribution is the flow of goods from the producer to the consumer.

There are two main types of distribution:

- direct distribution, which is used in direct selling
- extended distribution, which is used in indirect selling.

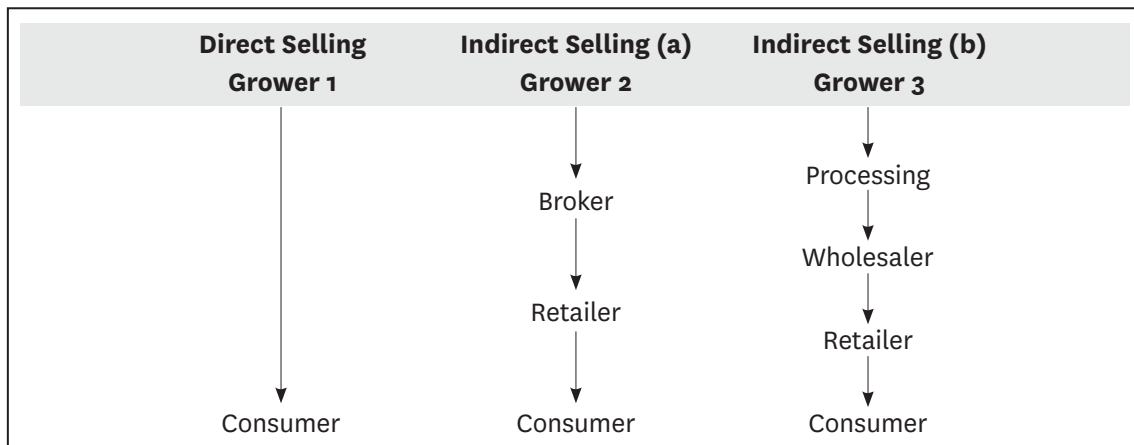


Refrigerated meat truck.

The diagram below shows both a direct selling chain and examples of indirect selling chains. There are a number of stages in each chain before the product gets to the buyer (consumer). Something happens at each stage.

The steps between the producer and the consumer in the indirect selling process connect the stages of the extended distribution chain.

There are three examples of distribution chains shown in the diagram below. The first example shows direct selling, the second shows indirect selling with three stages and the third has four stages, including the processing.



In direct sales there is only one stage – the grower growing the product. The consumer is not a ‘stage’ because this is the end point of sale.



1. Define a market.
2. Why is marketing so important to agricultural and horticultural producers?
3. Name the two types of selling systems. Explain the advantages and disadvantages to the consumer for each system.
4. How many stages are there in the following distribution chain?
grower > wholesaler > exporter > retailer > consumer
5. Visit a local supermarket to investigate a product – tomatoes. First, look at the price of fresh tomatoes. Then look on the shelves throughout the supermarket for the different processed forms of tomatoes. There are many. Look at their prices and packaging. List at least 20 products and their prices. This activity should take you an hour only.



Check the answer guide.

In the next session you will find out about types of indirect selling markets and the advantages and disadvantages to the producer and the consumer.

KEY POINTS

- Farmers and crop growers need to produce products the markets want.
- A market is the exchange of goods between people.
- Producers supply goods.
- Consumers buy goods.
- In direct selling, the producers sell directly to the consumers.
For example, gate sales and pick-your-own.
- In indirect selling, the producer and consumer do not meet.
For example, grower > wholesaler > retailer > consumer.

2 TYPES OF MARKETING

In this session you will learn about the main types of marketing systems.

The main types of marketing for agricultural and horticultural products are:

- auctions
- wholesale
- retail
- brokers and private treaty
- contracts.

AUCTIONS

Auctions are markets where goods are sold to the highest bidder. The buyers bid for the produce by offering a price to the auctioneer. The produce goes to the bidder who will pay the highest price. The auctioneer tries to sell everything that is offered. For their work they usually take a percentage of the price paid for each lot of produce sold. This is called **commission**.

The auction situation has advantages and disadvantages for the producer.

ADVANTAGES FOR THE PRODUCER

Some of the advantages applying to horticultural or agricultural produce are:

- producers get a fair price because buyers can see and compare a range of produce
- the producer does not need to keep in communication with all the possible buyers
- the producer is rewarded with higher prices when the goods are in short supply
- payment is reliable, as the auction companies pay the producer, so there are no worries about payment not being forthcoming.

DISADVANTAGES FOR THE PRODUCER

The disadvantages for a producer are:

- prices may fluctuate (up and down) and, if they go down, may not cover the cost of production
- producers do not know the buyers so may be unable to respond quickly to their needs
- there are delays in payment to the producer as there is an intermediary in the system
- if a larger buyer stops buying there may be a big price drop.



Lambs sold at auction.

WHOLESALE MARKET

The **wholesale** market has three main functions. It:

- buys goods from producers
- stores goods in warehouses
- sells the goods to retailers.

It is positioned between the markets where producers sell their produce and the retail market where consumers usually buy what they want.



Stored wool bales.

A wholesale business usually buys large quantities of goods from different producers.

ADVANTAGES FOR THE PRODUCER

- It is easier to sell in bulk to one wholesaler than to sell in small quantities to a number of retailers.
- Producers can shift their goods from their own storage space and use that space for the production of new goods.

DISADVANTAGES FOR THE PRODUCER

The wholesaler charges for the goods, plus the cost of storage and any other costs involved.

RETAIL MARKET

A **retail** market sells small quantities of goods to the consumers. Examples are a supermarket or dairy. They provide the consumer with a range of goods to choose from at varying prices. Some large supermarkets buy goods in bulk and repackage small quantities of goods to sell under their own brand name.

TYPES OF MARKETING

ADVANTAGES FOR THE PRODUCER

- A wide range and number of people have access to their products.

ADVANTAGES FOR THE CONSUMER

- There are a range of goods to choose from at varying prices.



Wide range of dairy goods sold in supermarket.

BROKERS AND PRIVATE TREATIES

Brokers are businesses that buy produce on behalf of buyers (for example, for supermarkets).

A broker enters into a private agreement (or treaty) with the producer. This sets the price and the quantity of the produce they want from a buyer. The broker charges commission (a fee) for this service but does not take ownership of the produce. Vegetables such as potatoes, carrots, cabbages and tomatoes are often sold in this way.

The grower agrees to supply a certain quantity of product over a specific time and at a price similar to what they would get at auction prices.

ADVANTAGES

- Produce reaches the market quickly and regularly with less handling.
- The grower knows in advance that their produce has sold and for how much.

CONTRACTS

A **contract** is an agreement between a producer and a major user, such as a processing factory. Negotiated each year, it covers the following points:

- the amount of produce to be bought by the factory
- when the produce has to be ready for the factory (harvesting date)
- description of the product quality, variety, size
- how produce is to be grown (chemical-free, organic and so on).

Planning of sowing and planting schedules is very important. Often a processor will send an advisor to help a producer plan so that the crop will reach the factory when required. The total seasonal production of a crop let out for contract is determined by predicting what the market requires. The producer holds any unsold processed product in store.

Stock farmers sign contracts as well, for instance for raising stock for a freezing works.

ADVANTAGES OF CONTRACTS

- The producer knows the products are going to sell, but at a set price.
- Buyer knows there is a fixed supply at a set price.
- Buyer may offer technical help to the grower.
- The producer can plan and budget more readily knowing the price in advance.

DISADVANTAGES OF CONTRACTS

- If market price goes up, the seller might not get the best possible price.
- If the producer cannot deliver, there may be a penalty in the contract.
- Large consumers in a small market may dominate the market and force down prices.
- The producer may need to plant more crop than is theoretically needed to ensure there is enough available to meet the contracted amount.
- Excess crop will be sold on the open market or taken at a different price (possibly lower) by the contract buyer.

2A

1. List five types of marketing used for selling agricultural and horticultural produce.
2. List the advantages and disadvantages of the auction system for the grower.
3. List the advantages and the disadvantages of the contracts system for the grower.
4. List the advantages and disadvantages of the wholesale market system for the grower.



Check the answer guide.

In the next session, you will find out what a market force is and how market forces affect the supply of agricultural and horticultural products.

KEY POINTS

Main types of marketing are:

- auctions – where goods are sold to the highest bidder
- wholesale – buys goods from producers
 - stores goods in warehouses
 - sells goods to retailers
- retail – sells small quantities of goods to the consumers
- brokers – buy produce on behalf of buyers but do not own it themselves
- contract – an agreement between a producer and a major user.

3 MARKET FORCES AFFECTING SUPPLY

In this session, you will learn what a market force is and how some market forces influence the supply of agricultural and horticultural products.

MARKET FORCES

A **market force** is something that affects the supply and demand of a product. Market forces are varied and you will be introduced to many of them during this course.

Some factors affecting markets are:

- customer preference
- seasonality
- quantity available
- prices
- market manipulations
- producer organisations
- market trends.

This session covers some of the market forces (also called **factors**) that affect the supply of an agricultural or horticultural product.

FACTORS AFFECTING SUPPLY OF PRODUCTS

- length of production
- perishability
- inputs
- seasonality
- climate
- prices and costs.

LENGTH OF THE PRODUCTION PERIOD

The **production period** is the time period between when a farmer or grower makes a decision on how much (quantity) of a product to produce and when the product is ready to sell.

In the production of many non-farm goods, the quantity to be made can be changed very quickly (in a matter of hours or days). For example, a bread factory can decide today how many loaves to bake tomorrow. This is because the production period is only a few hours from the time the ingredients are mixed to the time a loaf is baked and ready to sell.

In farming, the production period is much longer. For examples, the fastest growing vegetable crop takes several weeks to mature, a wheat crop takes many months to grow, and an orchard may take many years. Some animals can mature in a few months, for example chickens, while others take several years. Even if prices change during the production period, the quantity supplied will not vary much.

PERISHABILITY

Many farm products, such as fresh fruit and vegetables, keep for only a few days before they start to perish (rot). Growers of perishable products must sell (market) them regardless of the price they will get. Even if they can only get a low price for them, they must sell.

Strawberries are an example. If they are not sold immediately they will rot and become worthless. Some other products, such as wool, do not perish and can be stored until the price rises.



Strawberries last a very short time.

INPUTS

Inputs are resources that the farmer needs to produce a product. They include the land, labour (workers), buildings, machinery, fertilisers, seeds, breeding stock (animals) and so on.

Producers can't keep increasing prices to cover the increasing cost of inputs. There comes a point when consumers won't pay the higher price (demand will decrease).

If a change in the way a product is produced increases input costs, then demand decreases. For example, if a fruit grower is faced with an increase in the cost of insecticide spray, input costs will rise. The price of fruit will go up so consumer demand will decrease.

To ensure maximum returns, the grower will decrease supply to match demand. The grower may change to another product.

INPUTS THAT ARE DIFFICULT TO CHANGE

Many of these resources are very difficult to change or to put to different uses outside agriculture. So, when prices fall, producers still supply the same products. If they do not want to sell at lower prices, they wait out a period of low prices hoping that prices will improve again in the future. For example, storing wool until prices improve.

When prices rise, producers want to produce more quickly. For some products, they can do this by changing or introducing inputs that are easy to adjust, such as adding fertilisers or using herbicides (weed killer) on crops.

Most farming is seasonal; crop and animal products are produced, or are ready for sale, only at certain times of the year. For example, lamb is produced in the spring and apples are produced at the end of summer or in autumn. For both of these products, the production cycle takes one year. If the price changes and the producer wants to change the quantity to supply, there will be a time lag of up to a year.

MARKET FORCES AFFECTING SUPPLY



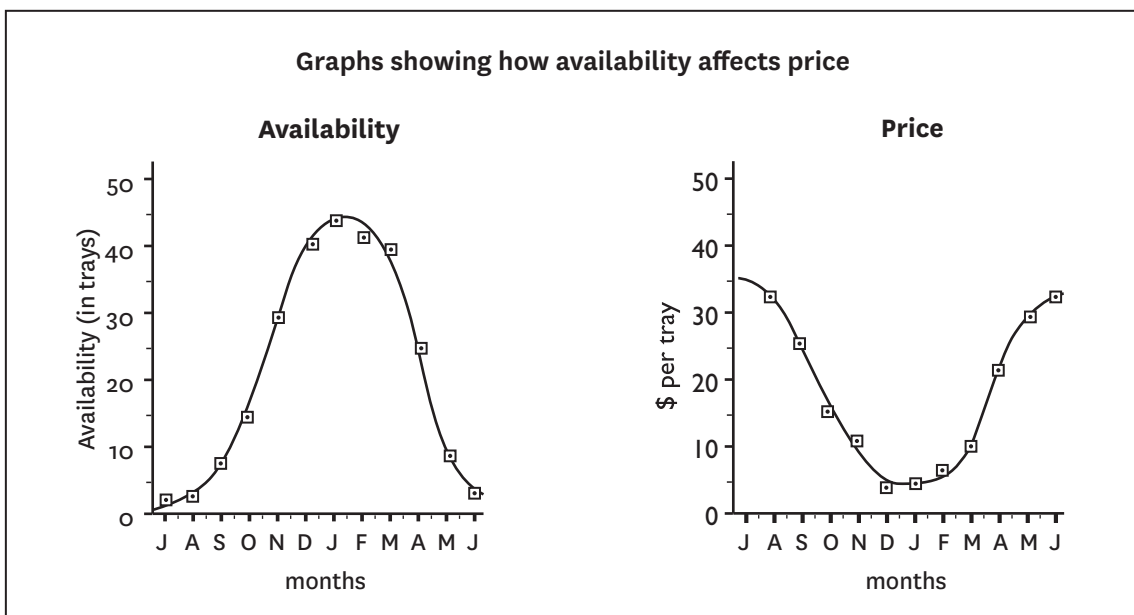
Crops sown in spring will often not be ready until late summer.

SEASONALITY

Seasonality is the pattern shown in the life cycle of a plant or animal in relation to the time of year. Strawberries are a good example of a seasonal crop as they are only available from the end of October to March. The time of peak production is November, December and January.

The price obtained for the strawberries is related to their availability – low availability means higher price, high availability means a lower price. When there is an abundance of produce the price is lower, **if all other conditions remain the same.**

The following two graphs show how supply or availability affect the price paid. These graphs are drawn with the months along the horizontal axis (beginning in July) and the availability and price is shown on the vertical axes.



EARLY SEASON PRODUCTION

If seasonal products are sold fresh (not stored, chilled or processed), the first supply coming onto the market early in the season usually fetches a higher price than the same product later in the season.

Some growers have the natural advantages of warmer temperatures in the area where they live. For example, citrus growers in Northland can produce citrus fruit earlier in the season than growers in other parts of the country.

Other growers alter the growing conditions to have produce ready early in the season when supply is scarce and price higher. However, this is usually:

- more costly
- more risky.

To produce a crop early in the season often involves providing a warmed environment. For example, some producers of fresh green beans will aim to have their product ready to market before Christmas. To do this they grow the green beans in glasshouses, which adds to the cost of inputs. However, these growers hope that the higher price they receive for early green beans will more than cover the extra cost. If this happens, the growers will get a greater return for this early crop over the same crop later in the season.



Large plastic greenhouses.

To produce a product like early lamb involves:

- bringing ewes into ovulation earlier than normal, so that the lambs will be born earlier
- providing extra feed for the ewes after lambing, so that they produce enough milk for the lambs because pasture production is lower early in the season.

Early production is not only more costly, it is also more risky. The main risks are from the weather. For example, a late frost can damage a crop like new potatoes and a period of cold wet weather can cause many lamb deaths.

MARKET FORCES AFFECTING SUPPLY

OUT OF SEASON SUPPLY – STORED PRODUCTS

There are products that only mature at certain times of the year but can be stored or processed so that they are available all year round. Onions are one example of such a product. After harvest they are lifted, graded and stored under cover until needed, so their supply is fairly constant. A steady supply means that the price varies little from month to month. Other examples are kiwifruit (stored in a coolstore) and canned or frozen produce such as tinned tomatoes and frozen peas.

CLIMATE

The climate of an area determines the farm products that can be successfully grown. Climate includes the temperature, rainfall and sunshine hours found in an area.

For the successful growing of citrus crops, warm temperatures all year are needed. Other crops, such as pipfruit (for example apples) and stone fruit (for example cherries), require a period of frost in winter to set the fruit buds and warm summers to ripen the fruit.

PRICES AND COSTS

To make a profit, the selling price the farmer gets for a product must be more than the cost to produce it (the price of the product must exceed the costs of production). If this does not happen over a certain period of time, the farmer will stop producing that product. If they only make a small profit for the product, they will produce less of it.

Priced received – Cost of production = Profit

3A

1. Explain how the length of the production period affects supply.
2. Name four types of inputs a farmer needs to produce a product.
3. Give one example of a highly perishable product.
4. Give one example of a non-perishable product.
5. What does 'seasonal crop' mean, and what makes strawberries a seasonal crop?
6. What market force determines where citrus fruit can be grown commercially?



Check the answer guide.

In the next session, you will learn about more market forces that affect the supply of agricultural and horticultural products.

KEY POINTS

A market force, or factor, is something that influences the supply and demand of a product. Some factors that affect supply are:

- length of production period – a long production period can prevent the farmer changing the quantity of a product they produce
- perishability of product – growers of perishable products must sell them quickly regardless of the price they fetch
- inputs – what a farmer needs to produce a product
- seasonality – seasonal products are able to be produced only in certain seasons of the year
- climate – determines what products can be successfully grown
- prices and costs – to make a profit, the selling price the farmer receives for a product must exceed the cost of production.

4 MORE MARKET FORCES AFFECTING SUPPLY

In the previous session you looked at some of the many factors that influence the supply of agricultural and horticultural products.

You will now look at some more market forces that affect supply:

- quantity supplied
- technological improvements
- seasonal effects
- special factors
- competition
- producer organisations.

QUANTITY SUPPLIED

Sufficient volume has to be supplied to meet market demand, especially for export markets. Retailers, such as supermarkets, demand guaranteed volumes of high quality product over a specific period. Growers must plan to meet this demand.

NEW CULTIVARS AND BREEDS

A new plant cultivar (variety) may be developed. The new cultivar may be higher yielding or resistant to (not harmed by) particular insect pests or diseases. This increases the amount of produce the grower can supply.

Equally, a new sheep breed may be developed that, for example, produces more lambs than normal, or is more resistant to diseases or pests. This means the farmer can increase the supply of product in a short time if the farmer can produce more lambs.

PESTS AND DISEASES

Pests and diseases can cause loss of production, and this reduces the amount of produce the farmer supplies.



Ewe with triplets.

DAVE JACKSON © TE KURA

TECHNOLOGICAL IMPROVEMENTS

Improvements in technology can increase productivity and supply.

Technology can often be used to increase supply without causing an increase in input costs. If a change in the way a product is produced reduces the costs of the inputs, or it enables more to be produced for the same input costs, then supply increases. For example, a mechanical harvester may replace some of the labour previously required for the job. For the same cost, a larger quantity of a product can be supplied.

MORE MARKET FORCES AFFECTING SUPPLY

Farmers can now scan their pregnant ewes to see which ones are carrying twins and triplets. These ewes can be put on better feed throughout their pregnancy.



An ultrasound scan of twin lambs.

SEASONAL EFFECTS (UNSEASONAL CONDITIONS)

Unseasonal conditions mean weather conditions that are not normal for a particular season. Examples are drought, above or below average temperatures, out-of-season frosts or heavy snowfalls.

- Bad weather conditions are likely to reduce supply.
- Good weather conditions are likely to increase supply.

Bad weather in a local area may affect individual farmers and reduce their supply without significantly affecting the total supply for the country. However, if unseasonal conditions are widespread, then total supply for the country will be affected.

Seasonal effects are environmental factors that cause problems with the production of produce. Some examples are:

- winds flattening crops
- hail damaging fruit
- unusual temperatures
 - frost damage to plants at the time of blossoming
 - cold, wet weather kills newborn lambs
- unusual amounts of water
 - a lack of water in animals and plants in times of drought causes dehydration
 - too much or too little rainfall causes a lack of feed for grazing
 - a flood can destroy crops and cause animal deaths.

MORE MARKET FORCES AFFECTING SUPPLY



Heavy snowfalls can cause lamb deaths.



Unsaleable hail-damaged peaches.

SPECIAL FACTORS

Special factors can be many things that do not fit in the other categories. **Transport strikes** are an example. A transport strike can prevent a product reaching a market. This has the effect of reducing supply.

COMPETITION

Competition can be reduced in special circumstances. Some producer organisations can buy produce at a set price from many small growers. They can then resell the produce to a large market. Here they are acting as a single seller that controls supply and reduces the competition, between smaller growers and also between bigger organisations. The bigger an organisation is, the more power it usually has to control a market. This usually happens when selling in the export markets rather than in local markets, for example the pipfruit market.

Within the New Zealand apple and kiwifruit industries, competition between growers can be reduced by the grower organisations. The organisations buy up the produce then sell it, on behalf of all the growers, as a single seller.

PRODUCER ORGANISATIONS

Producer (grower) organisations are made up of representatives of the growers. These representatives make decisions on behalf of the growers for the benefit of the whole industry. Each major product is handled by a group of producer organisations. Each of these organisations oversees some special product research, processing or marketing.

There are several ways in which grower organisations can influence the market supply. These include:

- organising a marketing system
- setting the price schedules and controlling the supply for market at a particular time
- providing technical know-how to improve production levels
- advising the grower on when, how and what to plant.

The main aim of any producer organisation is to obtain the best long-term returns for producers. Field staff workers are employed by the organisation to advise growers on how to improve their output, produce quality and product handling.

Some more widely known examples of producer organisations in New Zealand are:

- Zespri (kiwifruit) www.zespri.com
- Meat and Wool New Zealand (sheep and beef meat, wool) www.meatnz.co.nz
- ENZA (apple and pears) www.enza.co.nz

Have a look at their websites to see some of the services they provide.



1. Describe three ways in which a farmer can increase the supply of a product.
2. How can producer organisations help prevent competition among growers?
3. Explain what 'seasonal effects' means.
4. Give three examples of seasonal effects that can reduce the supply of a product.
5. Name two ways producer organisations can influence the supply market.



Check the answer guide.



Ring or email your teacher to discuss supply and how it can be affected.
0800 65 99 88 or first.surname@tekura.school.nz



Your teacher will assess this work.

In the next session, you will learn how to draw and interpret supply graphs.

KEY POINTS

Other market forces that affect supply include the following.

- Quantity supplied – higher yielding cultivars or breeds may increase the amount of produce the grower can supply. Pests and diseases may decrease the amount of produce the grower can supply.
- Technological improvements – can be used to increase supply without causing an increase in input costs.
- Competition – for export between growers can be decreased by producer organisations.
- Seasonal effects – bad weather conditions are likely to reduce supply. Good weather conditions are likely to increase supply.
- Special factors – can reduce supply to the market, e.g. transport strikes.
- Producer organisations influence supply by:
 - organising a marketing system
 - controlling price schedules
 - providing technical knowledge
 - advising the grower what and when to plant.

5 SUPPLY CURVES

In this session, you are going to learn how to recognise and draw supply curves (graphs). You are also going to learn what market or aggregate supply is.

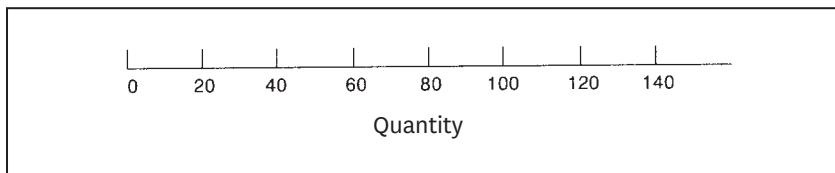
GUIDELINES FOR DRAWING SUPPLY CURVES (GRAPHS)

You may already be familiar with some of these guidelines.

- **Price** always goes on the **vertical axis**.
- **Quantity** always goes on the **horizontal axis**. (You may notice that the method for labelling axes in economics is different to the method used in mathematics or science.)



- The scale on each axis must increase by uniform intervals (even amounts). For example, a scale for price of radishes could be 1 cm for every 20 radishes as shown below.



- Each axis needs to be clearly labelled.
- The graph needs a suitable title.
- Each point should be plotted with a small cross (x).
- Points join with a smooth line. In some graphs this will be a straight line, in others a curve.
- Where possible, complete in pencil and use a ruler for straight lines.

SUPPLY

Producers or growers supply agricultural and horticultural products. The higher the price, the greater the quantity that a grower is willing to supply. **Supply** is the quantities of a product that growers are willing to supply at various prices.

5A

In the following example, a grower of radishes supplies a roadside stall. The table shows the number of radishes the grower is willing to supply at different prices.

SUPPLY TABLE FOR RADISHES

Price in \$	Quantity (number of radishes)
1	20
2	60
3	80
4	100
5	110
6	115
7	120

Use these figures to draw a supply curve.

1. Using your own graph paper, draw the supply curve for radishes given in the example above.
2. Using the graph you have just drawn, answer the following questions.
 - a. When the price is \$2.00, how many radishes are supplied?
 - b. When the price is \$3.50, how many radishes are supplied?
 - c. When the price is \$5.50, how many radishes are supplied?
 - d. When the price is \$6.50, how many radishes are supplied?
 - e. What happens to the number of radishes supplied as the price increases?



Check the answer guide.

THE CONCEPT OF SUPPLY

In the previous activity, you discovered an important economic idea, that is, the higher the price, the greater the quantity that a grower is willing to supply. It probably seems obvious that nobody willingly supplies a product that will only fetch a very low price.

Supply is the quantity of a product that growers are willing to provide at various prices.

As you saw in the radish example, the quantity supplied is proportional to the price. That is, as price increases, supply also increases.

MARKET SUPPLY

In the radish example there was only one grower, but in real life there will be many growers supplying radishes.

The **market supply** is the quantity of a product supplied by all the growers or producers. The total supply from all the growers or producers is also called the **aggregate supply**.

To calculate market supply, add together the quantities supplied by each grower. You'll work out a simple example in the next activity.



Price in \$	Grower A	Grower B	Grower C	Market supply
1	20	30	25	75
2	60	70	65	
3	80	90	85	
4	100	110	105	
5	110	120	115	
6	115	125	120	
7	120	130	125	

1. Complete the table by filling in the right-hand column. The first one has been done for you.
2. On your own graph paper draw the supply curve for 'Market supply for radishes' using the figures from the price and market supply columns. (Remember to put price on the vertical axis and quantity along the horizontal axis.)



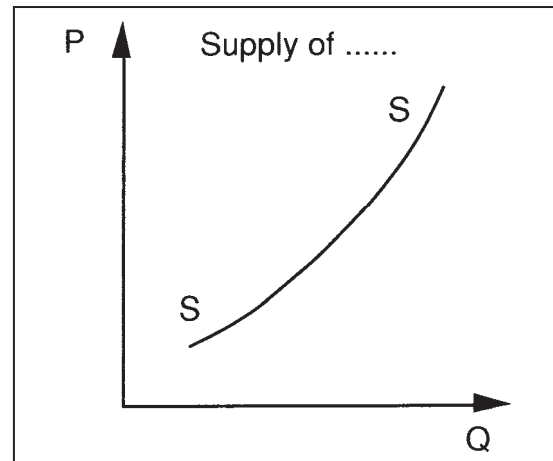
Check the answer guide.

DRAWING SKETCH GRAPHS

A sketch graph is a quick way of showing a supply graph. Instead of giving the actual figures for prices and quantities, a sketch shows what is expected to happen. Supply curves usually slope upwards from left to right.

The sketch graph for a supply curve could look like the one shown here on the right.

- **P** stands for **price**.
- **Q** stands for **quantity**.
- **S** stands for **supply**.
- Arrowheads show the **direction of increase** in price or quantity.
- The **title** includes the name of the product.
- The **curve** is labelled **S** > **S** for supply.



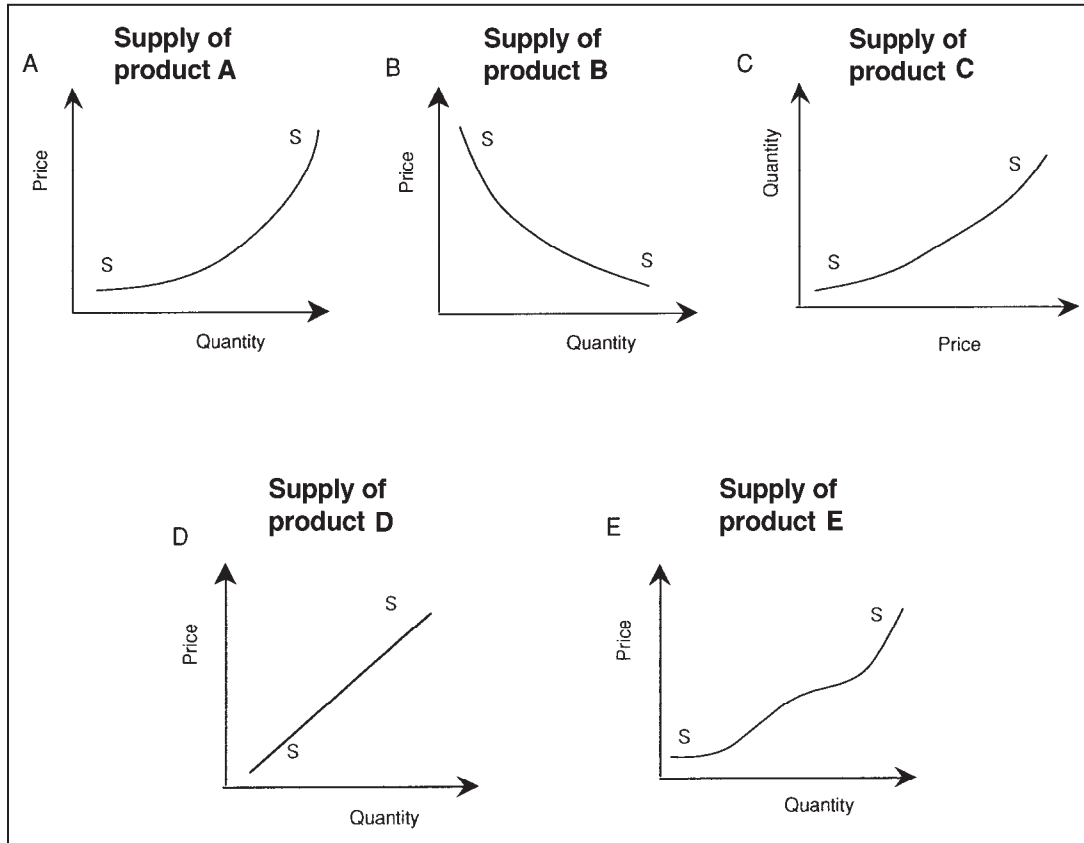
The **supply curve** may be a curved line or a straight line but it will still have the same direction of slope (upwards from left to right).

Now do the next activity.

SUPPLY CURVES

5C

1. Here are five sketch graphs **A** to **E**.



- a. Which of the above are correctly drawn sketch graphs of supply curves? Give the letters of the graphs.
- b.
 - i. Give the letters of the incorrect graphs.
 - ii. Say why each of these graphs is incorrect.



Check the answer guide.

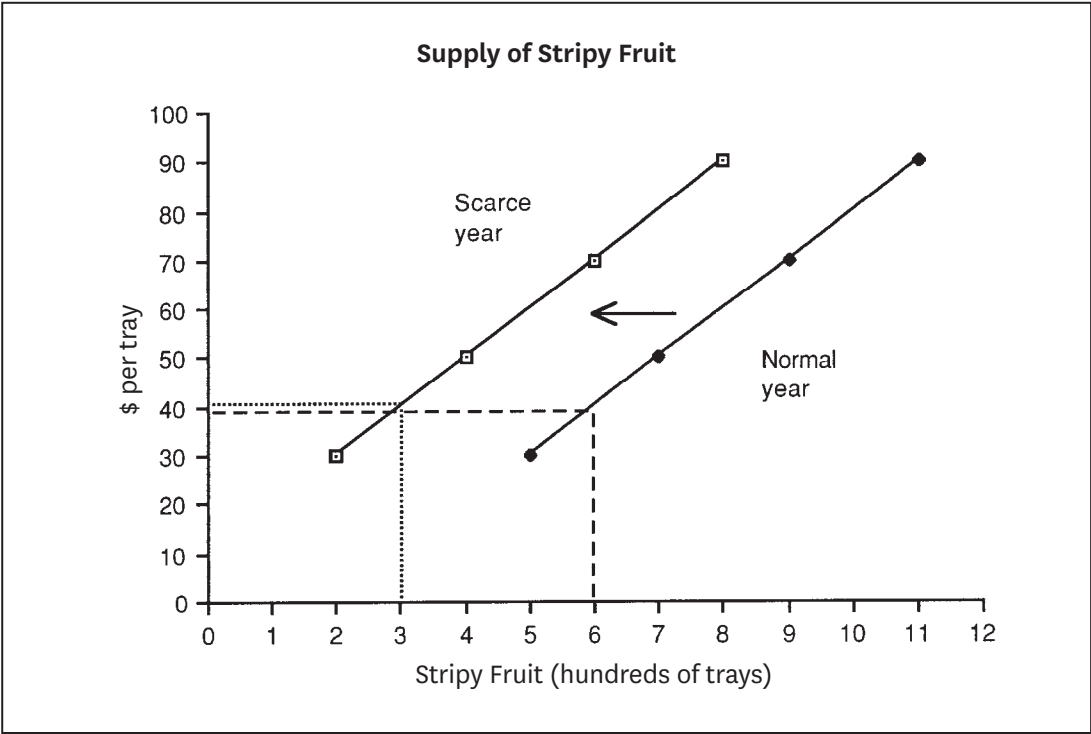


- The table below shows the aggregate supply at each price for product A. The middle column shows supply for a normal year and the right-hand column shows supply for a year when below average temperatures were experienced over the whole country, thus reducing supply.

AGGREGATE SUPPLY TABLE FOR PRODUCT A

Price (\$ per carton)	Normal year (Tonnes)	Scarce year (Tonnes)
3	5	2
6	10	8
8	15	12
9	20	15

- Draw a graph to show the supply curve for *product A* in a normal year. Label the curve *normal year*.
 - On the same graph, draw the supply curve for *product A* in the scarce year. Label the curve *scarce year*.
- Look at the graph below that shows supply curves for Stripy Fruit in a normal year and a scarce year.



SUPPLY CURVES

In a normal year the quantity of Stripy Fruit supplied at \$40 is 600 trays (see dashed line).
In a scarce year, the quantity supplied at \$40 is 300 trays (see dotted line).

- a. From the graph you drew for product A in question 1, work out the quantity supplied in a normal year when the price is \$4.
 - b. From your graph for product A in question 1, work out the quantity supplied in a scarce year when the price is \$4.
 - c. Draw an arrow to indicate the direction of the shift of the supply curve.
3. In the preceding question, you compared the quantity supplied in a normal year with the quantity supplied in a scarce year. Now you'll look at what happens in a year when there is a particularly good harvest for product A. You need to use the same graph as for question 1.
- a. Use these figures to plot and draw a third curve and label it *Bumper harvest year*.

Price per carton (\$)	Bumper harvest year (Tonnes)
3	7
6	12
8	17
9	25

- b. From your graph, work out the quantity of product A supplied in a normal year when the price is \$8 per carton.
- c. From your graph, work out the quantity of product A supplied in a bumper harvest year when the price is \$8 per carton.
- d. Draw an arrow to show the direction of the shift of the supply curve from a normal year to a bumper harvest year.



Check the answer guide.

In the previous activity you saw that:

- When the quantity of product A supplied at every price decreased (was scarcer), the supply curve shifted to the left.
- When the quantity of product A supplied at every price increased, the supply curve shifted to the right.

Here is an easy way to remember the direction of the shift of the supply curve:

- If **supply increases** (becomes more), the shift is to the **right** (there are more letters in the word 'right' than in the word 'left').
- If **supply decreases** (becomes less) the shift is to the **left** (there are fewer letters in the word 'left' than in the word 'right').

In the next session, you will find out how some market forces affect the demand for agricultural and horticultural products.

KEY POINTS

Supply is the quantity of a product that growers are willing to provide at various prices.

The higher the price, the greater the quantity a grower is willing to supply.

Market (aggregate) supply is the quantity of a product supplied by all growers or producers.

In supply graphs (curves):

- price goes on the vertical axis
- quantity goes on the horizontal axis
- scales on each axis must increase by even intervals
- each axis must be clearly labelled
- graph needs a suitable title
- each point is plotted with a small x
- points are joined with a smooth line (straight or curved).

In sketch supply graphs:

- P stands for price
- Q stands for quantity
- S stands for supply
- arrowheads show the direction of increase
- title includes the name of the produce
- supply curves usually slope upwards from left to right.

6 MARKET FORCES AFFECTING DEMAND

Market forces can increase or decrease the demand for a particular product. The next two sessions will look at some of these market forces.

Examples of market forces affecting demand are:

consumer preference	quality	advertising
size of market	substitutes	packaging
seasonality	complements	trends
quantity available	prices	producer organisations
reliability of supply	competition	niche marketing

In this session you will learn about:

- consumer preference
- advertising
- promotions
- packaging
- research and development
- size of market
- seasonality
- niche markets.

MARKET FORCES

CONSUMER PREFERENCE

Consumer preference is what the customer wants to buy. It can be influenced by many other factors, such as:

- advertising
- promotions
- packaging
- research and development
- climate.

ADVERTISING

Advertising is the main method of telling consumers about a product. If consumers want that product, then demand increases.

Advertising needs to have information and impact so that the consumers' interest is aroused.

To be useful, the advertisement needs to give specific details about the product or service:

- what it is
- what it does
- what it costs
- where it is available
- when it is available
- what backup services are available
- how it compares with similar products.

Sometimes an advertisement is deliberately short on some of this information, either because it might not help sales to give the information or as a teaser to grab attention and make you want to find out more. An advertisement must attract attention and hold that attention long enough for the message to sink in.

Ways to do this include:

- size (for example, small newspaper advertisement or large billboard)
- colour (full colour, or black and white, bright colours or mute)
- position on page or time on television (sweet treats during children's programmes)
- layout or overall design
- emotive content (for example, children and animals).

PROMOTIONS

Promotions help to make the consumer aware of a product and can also create demand for the product. For example, providing free sampling in a supermarket. Other promotions could include:

- recipes and cooking demonstrations
- price reductions to get consumers to try the product (specials)
- free samples in the mail
- special stands/display units to showcase product.

MARKET FORCES AFFECTING DEMAND

PACKAGING

The world is demanding packaging that is strong, attractive and recyclable. However, the cost of the packaging to the manufacturer must be reasonable for the value of the product.

Packaging must be well designed and present the product attractively to the wholesaler, retailer and customer. If the packaging makes the product look good, the consumer is more likely to buy that product.



Attractive yoghurt packaging.



Recyclable¹ long-life milk packaging.

Fruit has special packaging needs. The packaging must maintain fruit quality and extend the fruit shelf life.

Fruit packaging should:

- protect the product from bruising and squashing
- protect it from water loss
- allow enough air movement to aid cooling, fumigation and gas exchange during respiration
- reduce or prevent fruit-to-fruit contact to slow down the spread of fungi from infected fruit to clean ones
- be easy to handle.

It should not:

- transfer any off-flavours to the fruit
- release ethylene that may ripen the fruit too soon.

Packaging will also have to meet the requirements of the market. If produce is to be sold in a specific market, such as the European Union (EU), the packaging will have to meet the standards that this market sets.

RESEARCH AND DEVELOPMENT

Research and development focuses on other ways of using a product and this in turn leads to increase in demand.

Some examples of the ways that Meat & Wool NZ increased the demand for wool were by:

- developing a fine wool fibre to weave wool fabrics that can be worn in spring and summer especially in Europe – it is marketed as ‘Cool Wool’
- using wool (Insulwool™) for insulating in houses, instead of fibreglass insulation such as Batts
- spraying woollen upholstery fabrics (chair and couch coverings) with Scotchguard™ to make the fabric stain resistant
- blending of wool and synthetic fibres to make fabric covers for car and bus seats; this fabric wears longer than just wool, doesn’t pill (form small balls of fluff on the surface) and is more fire resistant than synthetic fibres.



‘Cool wool’ suit.

SIZE OF MARKET

The bigger the market is, the bigger the demand. The New Zealand market, with a population of 4 million people, is very small in world terms. New Zealand growers often aim to export to increase the size of their market, as the country has such a small population.

MARKET FORCES AFFECTING DEMAND

SEASONALITY

Seasonality is determined by:

- **seasons in New Zealand** – in winter people eat fewer salad vegetables such as lettuce and tomatoes; they eat more cooked vegetables such as pumpkin and peas.
- **seasons in other countries** – the northern hemisphere has the opposite seasons, so when it is winter in New Zealand it is summer there – this influences the demand for seasonal products grown in New Zealand.

NICHE MARKETING

A **niche market** is a very small market for highly specialised, highly priced products.

Niche markets aim towards:

- finding a product that customers want
- developing it precisely to their requirements
- maintaining a very high standard.

These aims have been taken up by the meat industry. New Zealand can now produce smoked beef fillets for Japan, bone-in-quarter for Korea, aged butterfly chops for Germany and lamb shoulder chops in burnt matagouri marinade for Britain.

Over the last 50 years, the standard of living in developed countries has greatly increased. Consumers in the wealthier countries are asking for a much wider range of goods, especially foodstuffs. These customers are moving away from mass-produced food and going for special luxury, ready-to-eat or natural products.

New Zealand is in a good position to take advantage of this situation. A small market niche of less than 1 per cent of the population of a large country like the USA is larger than the entire New Zealand market.



Niche marketed hand-crafted goat cheeses.



Find out more about niche cheese markets, for example, on www.organicgoatcheese.co.nz or watch an episode from Country Calendar, Episode 9, Milking Goats.

6A

1. Send in two advertisements from magazines or newspapers for primary agricultural or horticultural products. For each one, say what the main message is and how effective the advertisement is at getting its message across. Which do you think is the better advertisement and why?
2. Visit a supermarket, or another type of shop. List five different methods of product promotion that are used. Give examples of the product(s) being promoted by each method.
3. What does 'niche market' mean? Give an example.



Your teacher will assess this work.

4. Why do many New Zealand producers aim to export produce?
5. Name the season when more salad vegetables need to be supplied to the market.



Check the answer guide.

In the next session you will find out how some more market forces affect the demand of agricultural and horticultural products.

KEY POINTS

Some market forces that affect demand are the following.

- Consumer preference is what a customer wants to buy. This can be influenced by:
 - advertising
 - promotions
 - packaging
 - climate
 - research and development.
- Size of markets – the bigger the market the bigger the demand. New Zealand growers need to export because of the small population.
- Seasonality – the demand for some products is affected by the season. For example, demand for salad vegetables is greater in summer than in winter.
- Niche marketing – a niche market is a very small market for highly specialised, highly priced products.

7 MORE MARKET FORCES AFFECTING DEMAND

In this session you will look at:

- producer organisations
- product changed before sale
- complements
- substitutes
- quality.

PRODUCER ORGANISATIONS

Producer organisations can affect demand for a product in several ways. This session describes:

- establishment of new markets
- improving market awareness.

1. ESTABLISHING NEW MARKETS

Producer organisations use several ways to set up new markets for growers. All successful methods depend on the producer organisation making the most of the opportunities and minimising the problems. Main methods used are:

- improving market awareness
- closing the technology gaps
- developing the idea of total quality management
- setting acceptable standards for growers and exporters.

2. IMPROVING MARKET AWARENESS

Demand for products can be improved if producers are aware of what consumers want. Producer organisations can supply the producers with this information by helping with the following.

- **Understanding the markets and market trends**

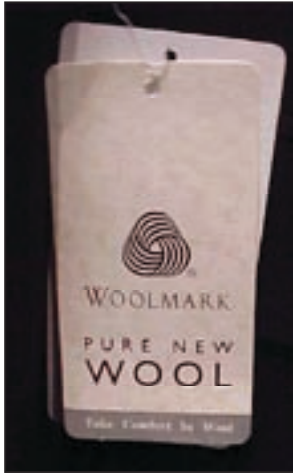
One new trend is that as the population gets older, there is a demand for miniature vegetables that give single servings. New cultivars are being developed to fill this new market. Other people look for organically grown produce (free of what they see as harmful chemicals) or the more exotic types of new fruit, vegetables and meat.

- **Knowing the distribution requirements**

Supermarkets demand a year-round supply of specific products. However, New Zealand products are on overseas supermarket shelves for short periods of time only, due to the limited volumes available compared with large overseas producers. In most overseas markets New Zealand has little or no control over the distribution of its produce. If a producer organisation could establish a New Zealand-controlled distribution company, it could supplement with products from other countries and maintain a year-round supply.

- **Recognising the effects of establishing brands**

Brand names are important in maintaining consumer interest and loyalty. In the horticultural sector, brand names must be centred on quality, freshness and safety.



Labels indicating quality wool products.



Finding a product that customers want may mean some products:

- are changed before sale
- processed to form other products
- have their size changed
- have their shape changed
- have their seasons extended.

PRODUCT CHANGED BEFORE SALE

Meat & Wool NZ had spent a lot of time and money looking for new opportunities that have led to new products and therefore new markets. They came up with a range of products developed from meat mechanically removed from lamb bones and trimmings. These products included sweet and sour meatballs and midget sausages. The midget sausages were developed to go into tins with baked beans and spaghetti.

PROCESSING TO FORM OTHER PRODUCTS

Whey was once a waste product from the manufacture of cheese and casein. It is now a valuable resource from which many other products are made. These range in complexity from basic whey powder to pharmaceuticals. In between are protein concentrates, specialist food ingredients, baby food components, calcium additives and alcohol.

MORE MARKET FORCES AFFECTING DEMAND

CHANGING THE SIZE OF PRODUCTS TO FIT A MARKET NICHE

Many people are now living alone or in two-person households. These people are looking for vegetables that will fit their needs. New cultivars are being developed to fill this market, such as mini carrots, cauliflowers and cabbages, which are now on the market. (Cherry tomatoes were developed for salads – either to be used whole or chopped in half. Different colours are now available.)

CHANGING THE BASIC PRODUCT

When a basic product is changed to make a new range of products, this is called **diversification**. This is usually done by further processing. For example, a basic meat product can be diversified as sausages, pâtés and special cuts. The processed product is usually sold at a higher price. The extra processing has increased the product's value and, from the producer's point of view, the product now has **added value**.

USING THE BASIC PRODUCT AS PART OF DIFFERENT PRODUCTS

Many basic products are processed and sold as ingredients in other products. For example, casein from milk is used in the manufacture of icecream. The main reasons for marketing these processed dairy products is to increase returns for the dairy industry and to gain added business security as an essential component of other products.

MAKING A NEW PRODUCT

Sometimes a new technological breakthrough will provide an opportunity for a poor grade of fruit, or other produce, to be used in making a new and different product.

Originally when manufacturers tried to make kiwifruit juice, it did not maintain a nice green colour and left a bad taste in the mouth. Non-premium (not the best) kiwifruit can now be used to make a juice that keeps its green colour and eliminates the bad aftertaste flavour.

CHANGING THE SHAPE OF PRODUCTS

Onions come in various forms from flat to globe or torpedo shape. Different markets have different bulb-shape requirements. For example, the European markets prefer flattened bulbs because they pack better. Farmers have to control both genetic and environmental factors to get the flattened shape.

COMPLEMENTS

Complements are products that are used together, for example strawberries and cream. If the price for strawberries rises, the quantity demanded will fall. This affects the demand for cream, which also falls.

If the demand for a product increases, then the demand for its complement (if it has one) will also increase.



Strawberries and cream.

DAVE JOHNSON © TE KURA

SUBSTITUTES

Substitutes are products that can be used in place of one another. For example:

- margarine instead of butter
- Marmite instead of Vegemite.

When the price of one of a pair of substitutes rises, people may change to the other substitute product.

For example, if the price of butter rises, demand increases for the substitute (margarine) and more is bought.

QUALITY

CLOSING THE TECHNOLOGY GAPS

New Zealand producers are required to guarantee the shelf life of their products and to consistently deliver fresh quality products to the markets. New de-infestation (pest removal) techniques are opening more new markets. There is also continuing research into the development of disease resistant plant cultivars and animal breeds. Producer organisations are able to encourage this research and development and thus increase the demand.

DEVELOPING AND ACCEPTING THE IDEA OF TOTAL QUALITY MANAGEMENT

Producer organisations are recognising the need to develop and demand professionalism and competence by setting high standards for growers and exporters. An example of this is Zespri™ and the high standards set for Zespri Gold™. See www.zespri.com.

PROBLEMS IN ESTABLISHING NEW MARKETS (INCREASING DEMAND)

New Zealand has four main problems when setting up new markets. They all relate to our distance from the markets and our small scale.

1. **Distance from markets** due to geographical position. New Zealand is a long way from its markets so costly airfreight is needed to get fresh produce there quickly. Shipping by sea may take longer than the shelf life of the product even with controlled atmosphere.
2. **Lack of critical mass** (supply volume). A lot of our producers are small scale businesses and so, in a user pay environment, it is difficult for them to find money to fund market research.
3. **Lack of market information**. Because of the limited resources mentioned above there is very little market research carried out, especially in the area of customer preference. This leads to products on the market that do not achieve customer acceptance.
4. **Market access**. The quarantine requirements of importing countries often require the development of detailed, expensive disinfection programmes, for example Japan and the USA. Other countries do not have these technical barriers yet.

MORE MARKET FORCES AFFECTING DEMAND



1. Name two methods by which producer organisations can affect the demand of a product. Explain each one.
2. Name three ways products can be changed to meet consumer demand.
3. Why will the demand for cream go down if the price of strawberries rises?
4. Explain three problems New Zealand has in establishing new markets.



Check the answer guide.



Ring or email your teacher to discuss how market forces affect demand.
0800 65 99 88 or first.surname@tekura.school.nz



Your teacher will assess this work.

In the next session, you will learn how to draw and interpret demand curves.

KEY POINTS

Other market forces that affect demand are the following.

- Producer organisations affect demand in many ways, such as by establishing new markets and improving market awareness.
- Product changes before sale – developing new sizes, shapes, further processing.
- Complements – products that are used together, for example, strawberries and cream. If the price of strawberries rises, the demand for cream will decrease.
- Substitutes are products that can be used in place of each other, for example, butter and margarine. If the price of margarine goes down the demand for butter will go down.
- Quality.

Problems in establishing new markets in New Zealand are caused by:

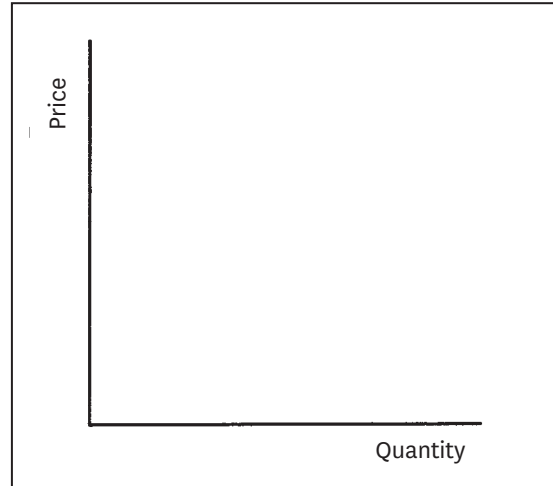
- distance from markets due to the country's isolated geographical position
- lack of critical mass because of the small scale of many producers
- lack of market information on what the consumer wants
- difficulty of market access caused by regulations in other countries.

8 DEMAND CURVES

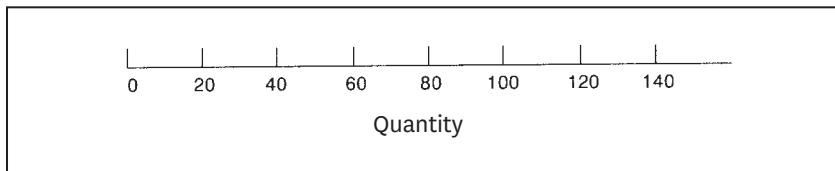
In this session, you are going to learn how to recognise and draw demand curves (graphs). You are also going to learn what market demand (aggregate demand) is.

GUIDELINES FOR DRAWING DEMAND CURVES (GRAPHS)

- **Price** always goes on the **vertical axis**.
- **Quantity** always goes on the **horizontal axis**. (You may notice that the method for labelling axes in economics is different to the method used in mathematics or science.)



- The scale on each axis must increase by uniform intervals (even amounts). For example, a scale for a quantity of grapes could be 1 cm for every 20 bunches as shown below.



- Each axis needs to be clearly labelled.
- The graph needs a suitable title.
- Each point should be plotted with a small cross (x).
- The points join with a smooth line. In some graphs this will be a straight line, in others a curve.
- Where possible, complete in pencil and use a ruler for straight lines.

DEMAND CURVES

8A

Look at this example of demand.

George goes to the greengrocer each week to buy fresh green grapes. He buys different quantities each week depending on the price. Here is what he bought each week for nine weeks.

Week	1	2	3	4	5	6	7	8	9
Price (\$ per kg)	8.50	7.50	6.50	5.50	4.50	4.00	5.00	6.00	7.00
Quantity bought (g)	100	200	400	600	1000	1300	800	500	300

1. Use the information in the table above to draw up a demand table.
Some guidelines to help you:
 - The main heading for your table is *Demand table for George for fresh green grapes*.
 - Under the main heading you'll need two columns, the left one headed up *Price (\$ per kg)* and the right one *Quantity bought (g)*.
 - Put the prices in order from the lowest price at the top of the left column to the highest price at the bottom. Beside each price put the quantity bought in the right column.
2. Using your own graph paper, draw the demand curve for fresh green grapes. Follow the same guidelines for drawing graphs as those given for supply curves.
3.
 - a. When the price is \$8, use the graph to work out what quantity of grapes is demanded.
 - b. When the price is \$6, what quantity of grapes is demanded?
 - c. When the price is \$4, what quantity of grapes is demanded?
4. What happens to the quantity of grapes demanded as the price falls?
5. What shape is George's demand curve? Choose one of the following statements:
 - a. It is horizontal.
 - b. It slopes upwards to the left.
 - c. It is vertical.
 - d. It slopes downwards to the right.



Check the answer guide.

THE CONCEPT OF DEMAND

Generally, demand curves show the same shape as George's. It shows us that at high prices consumers buy small quantities and at low prices consumers buy large quantities. So the quantity bought is inversely proportional to the price, that is:

- when the price rises, consumers buy less
- when the price falls, consumers buy more.

Buyers or consumers create demand. Although a consumer would like to buy many things, the final choice of what and how much they buy at different prices is what is really important.

Demand is the quantity of a product that people are willing to buy at a given price. Any price change causes a movement along the demand curve.

MARKET DEMAND

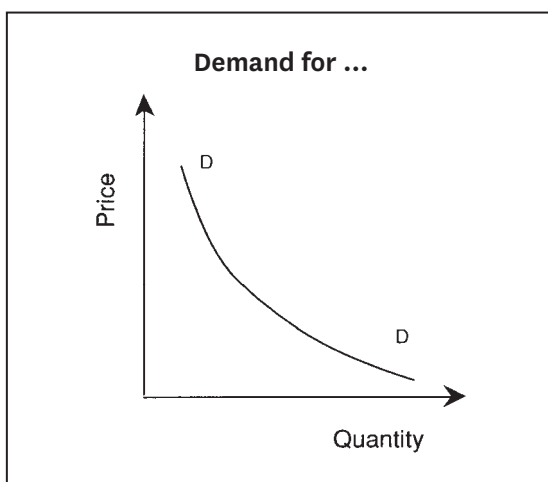
When everybody's individual demands for a product are added together, you have market demand (also called **aggregate demand**).

DRAWING SKETCH GRAPHS

You can draw sketch graphs for demand curves the same way you drew them for supply curves. One is shown below.

- **P** stands for **price**.
- **Q** stands for **quantity**.
- **D** stands for **demand**.
- Arrowheads show the direction of increase in price or quantity.
- The **title** shows the demand for a named product.
- The **curve** is labelled **D** > **D** for demand.

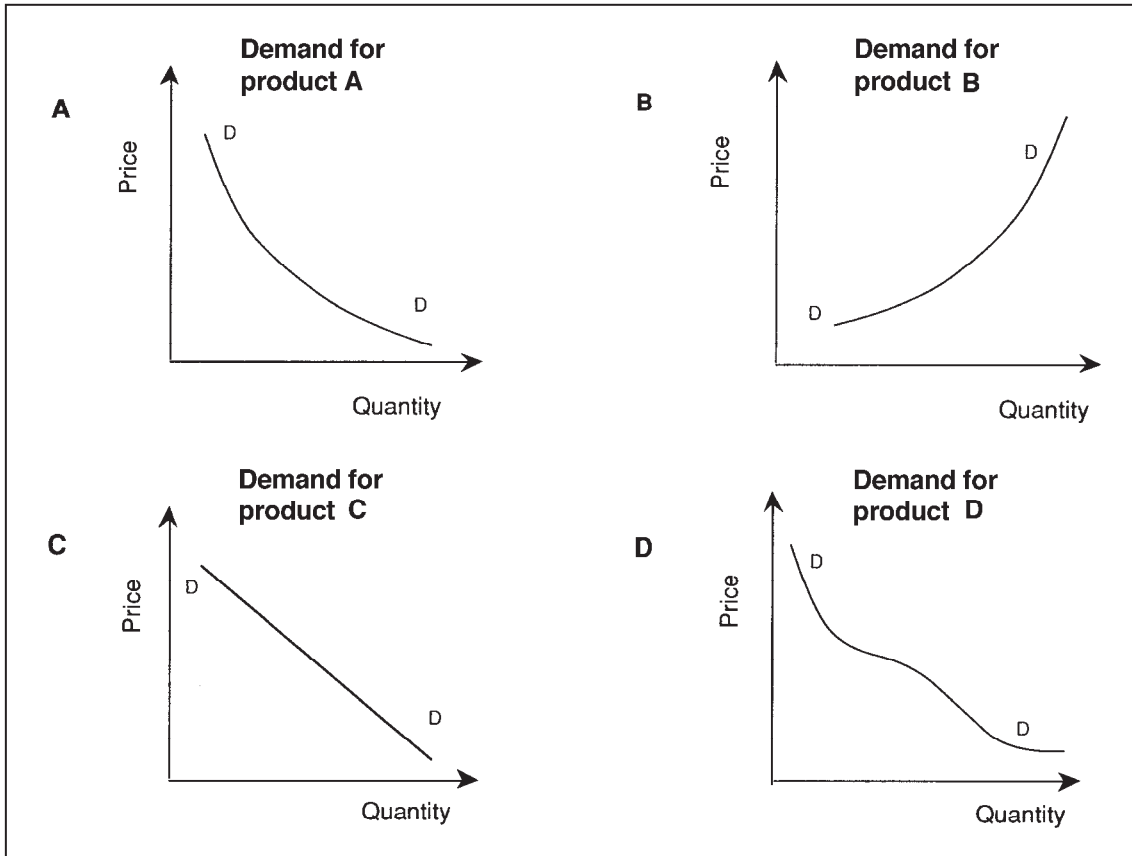
The **demand curve** may be a curved line or a straight line but it will still have the same direction of slope (downwards from left to right).



DEMAND CURVES

8B

Here are four sketch graphs for products A to D.



1. Which of the above are correctly drawn sketch graphs of demand curves?
Give the letters of the graphs.
2. Give the letter(s) of any incorrect graph(s) and say why each is incorrect.
3. Give the letters of any sketch graphs that would show supply curves and say how you know they are supply curves.



Check the answer guide.

FACTORS THAT SHIFT THE DEMAND CURVE

SUCCESSFUL ADVERTISING

The demand for a product at all prices will increase after a successful advertising campaign so the whole demand curve for the product will shift to the right.

8C

A producer organisation carried out an advertising campaign to persuade people to buy more fresh tomatoes.

The next table shows the results.

MARKET DEMAND FOR TOMATOES

Price (\$ per kg)	Before advertising (Quantity in tonnes)	After advertising (Quantity in tonnes)
3.00	50 000	60 000
3.50	45 000	55 000
4.00	40 000	50 000
4.50	35 000	45 000
5.00	30 000	40 000
5.50	25 000	35 000

- Draw a graph to show the demand curve for tomatoes before advertising.
Label the curve *Before advertising*.
- On the same graph draw the demand curve for tomatoes after advertising.
Label the curve *After advertising*.
- From your graph, work out the quantity of tomatoes demanded at \$4.75 before advertising.
- From your graph, work out the quantity of tomatoes demanded at \$4.75 after advertising.
- Draw an arrow to show the direction of the shift of the demand curve.

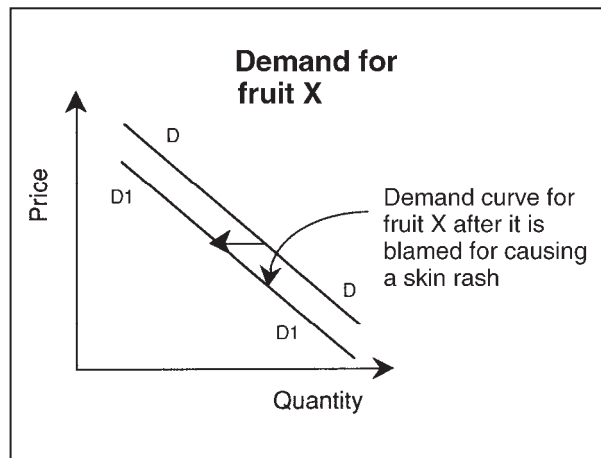


Check the answer guide.

DEMAND CURVES

CONSUMER PREFERENCE

Sometimes consumer preference increases demand. In other situations it may decrease demand. For example, suppose that eating fruit X is blamed for causing a skin rash. Consumers would prefer to eat less of this fruit so the demand for fruit X at all prices would decrease. This sketch graph shows how the demand curve would shift. A decrease in demand causes the demand curve to shift to the left.



Here is an easy way to remember the direction of the shift of the demand curve.

- If **demand increases** (becomes more) the shift is to the **right** (there are more letters in the word 'right' than in the word 'left').
- If **demand decreases** (becomes less) the shift is to the **left** (there are fewer letters in the word 'left' than in the word 'right').

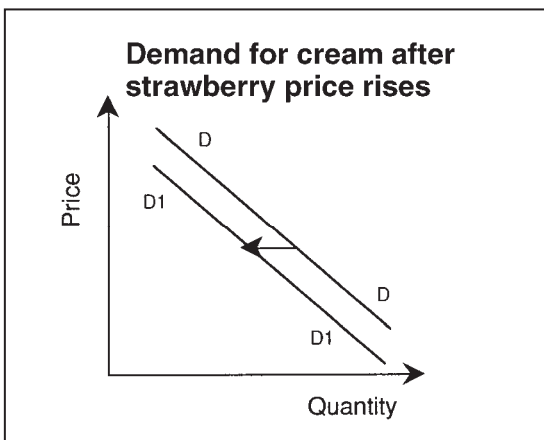
Note: the direction of the shift is the same as for shifts of the supply curve.

COMPLEMENTS

Complements are products that are used together, for example strawberries and cream.

If the strawberry price rises, the quantity demanded will fall. This affects the demand for cream, which also falls. This could be shown on a sketch graph like the one below.

If the demand for a product increases, then the demand for its complement (if it has one) will also increase.



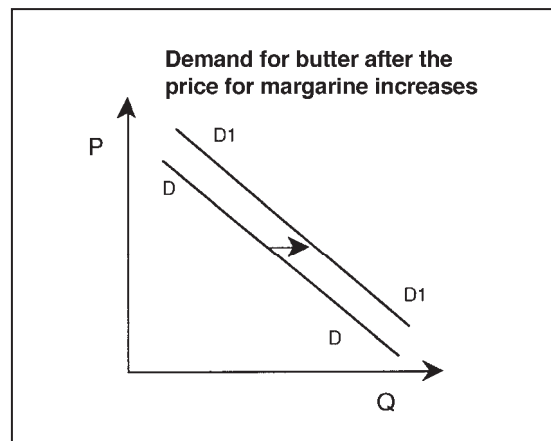
SUBSTITUTES

Substitutes are products that can be used in place of one another, such as:

- margarine instead of butter
- Marmite instead of Vegemite.

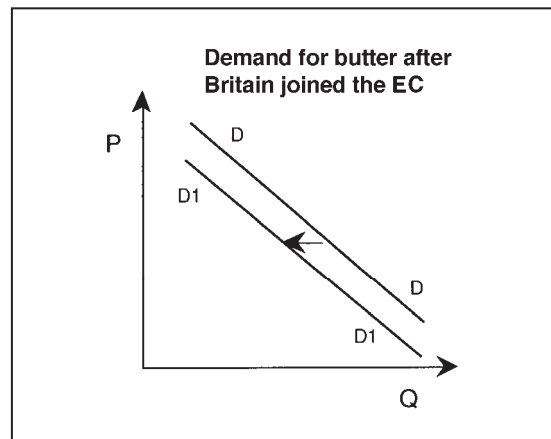
When the price of one of a pair of substitutes rises, people may change to the other substitute product.

For example, if the price of margarine rises the demand for butter (its substitute) increases and more is bought. The graph shows the shift in the demand curve for butter.



SIZE OF THE MARKET

If the size of the market for a product changes, this affects demand. For example, after Britain joined the European community it bought much less butter from New Zealand. The size of the export market for New Zealand butter was reduced. This shifted the demand curve as shown in the graph.



8D

1. Name three situations that would cause the demand curve to move to the left.
2. Does the move of the demand curve to the left, show an increase or a decrease in demand?



Check the answer guide.

In the next session, you will learn about supply and market trends.

KEY POINTS

Demand is the quantity of a product people are willing to buy at a given price.

Market (aggregate) demand is the total quantity of a product that all consumers combined are willing to buy.

The higher the price, the smaller the quantity a consumer is willing to buy.

Drawing demand graphs (curves)

- Price goes on vertical axis.
- Quantity goes on horizontal axis.
- Scales on each axis must increase by even intervals.
- Each axis must be clearly labelled.
- Graph needs a suitable title.
- Each point is plotted with a small x.
- Points are joined with a smooth line (straight or curved).

Sketching demand graphs

- P stands for price.
- Q stands for quantity.
- D stands for demand.
- Arrowheads show the direction of increase.
- Title includes the name of the product.
- Demand curves usually slope downwards from left to right.

9 SUPPLY AND MARKET TRENDS

A trend is a change that has occurred over time. In this session you will find out how to recognise and predict trends using graphs and tables.

SUPPLY TRENDS

Producers and producer organisations keep records of the supply of various products. They can use this information to try and predict what will happen in the future.

Useful items of information are:

- price received
- quantity supplied.

Graphs of this information often show patterns or trends.

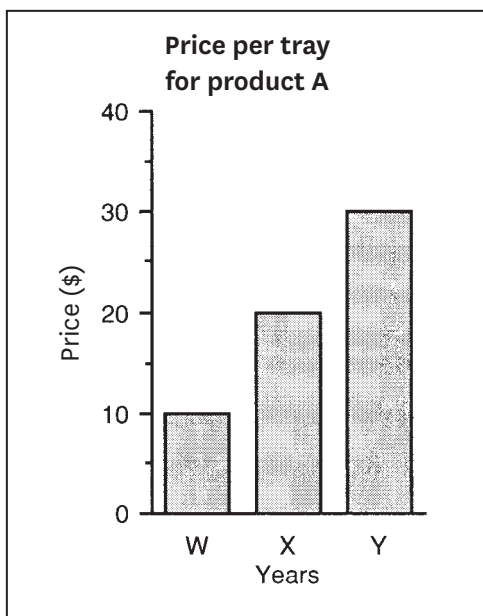
The trend may show:

- prices or supply decreasing for one product
- prices or supply increasing for another product.

TRENDS FOR THE SUPPLY OF ONE PRODUCT

The bar graph below shows the market value (price) received for product A over a period of three consecutive (following) years labelled W, X and Y.

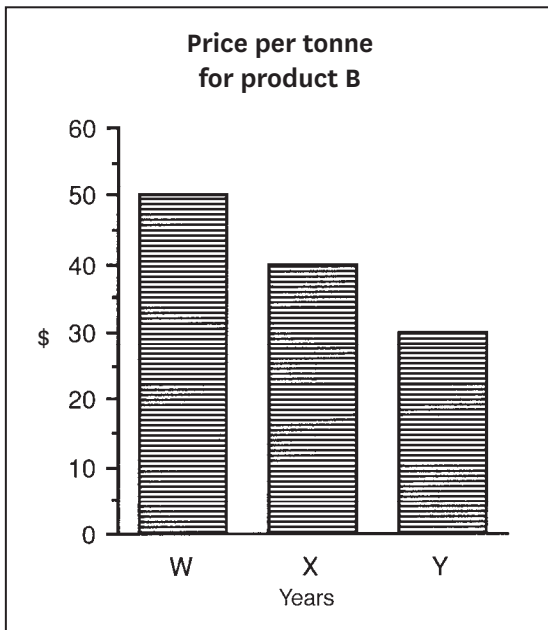
Product A received a higher price in year X than year W, and a higher price in year Y than year X. So, over the three years W, X, Y price for product A has steadily increased.



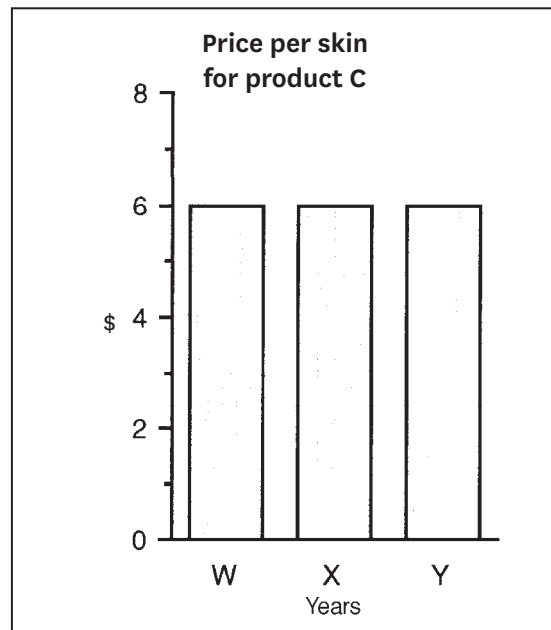
Based on the information on this graph, you would expect that in the next year, Z, the price for product A would be even higher.

On the following page, are two graphs showing trends for products B and C over a period of three years from year W to year Y.

SUPPLY AND MARKET TRENDS



Price for product B has steadily decreased from year W to year Y. From this graph, it is likely that the price for the next year will be lower than the price for year Y.



Price for product C has remained the same over the three years W to Y. It is likely that it will remain the same for the next year.

On graphs showing trends:

- time goes on the horizontal axis
- price or quantity goes on the vertical axis.

Sometimes there are two vertical axes, one on each side of the graph. Price goes on one axis and quantity on the other.

The previous graphs are all bar graphs, but the same information could be shown on a line graph.

Prediction for the next year is often drawn with a line of dashes.

On the next page is the information for product A shown on a line graph.



FLUCTUATING PRICES OR AMOUNTS

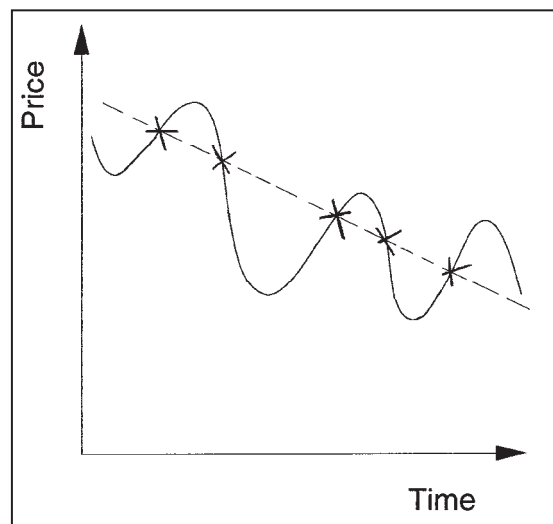
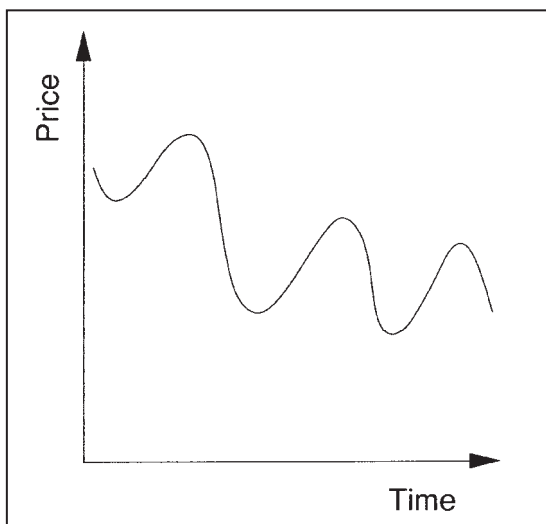
If price or the amount of a product fluctuates (goes up and down), it is more difficult to pick out a general trend.

To work out the general trend, you need to find the rough averages (middle points) between the peaks (high points) and troughs (low points) of the fluctuations on the graph. Mark them with an x. Then join the x's and see what line results. You may have met this idea in mathematics or science as 'the line of best fit'.

If the line slopes **downwards**, the general trend is that the price or amount is **decreasing**.

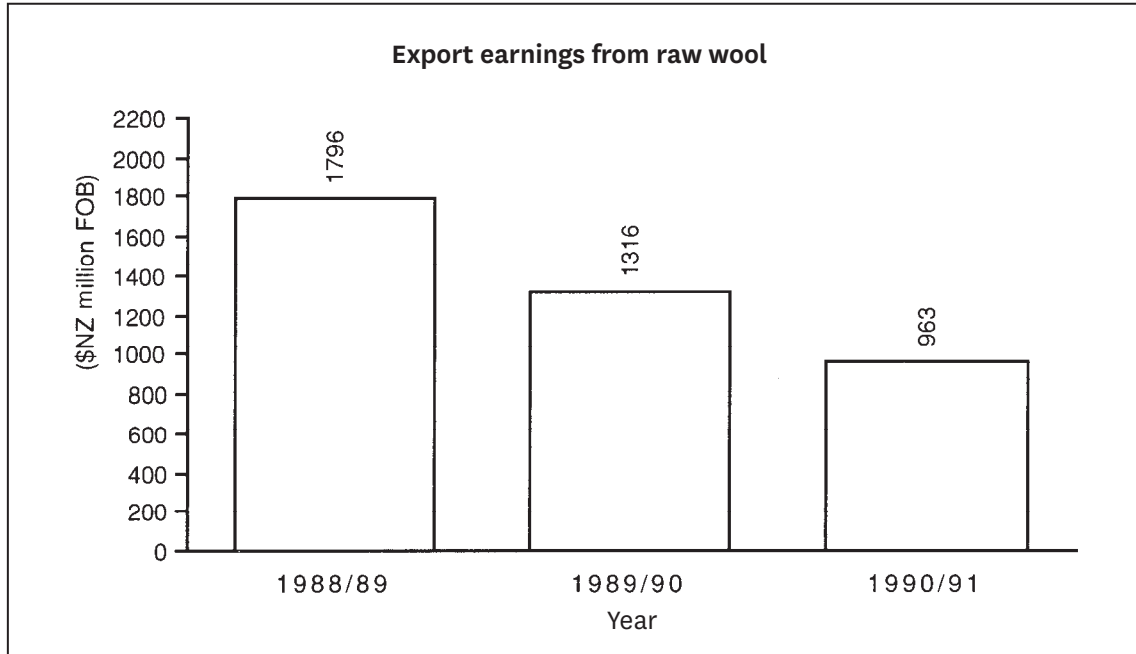
If the line slopes **upwards**, the general trend is that the price or amount is **increasing**.

The graph on the left shows the fluctuations; the one on the right shows the rough averages and the resulting general trend.



9A

Look at the graph below.



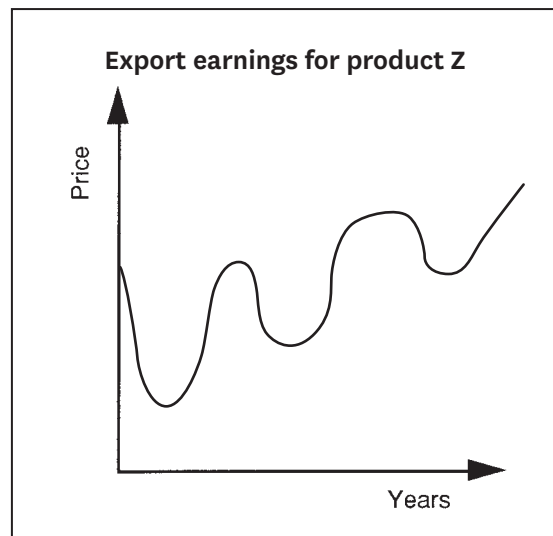
1. a. What trend does it show?
- b. Draw the axes for the graph on your own paper, but make the intervals on the price axis one centimetre apart.
Using the figures above each bar, plot points and draw a line graph.
- c. Using dashes, extend the line for another year and predict the export earnings from raw wool for that year.

Here is a graph for a product where price has fluctuated markedly.

2. What is the general trend?

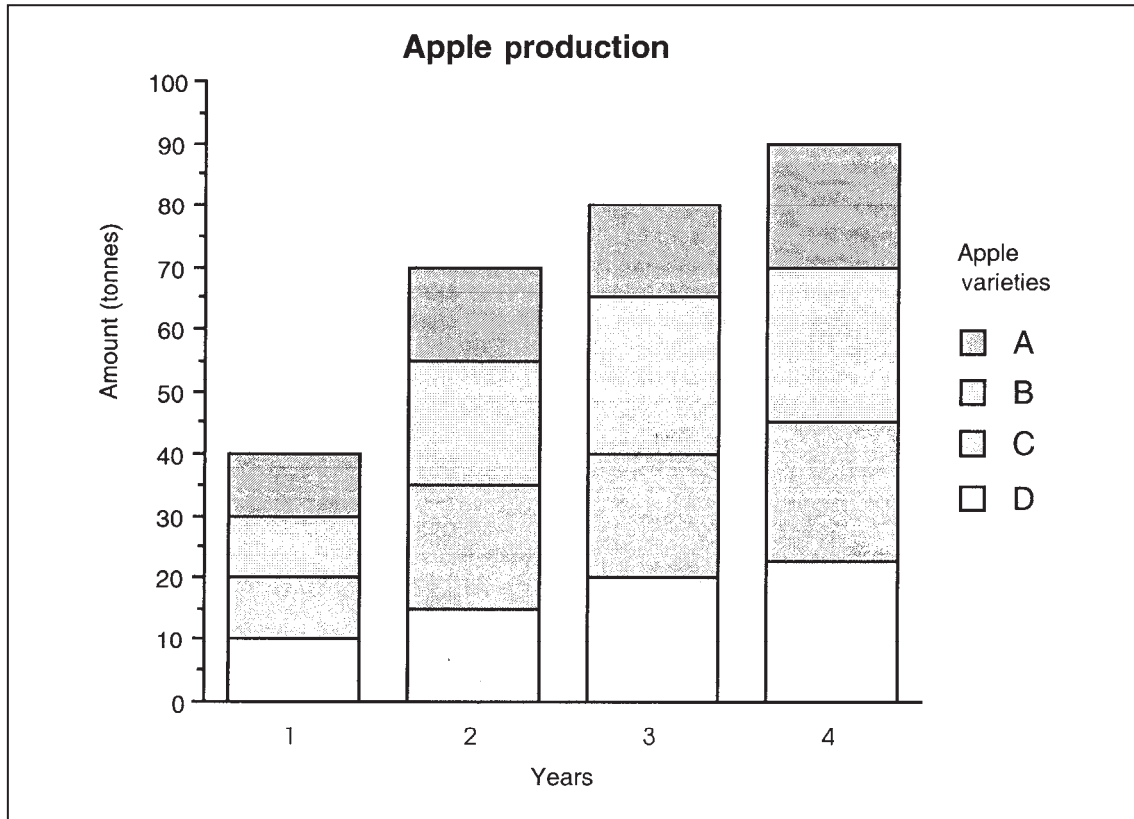


Check the answer guide.



CHANGES IN PROPORTION OR PERCENTAGE

Sometimes the supply of several similar products is compared over time. Here is a bar graph showing the production of apples over four years.



The general trend is that total apple production has increased steadily over the four years – from 40 tonnes in year 1 to 90 tonnes in year 4.

The proportion of each of the four varieties making up total production is shown on the bars by different shading.

The varieties can be identified using the key.



To find out which apple variety showed the greatest increase in terms of tonnes produced in the four years, follow the instructions below.

Calculate the production for each variety, in each year, by reading off the top and bottom amount for each variety.

Below is an example for **variety A** in year 1.

- The top reading is 40 tonnes and the bottom reading is 30 tonnes.
- Subtract the smaller (bottom) number from the larger (top) number.
40 tonnes – 30 tonnes = 10 tonnes.

SUPPLY AND MARKET TRENDS

Complete the table below and record the calculations following as you fill it in.

Apple production – total and by variety (figures in tonnes)

Year	Total	Variety A	Variety B	Variety C	Variety D
1					
2					
3					
4					

1. Calculate the production for:
 - a. Variety A in year 1.
 - b. Variety B in year 1.
 - c. Variety C in year 1.
 - d. Variety D in year 1.
2. Calculate the production for:
 - a. Variety A in year 2.
 - b. Variety B in year 2.
 - c. Variety C in year 2.
 - d. Variety D in year 2.
3. Calculate the production for:
 - a. Variety A in year 3.
 - b. Variety B in year 3.
 - c. Variety C in year 3.
 - d. Variety D in year 3.
4. Calculate the production for:
 - a. Variety A in year 4.
 - b. Variety B in year 4.
 - c. Variety C in year 4.
 - d. Variety D in year 4.
5. Which apple variety showed the greatest increase in terms of tonnes produced in the four years and by how much?



Check the answer guide.

You could find the trend more quickly but less accurately by:

- comparing only year 1 and year 4 as the graph shows you the trend increases steadily with no fluctuations
- selecting the two most likely varieties and doing the calculations on those only.

To find out what was the percentage change for variety A compared to variety B, from year 1 to year 4 follow the instructions below.

- Calculate the production figures for variety A and B in both year 1 and year 4.

These are in your table but if you used a short cut method, further calculation might be needed at this point. You can use a calculator here.

- **For variety A**

Production in year 1 was 10 tonnes out of 40 tonnes.

$$\frac{10}{40} \times \frac{100}{1} = 25\%$$

As a percentage (%) this is:

Production in year 4 was 20 tonnes out of 90 tonnes.

$$\frac{20}{90} \times \frac{100}{1} = 22\%$$

As a percentage (%) this is:

Between year 1 and year 4 production for variety A decreased from 25% to 22%.

$25\% - 22\% = 3\%$ a decrease of 3%

- **For variety B**

Production in year 1 was 10 tonnes out of 40 tonnes.

$$\frac{10}{40} \times \frac{100}{1} = 25\%$$

As a percentage (%) this is:

Production in year 4 was 25 tonnes out of 90 tonnes.

$$\frac{25}{90} \times \frac{100}{1} = 27.8\% \text{ (which is approximately 28\%)}$$

As a percentage (%) this is:

Between year 1 and year 4, production for variety B increased from 25% to 28%.

$28\% - 25\% = 3\%$ an increase of 3%

- The percentage change of production for variety A compared with variety B is variety A decreased by 3% and variety B increased by 3%.

MARKET TRENDS

A market trend is a change in demand occurring between the past and the present.

Market trends are useful for predicting possible changes in demand for primary products.

If there has been a change in demand for a product, it may be useful to try and identify why the change occurred. This can be particularly helpful if there has been a decrease in the demand for a product, as it may indicate possible future trends for other end products or for new products.

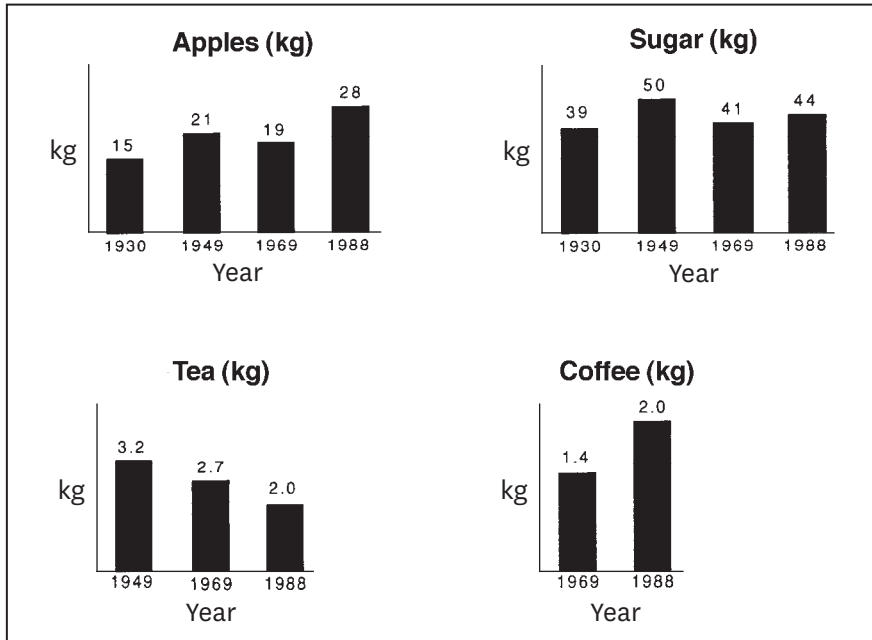
IDENTIFYING POSSIBLE REASONS FOR MARKET TRENDS

Changes in demand may be the result of a wide variety of reasons, such as:

- new products on the market
- advertising and promotions
- changes in technology – for example, production of synthetic fibres replacing wool
- changes in income distribution – for example, if income increases, people may spend money on more expensive foods
- substitute (other) products available – for example, potatoes can be replaced with rice, pasta or pizza
- changes in fashion or taste – for example, the emphasis on a balanced healthy diet has seen the promotion of low-fat products to prevent heart disease and the promotion of fruit and vegetables to prevent bowel cancer
- changes in lifestyle – for example, people changing to a less active job or lifestyle may alter their diet from foods that provide a lot of calories to foods that contain lower calories; a different example could be people who have very busy lifestyles eating more fast food meals.

9C

Here are four graphs that show changing tastes. The bars in each graph show the annual consumption per capita (amount eaten per head of population in one year).



1. For the apple graph, describe the market trend and give possible reasons for the trend.
2. For the sugar graph, describe the market trend and give possible reasons for the trend.
3. a. Look at the graphs for tea and coffee, explain the trend for each.
b. Suggest how these two trends could be related.



Check the answer guide.

KEY POINTS

- A trend is a change over time.
- A supply trend is a change in supply occurring between the past and the present.
- A market trend is a change in demand occurring between the past and the present.
- Either bar or line graphs can be used to show trends.
- On graphs showing trends:
 - time goes on the horizontal axis
 - price or quantity goes on the vertical axis.
- If the line slopes downwards, the trend is decreasing.
- If the line slopes upwards, the trend is increasing.

10 ASSESSMENT

The teacher-marked activity in each booklet is designed to be a progress test that will give you an indication of how your learning is progressing.

Revise the work in this booklet before you do this assessment.

10A

Read each extract and then answer the questions on each one.

1.

Fewer piggies go to market

'The number of pigs produced in New Zealand last year was the lowest ever recorded, but total tonnage increased marginally over the previous year,' says the annual report of the Pork Industry Board.

The decrease in production dated back to 1998-99, when an international oversupply of pork depressed prices and caused large numbers of producers to leave the industry. Those farmers who remained in the industry attempted to maximise returns by producing heavier pigs, resulting in the small increase in tonnage.

Competitive conditions in the marketplace and the low level of the New Zealand dollar resulted in a small decrease in the quantity of pork imported from other countries, although the volume is still significant at 28 per cent of our local consumption.

The combination of these supply changes has meant a decrease in total pork consumption in New Zealand to 16.6 kg per capita for the 2001 year.

- Explain how events in 1998-99 caused the current low numbers of pigs being produced.
- Describe in detail the change in pork consumption by New Zealand consumers, and identify one likely reason for the change.
- Explain what changes in the market place would be required in order for pig numbers to begin to increase again.

2.

Deer kill drops with schedules

The number of deer slaughtered in the first three months of 2002 fell 15 per cent compared to the same period last year, according to a recent Game Industry Board market report.

Venison exports and prices hit record highs last year, as European consumers switched from traditional red meats after BSE and foot and mouth scares.

However, demand for venison in European markets is back to normal levels, while demand in the emerging US market has recovered following the September 11 terrorist attacks. These caused a dramatic change in Americans' daily lives - including their eating habits - with consumers showing a preference for home-based or work-based meals as opposed to eating out at restaurants for some time after the attacks. Indications are that 90 per cent of traditional European beef consumers who switched to venison last year in the wake of the foot and mouth outbreak and ongoing concerns over BSE have reverted back to beef.

Consequently, schedule prices last week are down compared with the same time last year, and farmers are retaining stock.

Additionally; a steady improvement in velvet (the immature antler) prices this season, after a horror year in 2000/2001, has increased the numbers of stags retained by farmers.

NZQA

- a. Identify two reasons, other than September 11 or BSE concerns, for the drop in numbers of deer slaughtered during the first three months of 2002.
- b. What meat is seen as being in direct competition with New Zealand venison in the market place?
- c. Identify one event that has affected the demand for New Zealand venison. Describe in detail the change in demand and explain why the demand for NZ venison has changed.

3.

Growers Moving Towards Exports of Avocado Oil

Bay of Plenty-based Avocado Oil NZ unveiled its 'The Grove Avocado Oil' at last year's Ellerslie Flower Show.

The Company is selling mainly through upmarket delicatessens and is about to export the first 'token amount' to London's top-notch Fortnum and Mason. At present, avocado oil is relatively unknown around the world.

With about 70 per cent of New Zealand's avocado crop grown in the Bay of Plenty, and much of the remainder in Northland, the decision of where to locate the company took into account the costs involved in transporting the fruit as well as other factors. Plantings are also going ahead around Gisborne. With three-quarters of the trees yet to reach full production, the crop is expected to grow by up to 40 per cent a year for the next eight years, without including new plantings. This year's harvest of around 8,500 tonnes is forecast to have increased to 44,000 tonnes by 2010.

NZQA

- a. Explain why Avocado Oil NZ is based in the Bay of Plenty.
- b. Describe in detail the forecasted increase in avocado supply from 2001, when this article was written, to 2010.
- c. Identify two problems this increase in supply is likely to present to the avocado industry and give some solutions to these two problems.

4.

A cherry outlook

Cherries are regarded as the delicacy of the summer fruit crop but, while they command high prices, growing cherries is a risky business.

Asians are big buyers of cherries and United States growers can sell 12 000-14 000 tonnes of cherries to Asia in the same season as the Asian harvest. European markets are well established and demand continues to grow. The export potential is huge, but because of their highly seasonal production and the narrow climatic range cherries can be grown in, New Zealand producers face strong competition in these markets from Tasmanian and Chilean cherries.

In average year's New Zealand could expect to export 600 tonnes of cherries but in bad seasons the volume has been as little as 200 tonnes. In 1998 only 11 tonnes were exported to Japan, where quality requirements are very high.

Climatic conditions, especially the incidence of frost and air temperature and rainfall during September and October, have a significant effect on yield, while rainfall during the December-January harvest period can significantly damage crop quality. One of the major problems is fruit splitting during and after rainfall. Because of the high cost of rainproof covers, growers accept some level of loss as long as the splitting does not occur every year.

Central Otago and Marlborough are the most important cherry growing areas. Their sunny, warm summer climate does pose problems for fruit quality because field heat in the fruit must be reduced as quickly as possible in order to maximise shelf life. The use of hydro-coolers has been an important development as cherries which have been through the hydro-cooler can be stored for up to three weeks at temperatures between 0-2°C.

Research into new cherry varieties continues. Recent introductions include a variety that matures five days before Budat, the first acceptable early cherry, and one that matures ten days after Lapins, the industry's latest maturing variety. The introduction of dwarfing rootstocks will enhance the economics of the crop as smaller trees are cheaper to harvest and can be grown at higher densities.

NZQA

- a. Describe two aspects of cherry production that justify its description as 'highly seasonal'.
- b. Explain why it would be difficult to change the highly seasonal pattern of cherry production.
- c. Explain why the growing of cherries for export is a risky business.



Your teacher will assess this work.

11 ANSWER GUIDE

Mark these answers with a tick or a cross and write in any corrections that are needed.

1A

1. MARKETING

1. A market is the exchange of goods and services between two or more people.
2. Effective marketing is important because it helps producers to sell their products profitably.
3. **Direct sales**
Advantages to the consumer are: produce is grown where sold; costs less than at supermarket; is very fresh.
Disadvantages to the consumer are: consumer may have to travel long distances to the grower; not a lot of variety.
Indirect sales
Advantages to the consumer are: more produce to choose from; high quality available; less distance to travel; storage enables out of season produce.
Disadvantages to the consumer are: possibly higher prices; sometimes produce not as fresh.
4. Four stages.
5. Your teacher will check this answer.

2A

2. TYPES OF MARKETING

1. The five types of marketing used for selling agricultural and horticultural produce are: auctions, wholesale, retail, brokers, contracts.
2. Advantages of the auction system for the producer are: reliable payments to growers (don't have to worry about non-payment for goods); producer does not need to deal with all possible buyers; higher prices when goods are scarce.
Disadvantages of the auction system for the producer are: prices can fluctuate a lot and producer does not know what they will get; producers cannot respond quickly to the buyer's changing needs; delays in getting payments.
3. Advantages of contract system to the producer are: producer knows the products have a buyer; producer knows the price in advance so can budget more easily.
Disadvantages of contract system to the producer are: if market price goes up after the contract, the producer is stuck with the lower price; may be a penalty to pay if crop fails.
4. Advantages of wholesale system to the producer are: easier to sell in bulk to one wholesaler than to a number of buyers; producers free up storage space.
Disadvantages of wholesale system to the producer are: costs imposed by wholesaler for buying and storing the produce.

3A

3. MARKET FORCES AFFECTING SUPPLY

1. Longer production time: it's more difficult to change quantity if prices change during the production period.
2. Types of inputs into production are: land; labour; buildings; machinery; fertiliser; seeds or stock.
3. An example of a highly perishable product are strawberries, or other berry fruit.
4. An example of a non-perishable product is wool.
5. A seasonal crop has specific seasons in which it is readily available. For example, fresh New Zealand strawberries are available only from October to March.
6. Climate is the market force that determines where citrus fruit can be grown commercially.

4A

4. MORE MARKET FORCES AFFECTING SUPPLY

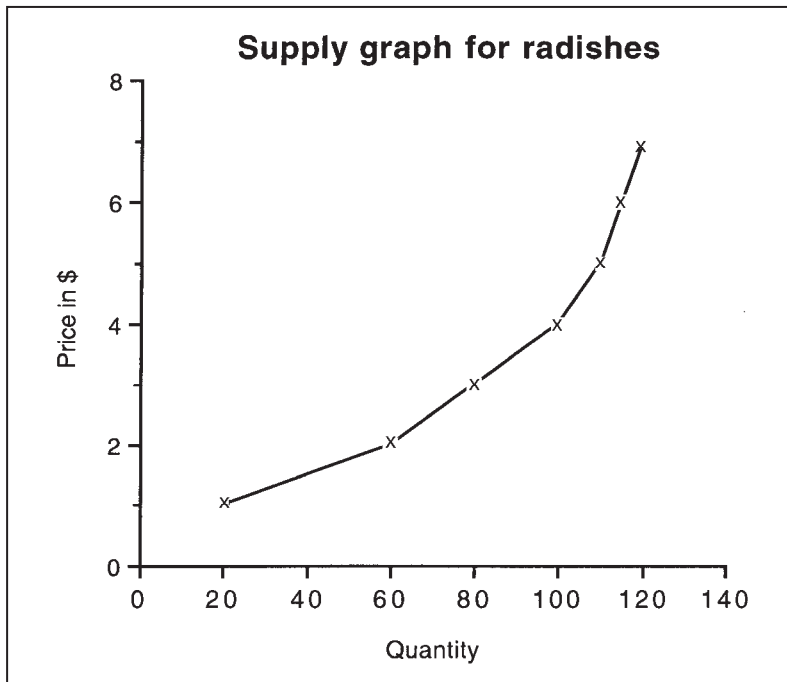
1. A farmer can increase supply of a product by: using higher yielding plant cultivars; using more fertile breeds of animals; reducing losses due to pests and diseases; with technological improvements.
2. Producer organisations buy produce for a set price from many smaller growers to prevent competition among them.
3. Seasonal effects are unseasonal weather conditions.
4. Examples of seasonal effects that can reduce supply are: high winds; hail; frosts; drought; floods; snowstorms.
5. Producer organisations can influence the supply market by: organising a marketing system; setting price schedules; providing technical knowledge; advising the grower on production methods.

5A

5. SUPPLY CURVES

1. Your graph should look like the one below. You may have used different scales for your axes, such as 2 cm intervals for each \$ increase on the vertical scale.

Check your graph has: a title, fully labelled axes, plotted points, and the points are joined with a smooth line.



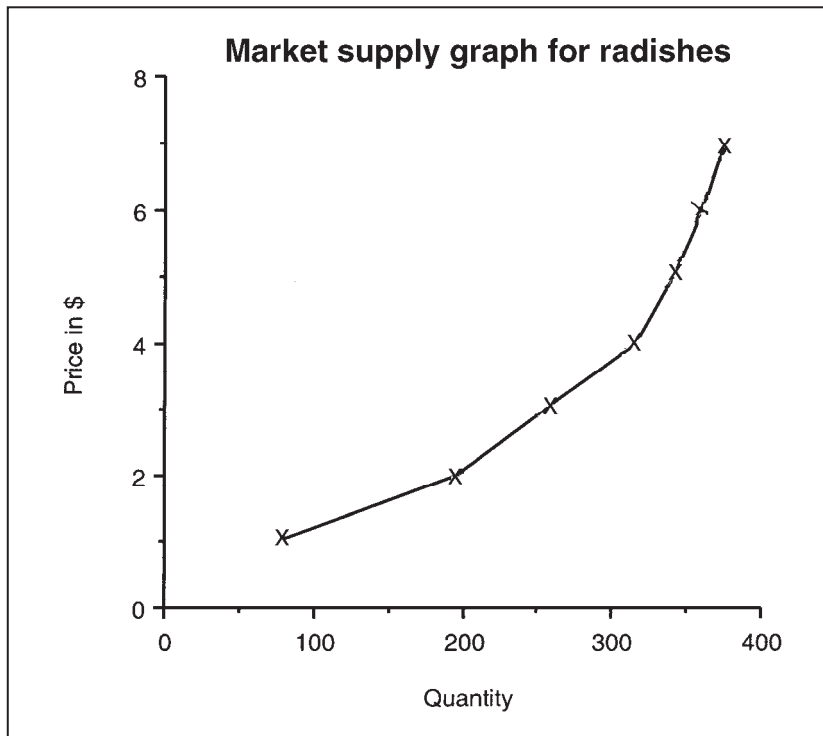
2. a. 60
 b. 91
 c. 112
 d. 117
 e. More radishes are supplied as the price increases.

5B

1.

Price in \$	Grower A	Grower B	Grower C	Market supply
1	20	30	25	75
2	60	70	65	195
3	80	90	85	255
4	100	110	105	315
5	110	120	115	345
6	115	125	120	360
7	120	130	125	375

2.

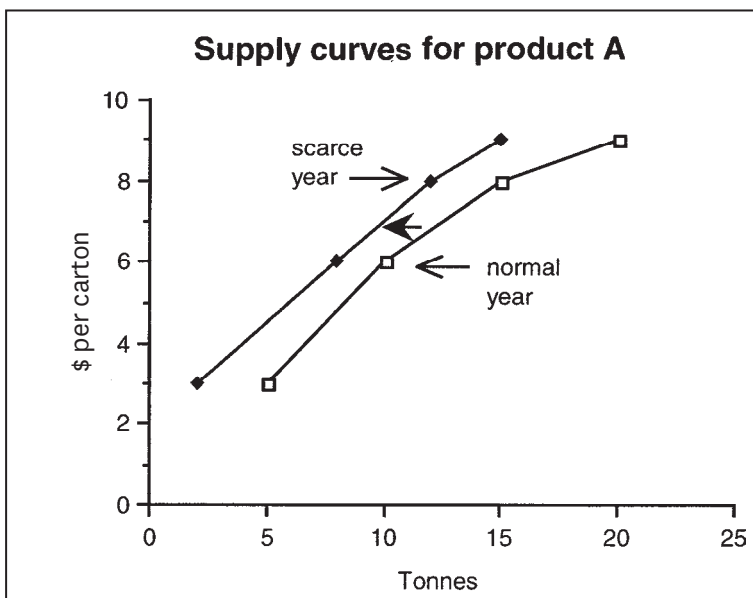


5C

1. a. A (graph slopes upwards from left to right), D and E.
- b. i. B is incorrect because the slope is downwards from left to right.
- ii. C is incorrect because P and Q are on the wrong axes.

5D

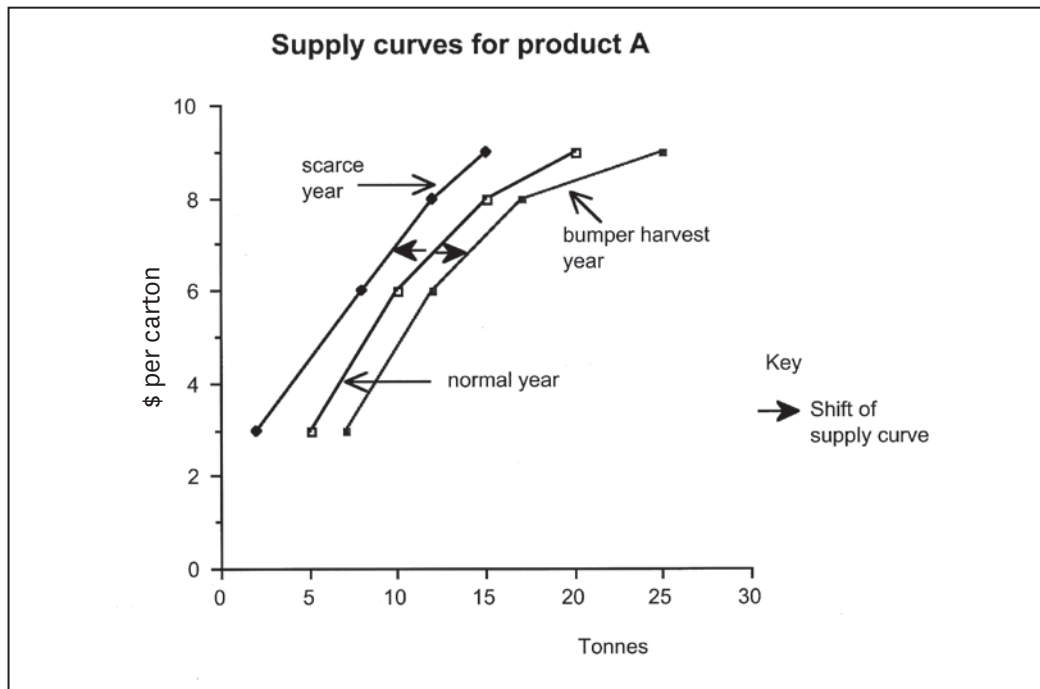
1. a. Curve for normal year shown in graph below.
- b. Curve for scarce year shown in graph below.



ANSWER GUIDE

2. a. About 6.5 tonnes.
- b. About 4 tonnes.
- c. The arrow between the normal year curve and the scarce year curve is pointing to the left.

3. a.



- b. 15 tonnes.
- c. 17 tonnes.
- d. The arrow between the normal year curve and the bumper harvest year curve is pointing to the right.

6. MARKET FORCES AFFECTING DEMAND

6A

1. Your teacher will check this answer.
2. Your teacher will check this answer.
3. Your teacher will check this answer.
4. New Zealand producers aim to export to increase the size of their market because local population is small.
5. Salad vegetables are eaten more in summer.

7A

7. MORE MARKET FORCES AFFECTING DEMAND

1. Producer organisations can affect the demand of a product by:
 - establishing new markets
 - improving market awareness.
2. Products can be changed by:
 - processing to form other products
 - changing their size
 - changing their shape
 - making a new product from them.
3. Strawberries and cream are complements. People use one with the other.
4. New Zealand has problems establishing new markets because of:
 - distance from world markets
 - lack of critical mass
 - difficult access to other markets caused by their regulations
 - lack of market information.

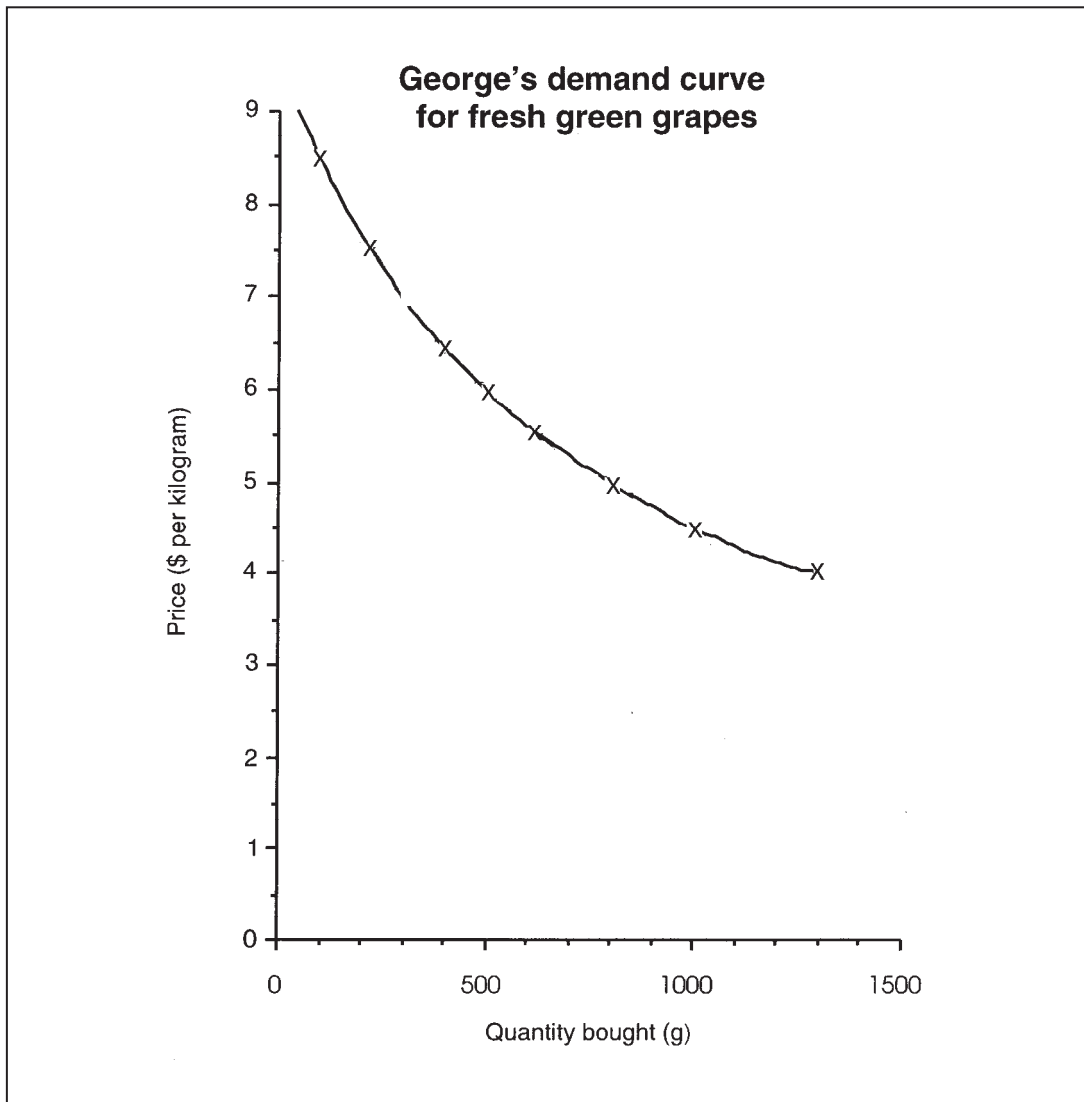
8A

8. DEMAND CURVES**1. DEMAND TABLE FOR GEORGE FOR FRESH GREEN GRAPES**

Price (\$ per kg)	Quantity bought (g)
4.00	1300
4.50	1000
5.00	800
5.50	600
6.00	500
6.50	400
7.00	300
7.50	200
8.50	100

ANSWER GUIDE

2.



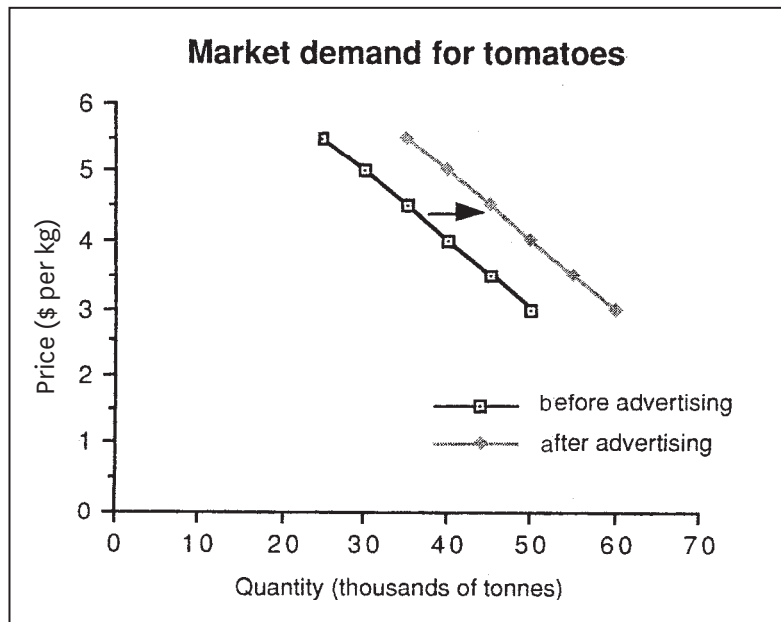
3. a. 150
b. 500
c. 1300
4. As the price falls, the quantity of grapes demanded increases.
5. d. It slopes downwards to the right.

8B

1. A, C and D.
2. B. Demand curves slope downwards to the right and this graph slopes upwards to the right.
3. B. Supply curves slope upwards from left to right.

8C

1. a. The demand curve for tomatoes before advertising is shown below.
b. The demand curve for tomatoes after advertising is shown below.



- c. About 32 500 tonnes.
- d. About 42 500 tonnes.
- e. The arrow between the curves is pointing to the right.

8D

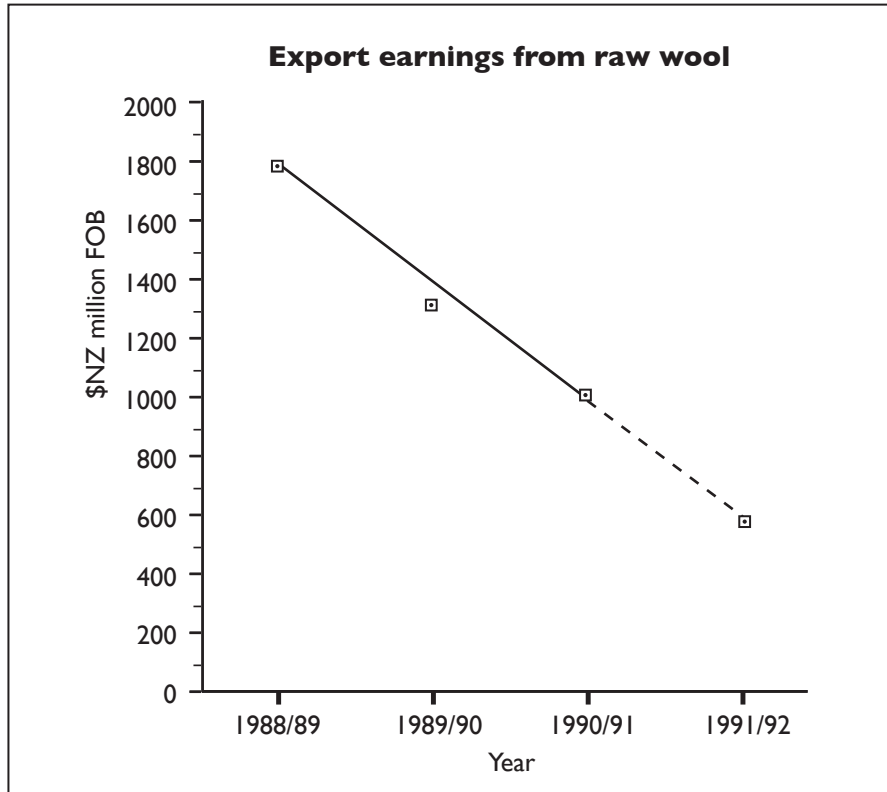
1. Situations that shift the demand curve to the left are:
 - the price of complements increasing
 - the price of substitutes decreasing
 - the size of the market decreasing.
2. The demand curve moving to the left is a decrease in demand.

9A

9. SUPPLY AND MARKET TRENDS

1. a. Export earnings from raw wool are declining.

b.



c. 500 \$NZ million FOB.

2. The general trend is that export earnings for product Z are increasing.

9B

1. to 4. Values are shown in the table below.

APPLE PRODUCTION – TOTAL AND BY VARIETY (FIGURES IN TONNES)

Year	Total	Variety A	Variety B	Variety C	Variety D
1	40	10	10	10	10
2	70	15	20	20	15
3	80	15	25	20	20
4	90	20	25	22.5	22.5

5. Variety B, from 10 tonnes to 25 tonnes, an increase of 15 tonnes.

9C

1. The general market trend from 1930 to 1988 has been an increase in apple consumption. The reasons could be:
 - advertising and promotion of apples
 - newer varieties available
 - emphasis on eating fruit as part of a balanced healthy diet
 - better storage facilities so that apples are available all year round.

2. Apart from the large increase in sugar consumption in 1949, the amount eaten has in general increased by only a small amount. The reasons could be:
 - people have always enjoyed sweet tasting food
 - sugar is a cheap food and found in a great variety of foods such as cereals, cakes, biscuits, sweets, ice cream, soft drinks and so on.

3.
 - a. Tea consumption has decreased; coffee consumption has increased.
 - b. These two trends could be related in that people may well have reduced the amount of tea they drink and replaced it with coffee.

10A

10. ASSESSMENT

Your teacher will assess these answers.

ACKNOWLEDGEMENTS

Every effort has been made to acknowledge and contact copyright holders. Te Aho o Te Kura Pounamu apologises for any omissions and welcomes more accurate information.

Photo

Photo: iStockphoto, Tomato plant, 3339536.

Old strawberry; Strawberries and cream; Yards in snow; Triplet lambs © Dave Jackson, Wellington, NZ: The Correspondence School. Used in any medium for education and its promotion by permission.

Hail damaged peaches © Kenny Liggins.

Text

Fewer Piggies go to market; Deer kill drops with schedules; from University Entrance, Bursaries and Scholarships Examination: Agriculture and Horticulture: 2002, © NZ Qualifications Authority 2002, Wellington, NZ.

Growers moving towards exports of avocado oil; from University Entrance, Bursaries and Scholarships Examination: Agriculture and Horticulture 2001, © NZ Qualifications Authority 2001, Wellington, NZ.

A cherry outlook; from University Entrance, Bursaries and Scholarships Examination: Agriculture and Horticulture: 2000, © NZ Qualifications Authority 2000, Wellington, NZ.

The Correspondence School would like to acknowledge the help of Gladstone Cheeses.

SELF ASSESSMENT

ARO MATAWAI

AGS301

Tick the box that's best for you.

	Very well	Quite well	With difficulty
I can say what a market is and explain why marketing is important to agricultural and horticultural production.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I can list and explain the market forces (factors) that affect product supply.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I can list and explain the market forces (factors) that affect product demand.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I can list and explain the market forces (factors) that affect product demand.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I can draw and interpret supply graphs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I can draw and interpret demand graphs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I can recognise product trends.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Student comment



Phone, fax or email your teacher if you want to talk about any of this work.

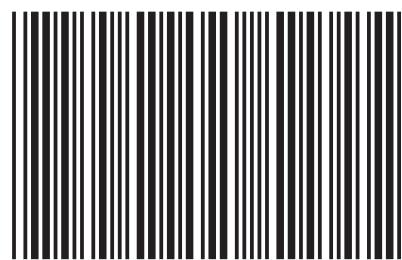
Freephone 0800 65 99 88

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Please find attached letter

Teacher comment

COVER SHEET – AGS301



STUDENTS – PLACE STUDENT ADDRESS LABEL BELOW OR WRITE IN YOUR DETAILS.

Full Name _____

ID No. _____

Address
(If changed) _____

AUTHENTICATION STATEMENT

I certify that the assessment work is the original work of the student named above.

Signed _____
(Student)

Signed _____
(Supervisor)

FOR SCHOOL USE ONLY

ASSESSMENT