

91010



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1

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## Level 1 Geography, 2016

### 91010 Apply concepts and basic geographic skills to demonstrate understanding of a given environment

9.30 a.m. Wednesday 16 November 2016  
Credits: Four

Achievement	Achievement with Merit	Achievement with Excellence
Apply concepts and basic geographic skills to demonstrate understanding of a given environment.	Apply concepts and basic geographic skills to demonstrate in-depth understanding of a given environment.	Apply concepts and basic geographic skills to demonstrate comprehensive understanding of a given environment.

Check that the National Student Number (NSN) on your admission slip is the same as the number at the top of this page.

**You should attempt ALL the questions in this booklet.**

Pull out Resource Booklet 91010R from the centre of this booklet.

If you need more room for any answer, use the extra space provided at the back of this booklet.

Check that this booklet has pages 2–12 in the correct order and that none of these pages is blank.

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

High  
Merit

TOTAL

16

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**QUESTION ONE: Locations and Features**

Read the following geographic concept and refer to it, as well as **Resources A and B** on pages 3 and 4 of the resource booklet, when answering (a).

**Geographic Concept**

**Patterns** may be spatial: the arrangement of features on the earth's surface; or temporal: how characteristics differ over time in recognisable ways.

- (a) (i) In which compass direction does the Clutha River/Mata-Au flow?

South east

- (ii) Name the New Zealand Cycle trail that is graded the most "advanced".

Old Ghost Road

Refer to **Resource C** on page 5 of the resource booklet when answering (b).

- (b) (i) How long is the Clutha Gold Trail?

73 km

- (ii) How many bridges cross the Clutha River/Mata-Au between the start and finish of the Clutha Gold Trail?

4

- (iii) Circle below the section of the Clutha Gold Trail that has the greatest change in altitude:

Roxburgh Dam  
to Roxburgh

Roxburgh to  
Millers Flat

Millers Flat to  
Beaumont

Beaumont to  
Lawrence

Refer to **Resource D** on page 6 of the resource booklet, when answering (c).

- (c) (i) What linear feature is found at 122497?

state highway 8

- (ii) What is the area reference (4-figure or AR) for the grid square where the Teviot River joins the Clutha River/Mata-Au?

175 506

Read the following geographic concept and refer to it, as well as **Resources D and E** on pages 6 and 7 of the resource booklet, when answering (d).

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### Geographic Concept

**Environments** may be natural and / or cultural. They have particular characteristics and features which can be the result of natural and / or cultural processes. The particular characteristics of an environment may be similar to or different from another environment.

Geographers use both maps and photographs when studying environments.

- (d) (i) Which of Resource D or Resource E is the more recent?

E

Give at least ONE piece of evidence from the resources to support your answer.

Resource D does not show the ~~roads~~ fields shown on Resource E below the racecourse.

- (ii) Fully explain the usefulness of Resource D OR Resource E for geographers, when looking at the patterns of land use in Roxburgh East.

Include specific evidence from the resource to support your answer.

Resource E would be useful to geographers because it is more zoomed in than resource D.  
Resource E shows each field distinctly and it shows the roads between them.

MS

**QUESTION TWO: Climate and Patterns**

Read the following geographic concepts and refer to them, as well as **Resource G** on page 8 of the resource booklet, when answering this question.

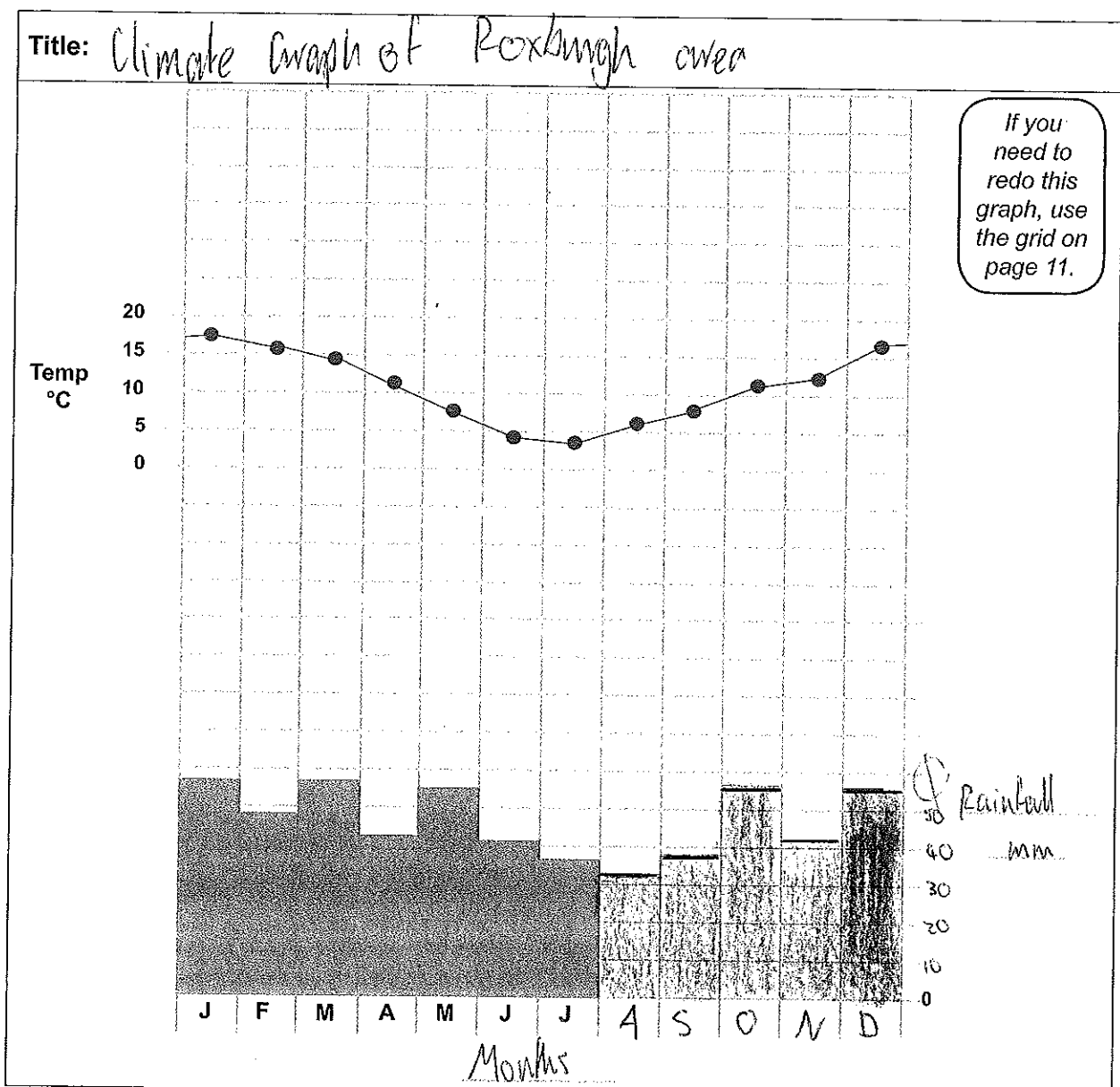
**Geographic Concepts**

**Environments** may be natural and / or cultural. They have particular characteristics and features which can be the result of natural and / or cultural processes. The particular characteristics of an environment may be similar to or different from another environment.

**Patterns** may be spatial: the arrangement of features on the earth's surface; or temporal: how characteristics differ over time in recognisable ways.

The climate of Roxburgh is ideal for growing fruits. The first stone fruit trees (red apricots) were planted in 1866. Apples have been grown commercially since the early 1900s. Both these types of fruit require cool winters to allow the fruit to set.

- (a) Complete the climate graph for the Roxburgh area below, using information from Resource G on page 8 of the resource booklet.



- (b) Calculate the total annual rainfall for the Roxburgh area.

566.8 mm

- (c) Calculate the average temperature for the Roxburgh area in summer.

15.2°C

58.2  
33.6

- (d) Fully explain the pattern of temperatures and rainfall that the Roxburgh area experiences throughout the seasons.

Include specific information from Resource G on page 8 to support your answer.

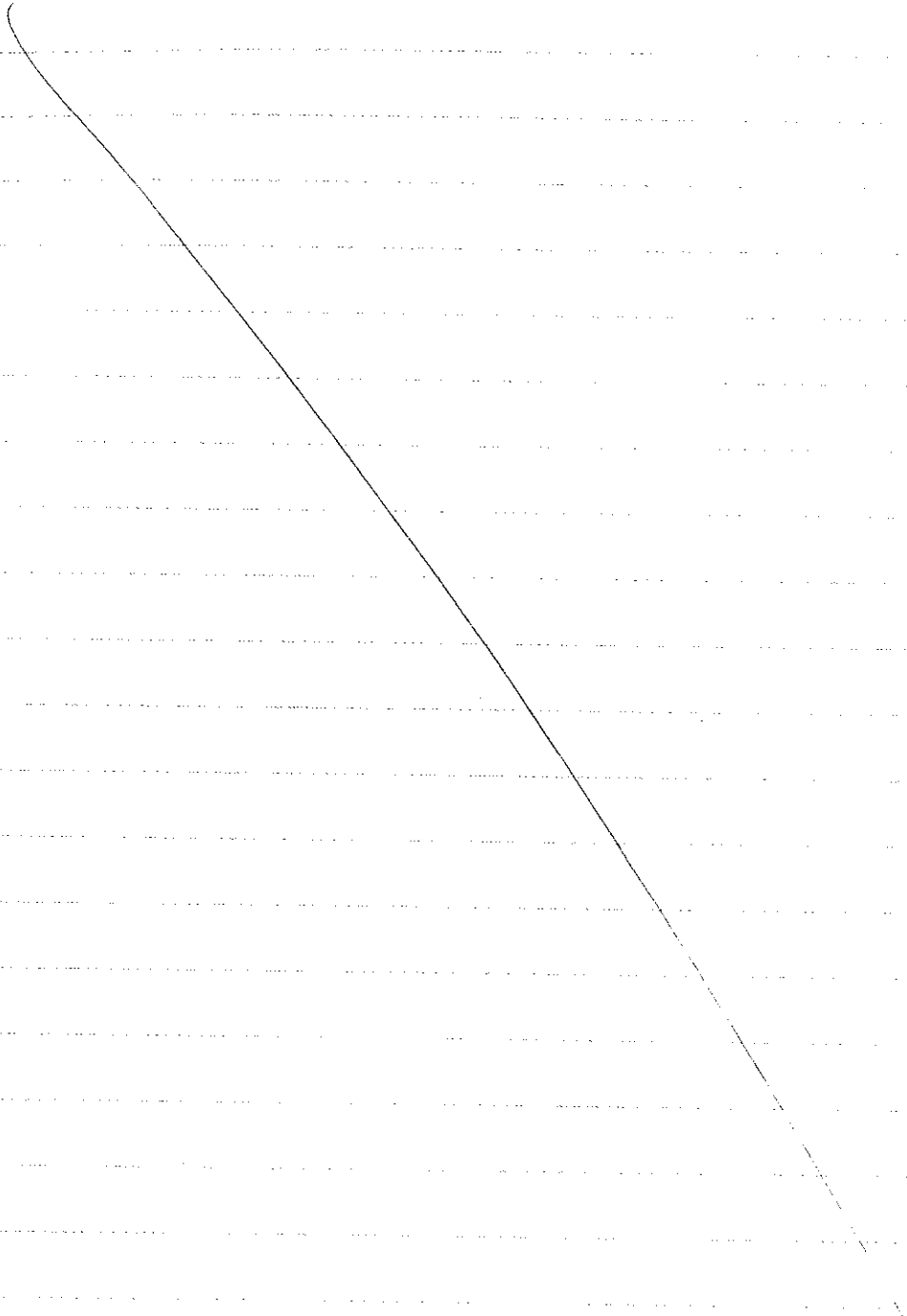
Roxburgh is found in the south island of New Zealand. They experience moderately warm summers (15.2°C) and very chilly winters (5.3°C). The climate graph shows that their temperature has a dip between June and July which are the end of the winter months. These are also some of their drier months. Their warm months are often their wet months, opening up the possibility that they have ~~rather~~ slightly humid weather at the start and end of their year.

Their rainfall in Roxburgh seems to fluctuate a bit - they will experience a wet month and then a drier month... Although there is only 24.6mm range between their highest (58.2mm) and their lowest (33.6mm), a pattern is noticeable.

Roxburgh is also sheltered from the weather by the mountain range that runs down the left side of the

Part (d) continues on the next page

South island, limiting the amount of rain  
the area receives. ||



Mt e

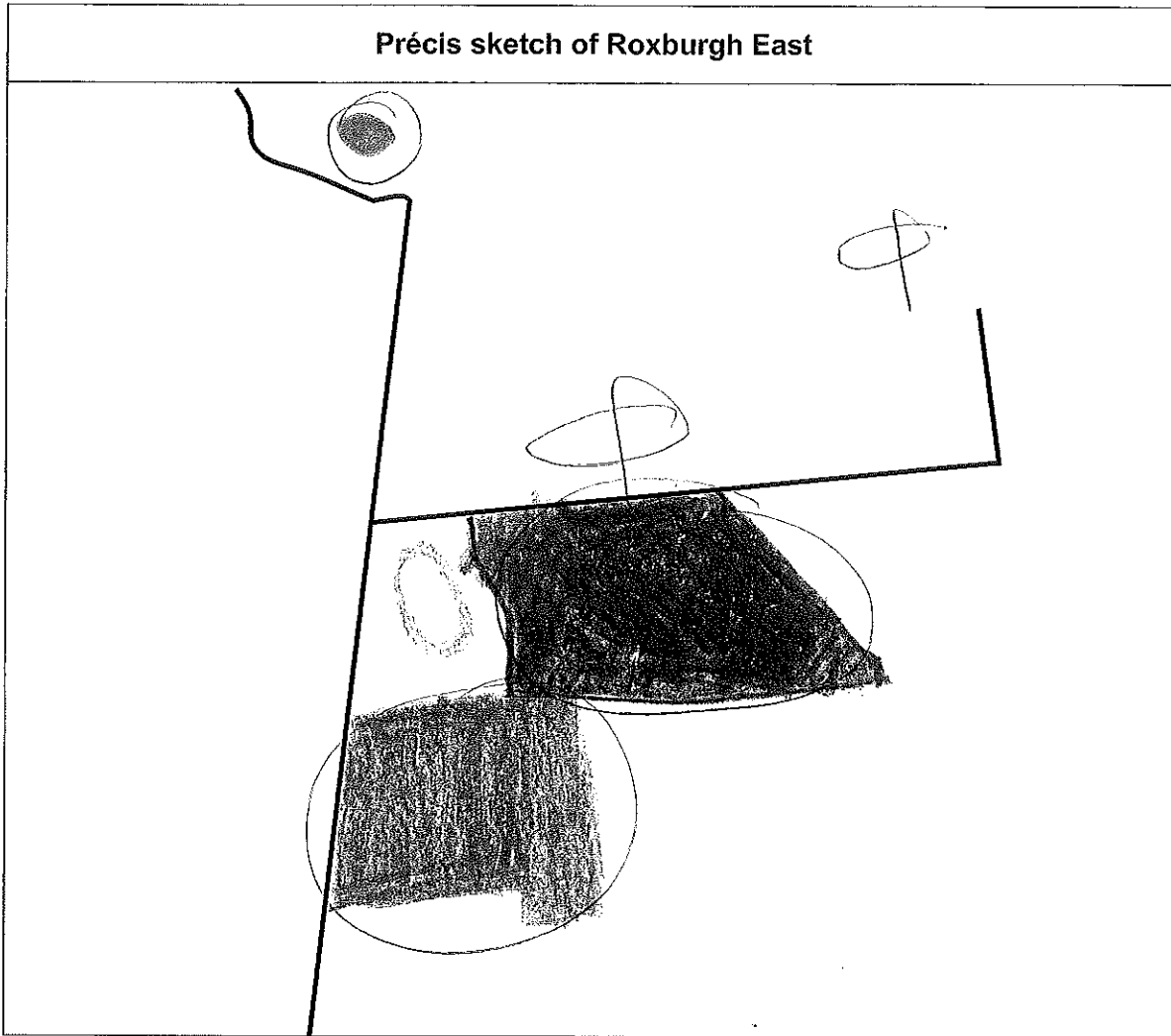
### QUESTION THREE: Sustainability

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Refer to **Resources D–F** on pages 6 and 7 of the resource booklet, when answering (a).

(a) On the **précis sketch** below, **locate and label**:

- a storage dam north of Kinaston Road
- the Roxburgh Racecourse
- the area of orcharding south of the Roxburgh Racecourse (by shading it in).

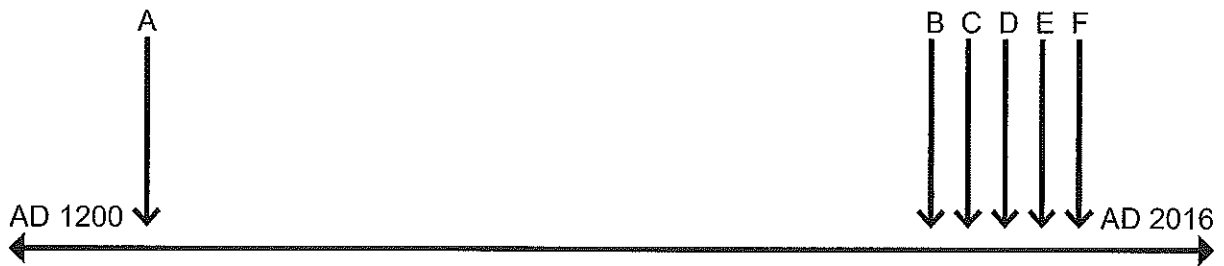


**Key:**

	Storage dam north of Kinaston Road
	Roxburgh Racecourse
	Orchard area south of the Roxburgh Racecourse

Refer to **Resource A** on page 3 of the resource booklet, when answering (b).

The continuum below shows the use of land in the Roxburgh area in historical order.



- (b) Match the letter from the continuum above with the corresponding land use type in the table below.

*Note: C and E have been done for you.*

Land Use Type	
Apple growing	C
Moa hunting	A
Roxburgh Dam and Township	D
Clutha Cycle Trail	<del>A</del> F
Gold dredging	B
Canning apricots (ceased)	E

1275

1862 1900



Read the following geographic concepts and refer to them, as well as **Resources A–I** on pages 3–9 of the resource booklet, when answering (c).

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### Geographic Concepts

**Kaitiakitanga** means to “care for” the environment: sustainable use, management, and control of natural and physical resources that are carried out to the mutual benefit of people and resources. A kaitiaki is a guardian. This can be a person or group that cares for an area, such as a lake, forest, or river valley.

**Sustainability** involves adopting ways of thinking and behaving that allow individuals, groups, and societies to meet their needs and aspirations without preventing future generations from meeting theirs. Sustainable interaction with the environment may be achieved by preventing, limiting, minimising, or correcting environmental damage to water, air, and soil, as well as considering ecosystems and problems related to waste, noise, and visual pollution.

- (c) Fully explain how the concepts of kaitiakitanga and/or sustainability can be applied to the different types of land use in the Roxburgh area.

In your answer, include the geographic concept of kaitiakitanga and/or sustainability, and specific evidence from any of the resources on pages 3–9 of the resource booklet.

When moas were still alive, they were hunted in the south of the South Island. However, this was not done in a sustainable fashion and would have been done primarily for food. Since the hunting was performed at an unsustainable way, the moa bird is now extinct. The land was also used for digging gold. Gold, unlike moa, can not reproduce so once it's gone, it's gone. We are told that the discovery of gold is what “gave Roxburgh its start” in 1862. The gold was quickly found and removed as it was very desirable. Next, the development of orchards came in to play. Roxburgh is one of the largest apple orchards in Australasia and with such a big

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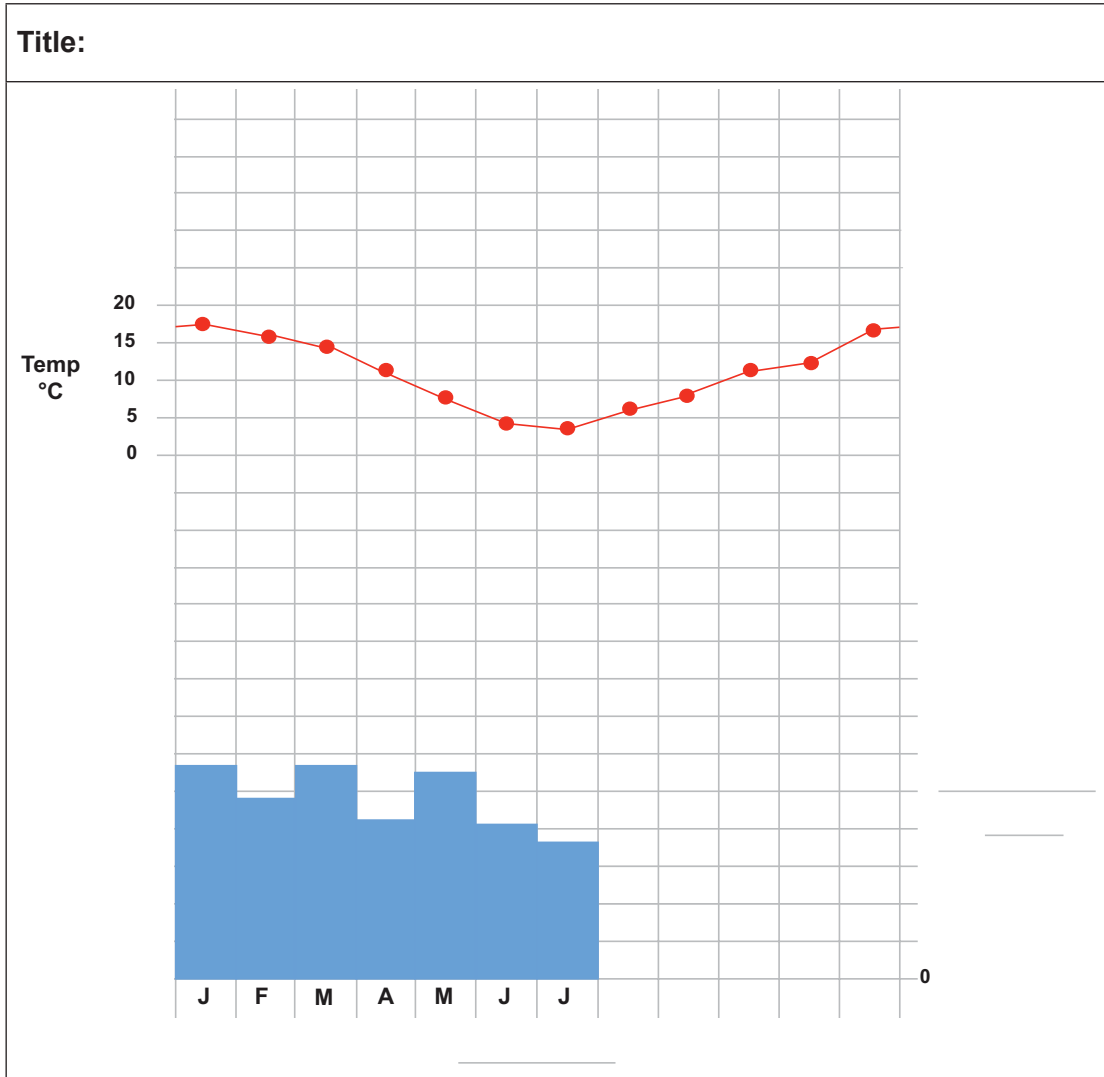
business comes a big responsibility. The orchard only sprays their trees when "absolutely necessary" meaning that their produce is as natural and healthy as possible. Since the trees are as natural as possible, their carers are displaying the concept of kaitiakitanga. They are taking care of their environment and trying to preserve the trees for as long as possible. We are told that the caretakers of Southern Orchards also have beehives that naturally help out with pollinating the trees. They also have a "14km special shelter belt" for native skinks. This is a sustainable practise because as the skinks have a safe place, they will breed and continue their species.

The watering of the orchard is also sustainable as it is only used when necessary.

The use of cyclists tracks is a sustainable thing too because instead of people potentially making their own tracks or going off course (which could be bad for the wildlife + plants) they are able to choose between a variety of tracks.

**SPARE GRID**

If you need to redo the climate graph from Question Two (a), complete it on the grid below. Make sure it is clear which answer you want marked.





High Merit exemplar for Geography 91010 2016		Total score	16
Q	Grade score	Annotation	
1	M5	<p>The candidate provides evidence towards an M5, rather than M6 or E7. Two basic skills are inaccurate: compass direction and the four-figure grid reference.</p> <p>The correct letter is selected for Question One (d) (i), but the evidence shows the candidate does not recognise orchards as the main land use type. Question One (d) (ii) lacks the detailed, specific evidence required for a higher grade.</p>	
2	M6	<p>The candidate provides an incomplete climate graph scale and the calculation of temperature is inaccurate. Paragraph fully explained with specific evidence.</p>	
3	M5	<p>Inaccurate plotting of two features on the précis sketch limited the candidate to an M5, despite the Excellence standard paragraph answer.</p>	