

# Cambridge O Level

CANDIDATE  
NAME

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CENTRE  
NUMBER

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## GEOGRAPHY

2217/01

Paper 1 Physical Geography

For examination from 2027

SPECIMEN PAPER

1 hour 45 minutes

You must answer on the question paper.

You will need: Insert (enclosed)  
Calculator  
Ruler

## INSTRUCTIONS

- Answer **three** questions in total:  
Section A: answer Question 1.  
Section B: answer **two** questions.
- Use a black or dark blue pen. You may use an HB pencil for any diagrams or graphs.
- Write your name, centre number and candidate number in the boxes at the top of the page.
- Write your answer to each question in the space provided.
- Do **not** use an erasable pen. Do **not** use correction fluid or tape.
- Do **not** write on any bar codes.
- If additional space is needed, you should use the lined pages at the end of this booklet; the question number or numbers must be clearly shown.

## INFORMATION

- The total mark for this paper is 75.
- The number of marks for each question or part question is shown in brackets [ ].
- The insert contains additional resources referred to in the questions.

### Definitions

LICs = low-income countries

MICs = middle-income countries

HICs = high-income countries

This document has **22** pages. Any blank pages are indicated.

Section A

Answer Question 1.

- 1 (a) Study Figure 1.1, a map showing the location and magnitude of earthquakes in Alaska, USA.

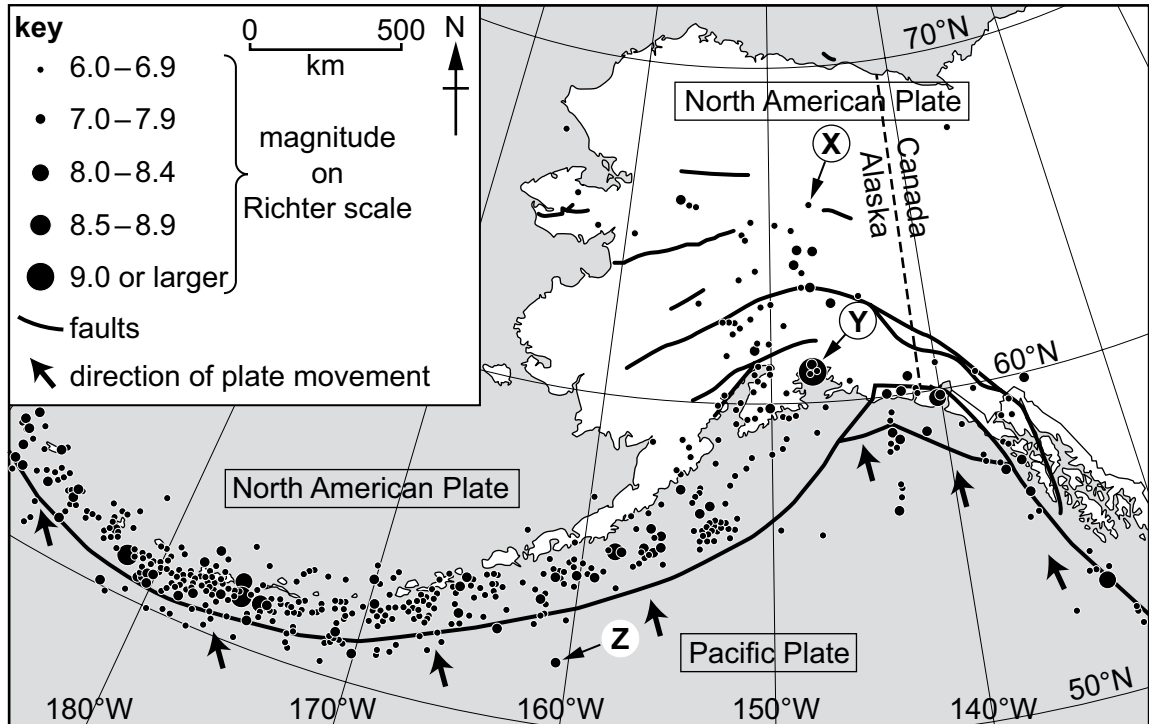


Figure 1.1

- (i) In which direction is the Pacific Plate moving?

Tick **one** answer.

	tick (✓)
north (N)	
north-north-west (NNW)	
north-west (NW)	
south-east (SE)	
south-south-east (SSE)	

[1]

- (ii) State the latitude and longitude of the earthquake labelled **X** in Figure 1.1.

.....°N .....°W [1]

(iii) Identify the magnitude on the Richter scale of the earthquakes labelled **Y** and **Z** in Figure 1.1.

**Y** .....

**Z** .....

[2]

(iv) Name **two** other scales which can be used to measure earthquakes.

1 .....

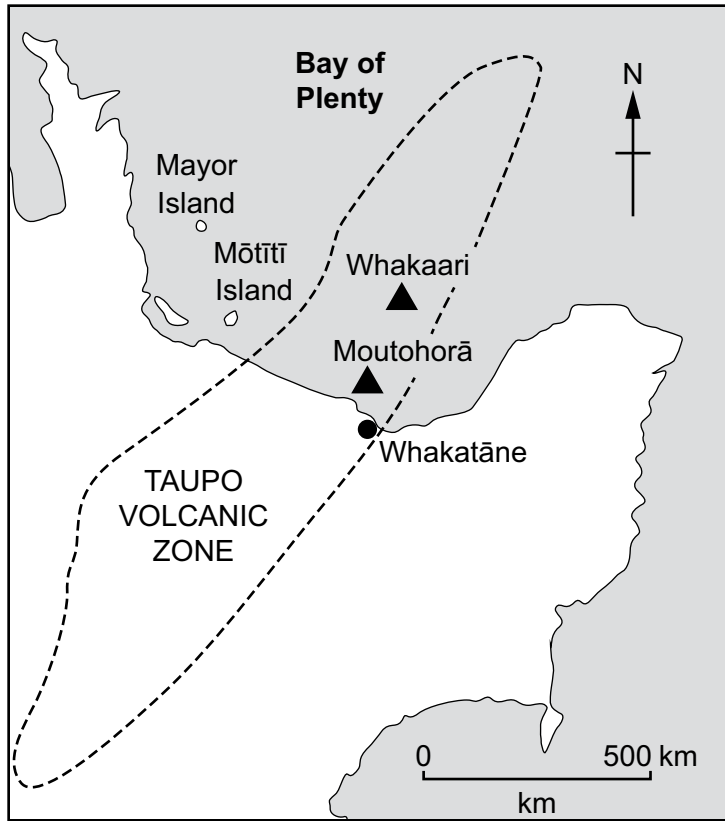
2 .....

[2]

(v) Describe the distribution of earthquakes shown in Figure 1.1.

.....  
.....  
.....  
.....  
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..... [4]

(b) Figure 1.2 shows the location of Whakaari, New Zealand, where a volcano erupted in 2019.



- key**
- ▲ volcano
  - sea
  - land
  - town

**Figure 1.2**

(i) Use Figure 1.2 to describe the location of Whakaari.

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..... [3]



(c) Assess the extent to which technology can reduce the impacts of volcanic eruptions.

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..... [7]

[Total: 25]

**Section B**

Answer **two** questions from this section.

2 (a) Study Figure 2.1 (Insert), a photograph showing a bay at low tide.

(i) Name the coastal landform labelled **X** in Figure 2.1.

..... [1]

(ii) Use Figure 2.1 to identify **two** characteristics of the landform labelled **X**.

1 .....

2 ..... [2]

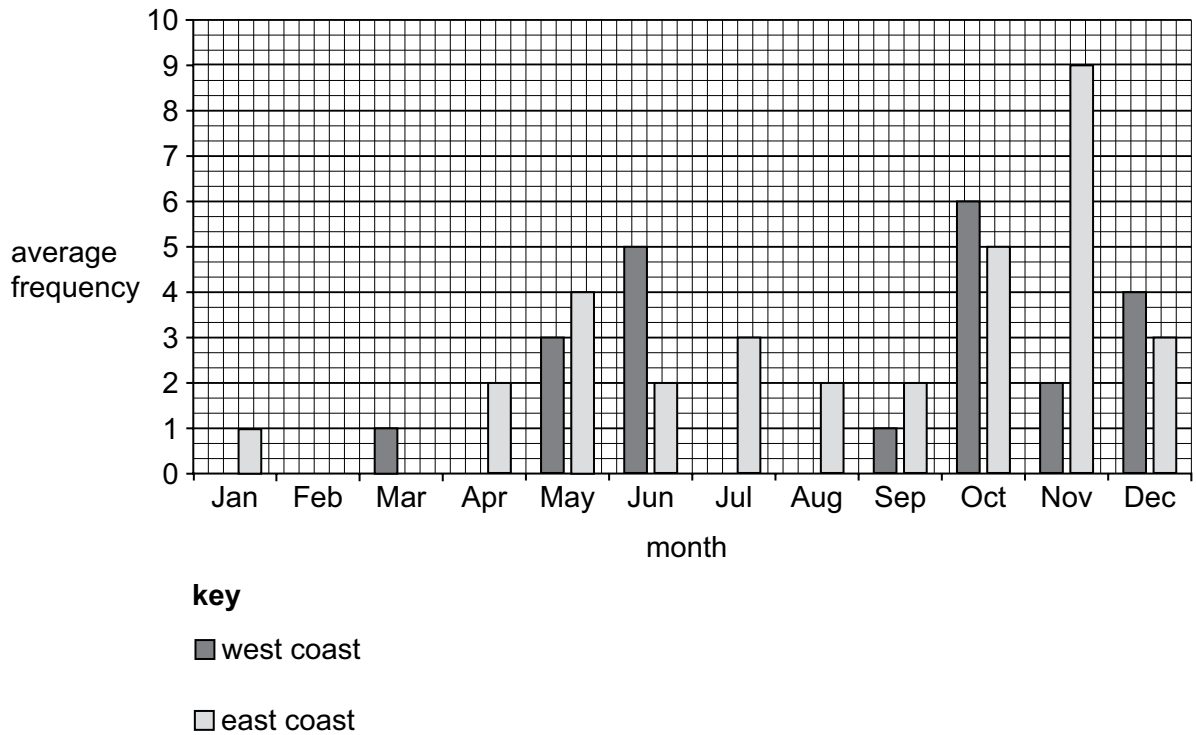
(iii) Use Figure 2.1 to describe the features of the bay. Do **not** refer to landform **X**.

.....  
.....  
.....  
.....  
.....  
..... [3]

(iv) Explain why bays and headlands form along discordant coastlines.

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.....  
.....  
.....  
.....  
.....  
.....  
..... [4]

(b) Figure 2.2, shows the average monthly frequency of tropical cyclones affecting India's west and east coasts.



**Figure 2.2**

(i) Use Figure 2.2 to compare the average monthly frequency of tropical cyclones on India's west and east coasts. Refer to data in your answer.

.....

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..... [3]





(c) Explain the importance of coral reefs to a coastal area you have studied.

name of coastal area .....

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[7]

[Total: 25]

3 (a) Figure 3.1 shows four climatic regions.

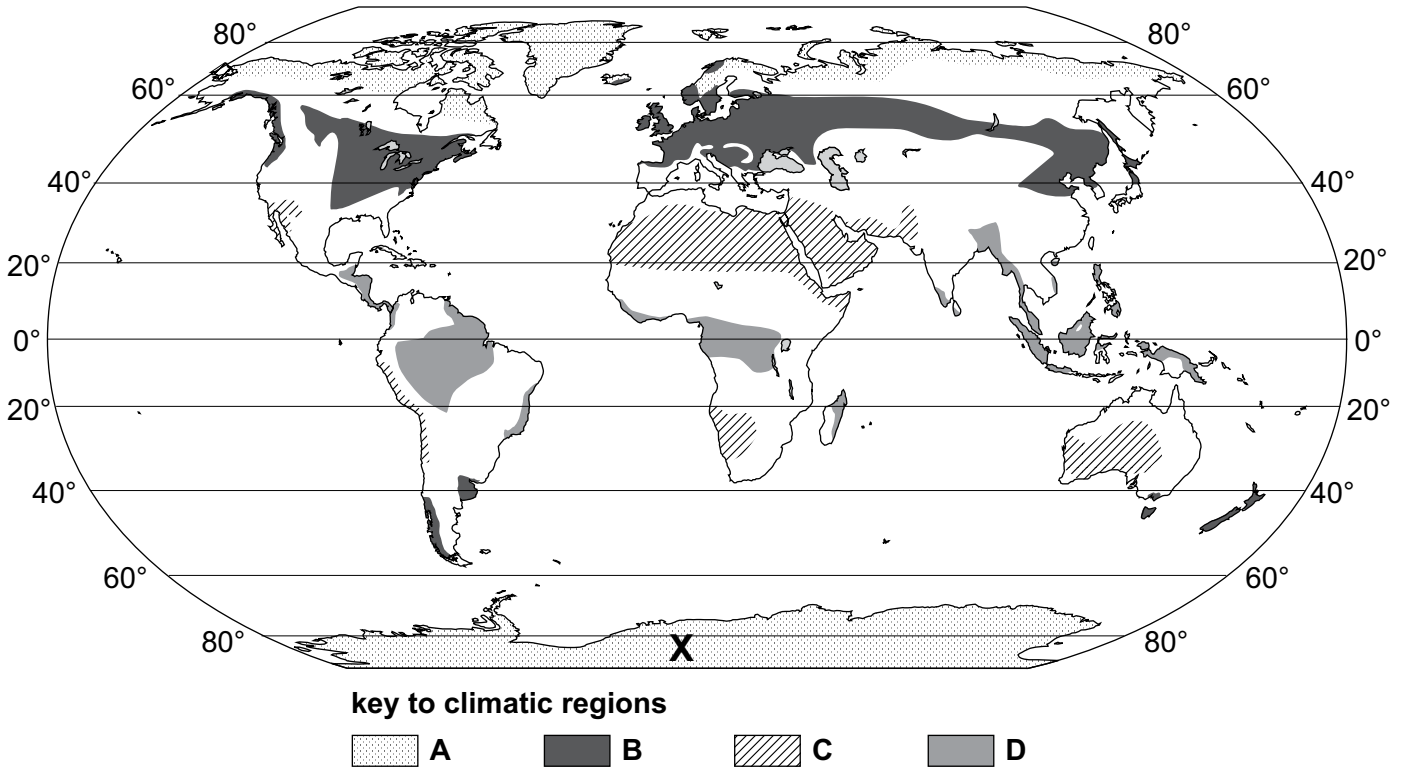


Figure 3.1

(i) Name the continent marked X in Figure 3.1.

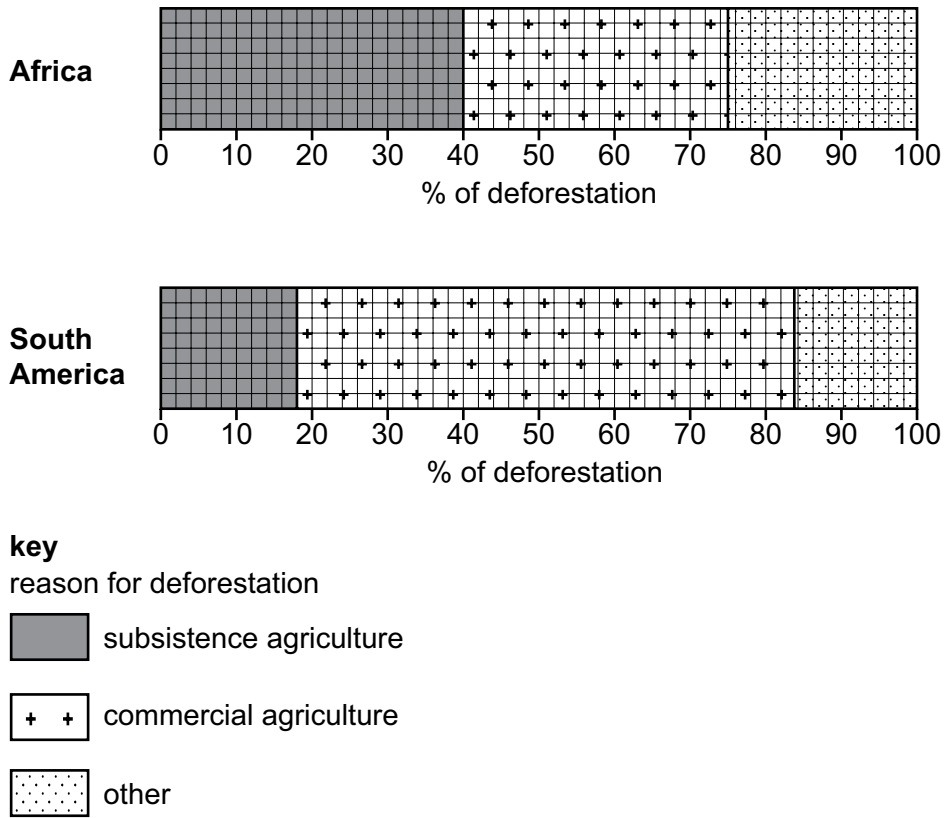
..... [1]

(ii) Zone D in Figure 3.1 has an equatorial climate. Describe the distribution of the regions with an equatorial climate.

.....  
 .....  
 .....  
 ..... [2]



(b) Figure 3.3 shows the reasons for the deforestation of tropical rainforests in Africa and South America.



**Figure 3.3**

(i) Use Figure 3.3 to compare the percentage of deforestation in Africa and South America for both types of agriculture. Refer to data in your answer.

.....

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..... [3]

- (ii) Study Table 3.1, which shows three plans which the government of a country in Africa is considering to sustainably manage the tropical rainforest.

**Table 3.1**

<p><b>Plan A</b></p> <p>Allow development only in restricted areas and plant two trees for every tree that is removed.</p>
<p><b>Plan B</b></p> <p>Create national parks/conservation areas to prevent development in all areas of tropical rainforest.</p>
<p><b>Plan C</b></p> <p>Only allow development of the tropical rainforest for ecotourism.</p>

Choose the plan that you think will be most effective in sustainably managing the tropical rainforest. Justify your decision.

plan chosen .....

justification .....

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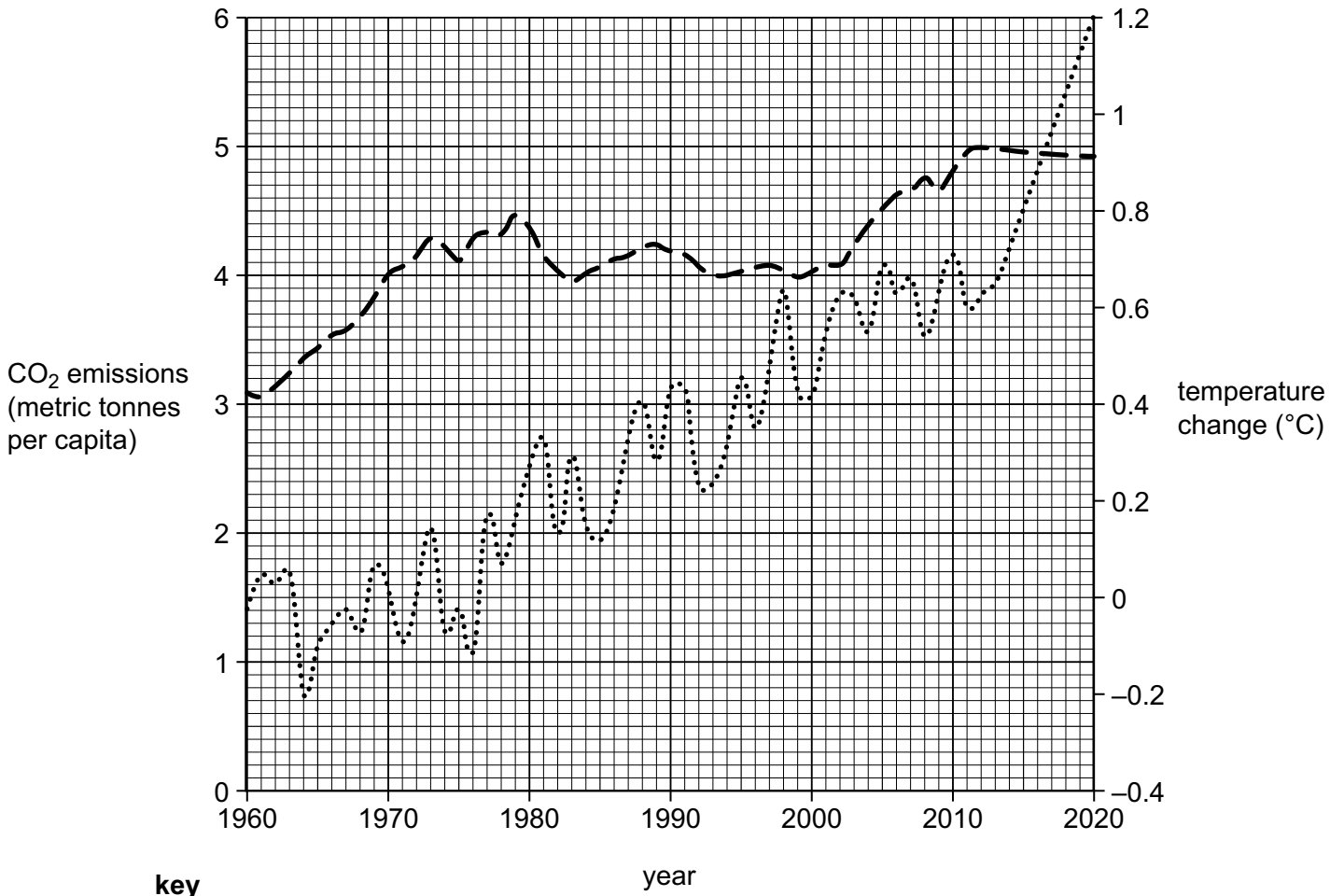
.....

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[5]



- 4 (a) Study Figure 4.1, which shows changes in global carbon dioxide (CO<sub>2</sub>) emissions and average temperature change between 1960 and 2020.



- key**
- - CO<sub>2</sub> emissions (metric tonnes per capita)
  - ..... average temperature change (°C)

**Figure 4.1**

- (i) Estimate the increase in global CO<sub>2</sub> emissions between 1960 and 2020.  
 ..... metric tonnes per capita [1]
- (ii) Give **two** reasons for the increase in global CO<sub>2</sub> emissions between 1960 and 2020.
- 1 .....
- 2 .....

[2]



(iii) Use Figure 4.1 to describe the average changes in temperature between 1960 and 2020. Refer to data in your answer.

.....  
.....  
.....  
.....  
.....  
.....  
.....[3]

(iv) Use evidence in Figure 4.1 to describe the relationship between global CO<sub>2</sub> emissions and average temperature change.

.....  
.....  
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.....  
.....  
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.....  
.....[4]

(b) (i) State **one** reason for each of the following impacts of climate change.

rising sea levels .....  
.....  
prices of food may rise .....  
.....  
shortage of fresh water .....  
.....  
[3]









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**Copyright acknowledgements**

- Question 1, Figure 1.1 © *Earthquakes in Alaska*; U.S. Geological Survey; <https://pubs.usgs.gov/of/1995/0624/pdf/of95-624L.pdf>
- Question 1, Figure 1.2 © Reprinted from *Journal of Volcanology and Geothermal Research*, Vol 302, Klaus Mayer, Bettina Scheu, H. Albert Gilg, Michael J. Heap, Ben M. Kennedy, Yan Lavallée, Mark Letham-Brake, Donald B. Dingwell, *Experimental constraints on phreatic eruption processes at Whakaari (White Island volcano)*, Page 151, 1 September 2015, with permission from Elsevier.
- Question 2, Figure 2.1 © Steve Sibley © Cambridge University Press & Assessment
- Question 2, Figure 2.2 © Bar chart from [www.air-worldwide.com/blog/posts/2022/4/growing-tropical-cyclone-risk-on-indias-west-coast/](http://www.air-worldwide.com/blog/posts/2022/4/growing-tropical-cyclone-risk-on-indias-west-coast/)
- Question 3, Figure 3.2 © *World Biome Climate Graphs*; tes; <https://www.tes.com/teaching-resource/worldbiome-climate-graphs-6301500>

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