# NEW ZEALAND: USING AN ATLAS MAP

**Study the 2.1 map and complete the following tasks.**

1 Name the capital city of New Zealand.

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2 Name the strait separating the North Island and South Island.

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3 Name New Zealand's largest urban centre.

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4 What is the straight-line distance between:

a) Wellington and Dunedin? ---

b) Wellington and Auckland? ---

5 What is the direction of:

a) Christchurch from Wellington?

---

b) Wellington from Auckland?

---

c) Christchurch from Dunedin?

---

d) Mt Taranaki from Wellington?

---

6 Name the feature of the physical environment located at the following latitudes and longitudes:

a) 44°41'S 167°55'E

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b) 43°33'S 170°10'E

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c) 43°28'S 170°10'E

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d) 39°18'S 174°05'S

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7 Name the urban centre located at the following latitudes and longitudes:

a) 45°53'S 170°31'E

---

b) 45°02'S 168°40'E

---

c) 46°25'S 168°21'E

---

d) 38°09'S 176°15'E

---

8 What is the latitude and longitude of the following landform features?

a) Mt Cook ---

b) Lake Taupo ---

9 Name the mountain ranges running the length of the South Island.

---

10 Name the plains to the south-west of Christchurch.

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11 Name the river flowing into Canterbury Bright.

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12 Name the lake on which Queenstown is located.

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13 Name the highest peak on North Island.

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# NEW ZEALAND: CLIMATE AND DEMOGRAPHY

**Study Figures 2.2a to 2.2c (page 22) and complete the following tasks.**

1 Identify the areas of New Zealand that have mid-summer daily average temperatures greater than 23.0°C.

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2 Identify the areas of New Zealand that have mid-winter daily average temperatures greater than 0.0°C.

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3 State the average annual minimum and maximum temperature experienced in the area surrounding Mt Taranaki (Mt Egmont).

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4 Give the reason for the pattern of temperature shown on New Zealand's North Island during winter:

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5 Compare the map showing the pattern of rainfall (Figure 2.2c) with an atlas map showing the topography of New Zealand. Account for the very high rainfall recorded along the west coast of the South Island. Name the type of rainfall responsible and draw an annotated diagram to illustrate how it works.

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**Study Figure 2.2d (page 22) and complete the following tasks.**

6 Name the station that has:

a) The highest average monthly temperature.

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b) The lowest average monthly temperature.

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c) The highest annual rainfall.

---

d) The lowest annual rainfall.

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7 Estimate the annual range of temperature of Auckland.

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8 State the difference in the amount of October rainfall that Hokitika receives compared to Auckland.

---

9 Describe the seasonal distribution of rainfall of Wellington.

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10 Explain why Hokitika receives more rainfall than Christchurch does.

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**Study Figures 2.2e and 2.2f (page 23) and complete the following tasks.**

11 State the years in which New Zealand's annual rate of population growth exceeded 3%.

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12 State the years in which New Zealand recorded its lowest rate of population growth.

---

13 State the general trend in the annual rate of population increase since 1945.

---

14 State the years the population gain through net migration equalled or exceeded the population gain from natural increase.

---

15 Estimate the rate of population increase experienced in 1979.

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16 State the year in which the number of people leaving New Zealand first exceeded the gain through immigration.

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**Study Figure 2.2g (page 23) and complete the following task.**

17 Describe the trends shown in the graph.

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**Study Figure 2.2h (page 23) and complete the following tasks.**

18 State the proportion of New Zealand's population under the age of 15 years in 1961.

---

19 Calculate the number of people under the age of 15 years in 1961.

---

20 State the proportion of New Zealand's population under the age of 15 years in 2003.

---

21 Calculate the number of people under 15 years in 2003.

---

22 Explain what the shape of the population pyramids tells us about New Zealand's rate of natural increase and the age structure of its population.

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23 Describe the distribution of New Zealand's population.

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---

24 Estimate the population size of the following urban centres:

a) Wellington ---

b) Auckland ---

c) Dunedin ---

d) Hamilton ---

**Study Figure 2.2j and complete the following tasks.**

25 Calculate the number of Maori people living in New Zealand in 1991 and 2001.

---

---

26 Calculate the number of European New Zealanders living in New Zealand in 2001.

---

**Study Figure 2.2k and complete the following task.**

27 Estimate the change in median age of the New Zealand population between 1991 and 2003.

---

**Study Figure 2.2l and complete the following task.**

28 Describe the changing distribution of New Zealand's urban and rural population since 1936.

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**Study Figure 2.2m and complete the following tasks.**

29 Calculate the increase in life expectancy experienced by both males and females since 1960-62.

---

---

30 State the difference in the average age of death for males and females in 1985-87.

---

**Select one of the photographs that accompany the New Zealand topographic map extracts and complete the following task.**

31 Construct a line drawing of the photograph. Label significant features of the physical and/or human environments.

# MILFORD SOUND TOPOGRAPHIC MAP EXTRACT

**Study the Milford Sound topographic map extract (page 27) and complete the following tasks.**

1 What is the scale of the Milford Sound map extract?

2 What is the contour interval used on the Milford Sound map extract?

3 Identify the feature of the physical environment located at the following grid references:

a) 325675

b) 287665

c) 333786

d) 258710

e) 381724

f) 363666

g) 255594

h) 273585

4 Identify the feature of the human environment located at the following grid references:

a) 205577

b) 325674

c) 335715

d) 260562

5 Identify the dominant vegetation type in AR 3365.

6 What is the approximate altitude of the tree line on the Sheerdown Hills?

7 Estimate the altitude of the landform feature located at the following grid references:

a) 240660

b) 240636

c) 353714

8 What is the greatest difference in relief experienced in a traverse from Access Peak (GR 378643) to Lloyd Peak (GR 381602)?

9 What is the direction of Access Peak (AR 3764) from Odyssey Peak (AR 3666)?

10 What is the general direction of flow of Surprise Creek, located in the south-east quadrant of the map extract?

11 What is the bearing of Shoulder Hill (GR 309676) from Devils Armchair (GR 331705)?

12 Estimate the length of the Milford track from Sandfly Point (GR 361701) to the junction at GR 270574.

13 What is the number of footbridges crossed on a walk from Sandfly Point (AR 3670) to Mintaro (AR 2755)?

14 Calculate the average gradient of the slope between Odyssey Peak (GR 363666) and GR 346678.

15 Calculate the average gradient of the slope between Mitre Peak (GR 321759) and the foreshore of Milford Sound at GR 329769.

16 Calculate the average gradient of Camp Oven Creek from its source at GR 328721 to where it joins the Arthur River.

17 On a separate piece of paper construct cross-sections of the landform features between the following locations. Use a vertical scale of 1 cm = 500 m.

a) From Shoulder Hill (AR 3067) to Mt Ada (AR 3565)
b) From Shoulder Hill (AR 3067) to Devils Armchair (GR 331705)
c) From Access Peak (AR 3764) to Lloyd Peak (AR 3860)
d) From Footstool (AR 3374) to Cascade Peak (AR 3775)
e) From Mitre Peak (GR 321759) to The Lion (AR 3478)
f) From GR 274694 to Mt Phillips (AR 3472)

18 Calculate the vertical exaggeration of the cross-sections you have drawn.

19 How was Lake Ada formed?

20 What evidence is there that the topography of the area covered by the map extract has been shaped by glacial processes?

21 Name two mountains that have areas of permanent snow and ice.

22 Use the information contained on the map extract to write a one-page description of the landscape experienced on a trek or tramp (as it is known in New Zealand) beginning at Milford Sound and ending at Mintaro (AR 2755).

23 What type of visitor do you think would be attracted to the area covered by the map extract?

**Study Figure 2.3a and the Milford Sound topographic map extract on page 27 and complete the following tasks.**

24 What is the length of the runway at Milford Sound?

25 Suggest why the runway has this orientation.

26 On what type of fluvial landform feature is the runway built?

27 Locate the following features on Figure 2.3a:

a) Bowen River and falls
b) Milford Sound airstrip
c) Sinbad Gully
d) Camp Oven Creek
e) Lake Ada
f) Lake Brown
g) Sheerdown Hills

28 Estimate the scale of Figure 2.3a.

**Study Figure 2.3b and complete the following tasks.**

29 On a separate piece of paper construct a line drawing of Figure 2.3b.

30 Locate and name the following features:

a) Arthur River
b) Lake Ada
c) Odyssey Park
d) Mt Ada
e) The mouth of the Cleddau River
f) Milford Airport
g) Fishing boat facilities

31 In what direction was the camera facing when the photograph was taken?

# LAKE TEKAPO TOPOGRAPHIC MAP EXTRACT

**Study the Lake Tekapo topographic map extract and complete the following tasks.**

1 What is the scale of the Lake Tekapo map extract?

2 What is the contour interval used on the Lake Tekapo map extract?

3 Identify the feature of the physical environment located at the following grid references:

a) 146925

b) 067973

c) 116930

d) 064890

4 Identify the feature of the built environment located at the following grid references:

a) 064873

b) 063863

c) 066868

d) 065849

e) 066882

5 Identify the productive activity taking place in AR 0685.

6 What is the area of the following features?

a) Lake McGregor

b) Lake Alexandrina

c) Motuariki Island

7 What is the density of the buildings in AR 0693?

8 What is the depth of Lake Tekapo at GR 110950?

9 What is the distance by road from the bridge in Lake Tekapo township to the gravel pit located at GR 144981?

10 Calculate the time it would take for a truck to travel from the bridge in Lake Tekapo township (GR 080860) to the gravel pit located at GR 144981 at an average speed of 60 km/h.

11 Estimate the water surface height, or elevation, of Lake Alexandrina.

12 What is the local relief experienced in a traverse from the summit located at GR 130854 to the spot height at GR 148843?

13 What is the aspect of the slope in AR 0688?

14 What is the bearing of Mt John (AR 0688) from Mt Hay (AR 1492)?

15 Identify the landform feature located at a distance of 4 km and with a bearing of 202° from Mt Hay.

16 On a separate piece of paper construct a cross-section from Mt Hay (GR 145925) to the spot height at GR 090924. Include indicators of water depth.

17 Calculate the vertical exaggeration of the cross-sections you have drawn.

18 Describe how the water cycle has been modified by people in the south-west quadrant of the map extract.

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**Study Figure 2.4a and the Lake Tekapo topographic map extract and complete the following tasks.**

19 Locate the following features on the photograph:
a) Lake Tekapo
b) Motuariki Island

20 On a separate piece of paper construct a line drawing of the photograph and label the features of the physical environment listed in activity 19.

21 In what direction was the camera facing when the photograph was taken?

---

**Study Table 2.4a and complete the following tasks.**

22 On a separate piece of paper construct the climate graph for Lake Tekapo.

**23 Study the climate graph you have drawn and complete the following tasks:**

a) Calculate the annual range of average monthly temperatures.

---

b) Name the wettest month of the year.

---

c) Name the driest month of the year.

---

d) Describe the seasonal distribution of rainfall.

---

# TASMAN GLACIER TOPOGRAPHIC MAP EXTRACT

**Study the Tasman Glacier topographic map extract and complete the following tasks.**

1 Identify the feature of the physical environment located at the following grid references:

a) 792206 _____

b) 799190 _____

c) 818216 _____

2 Identify the feature of the human environment located at the following grid references:

a) 770143 _____

b) 766173 _____

c) 770233 _____

d) 762170 _____

3 What is the direction of the Tasman Lake from Mt Cook township?

_____.

4 What is the direction of flow of Gorilla Stream in AR 8515?

_____.

5 Estimate the distance by road from Mt Cook bridge (GR 766150) to the shelter located at GR 814195.

_____.

6 Calculate the time it would take for a bike rider to travel from Mt Cook bridge at GR 766150 to the shelter located at GR 814195 at an average speed of 30 km/h.

_____.

7 What is the length of the Mt Cook Airport runway?

_____.

8 Identify the landform feature located at a distance of 8.5 km and with a bearing of 66° from the bridge in Mt Cook township (GR 766150?

_____.

9 What is the area of Tasman Lake?

_____.

10 What is the height of the landform feature located at GR 781184?

_____.

11 Calculate (to the nearest whole number) the gradient of the slope from the spot height at GR 787172 to the road at GR 795160.

_____.

12 What is the aspect of the slope in AR 8317?

_____.

13 What is the bearing of Wakefield Falls (GR 799190) from Billiken Pass (GR 792206)?

_____.

14 On a separate piece of paper construct a cross-section from the spot in AR 7817 to the spot height in AR 8415. Use a vertical scale of 1 cm = 200 m.

15 Calculate the vertical exaggeration of the cross-section.

_____.

16 Identify the alpine feature running along the western edge of the Tasman Glacier.

_____.

17 Identify the fluvial features in AR 8624.

_____.

_____.

18 On a separate piece of paper draw a precise map showing the distinctive landform types on the Tasman Glacier map extract.

19 What evidence is there that the Tasman Glacier and Hooker Glacier are retreating?

_____.

_____.

20 Describe the fluvial features on the Tasman Glacier map extract.

21 List the range of urban functions likely to be available in Mt Cook village.

22 Explain why the area covered by the map extract might be attractive to tourists.

23 On a separate piece of paper construct a line drawing of the photo of the Tasman Glacier (Figure 2.5a). Use an arrow to show the direction of the glacial flow.

# MT TARANAKI (MT EGMONT) TOPOGRAPHIC MAP EXTRACT

**Study the Mt Taranaki topographic map extract and complete the following tasks.**

1 What is the scale of the Mt Taranaki map extract?

---

2 What is the contour interval used on the Mt Taranaki map extract?

---

3 Identify the feature of the physical environment located at the following grid references:

a) 020100 ---

b) 055083 ---

c) 014072 ---

d) 999154 ---

e) 984156 ---

4 Identify the feature of the human environment located at the following grid references:

a) 051099 ---

b) 976027 ---

c) 046144 ---

d) 047167 ---

5 Identify the drainage feature located in AR 0016.

---

6 Identify the mass movement feature in AR 0213.

---

7 Identify the recreational activity evident in GR 033109.

---

8 Name one other recreational activity available on the Mt Taranaki map extract.

---

9 Identify the tourism-related facilities in AR 0414.

---

10 What is the aspect of the slope in AR 0209?

---

11 What is the length of the longest ski tow in the north-east quadrant of the map extract?

---

12 Estimate the length of the Lake Dive Track from its beginning at GR 993019 to its junction with the Brames Falls Track at GR 018087.

---

13 Calculate how long it would take to walk from the beginning of the Lake Dive Track to its junction with the Brames Falls Track at GR 018087.

---

14 What is the average gradient of the Lake Dive Track at GR 993019 to its junction with the Brames Falls Track at GR 018087?

---

15 What is the average gradient of the Mangahume Stream from GR 988060 to GR 955031?

---

16 What is the height of the landform feature located at GR 969159?

---

17 What is the height of The Dome in AR 9915?

---

18 Estimate the area of Ahukawakawa Swamp.

---

19 What is the bearing of Hasties Hill (AR 0407) from the summit of Mt Taranaki?

---

20 Name the water feature that has a bearing of 185° from the summit of Mt Taranaki.

---

21 On a separate piece of paper construct a cross-section from GR 970130 to the summit of Mt Taranaki. Use a vertical scale of 1 cm = 200 m. Begin your scale at 600 m above sea level.

22 Calculate the vertical exaggeration of the cross-section from GR 970130 to the summit of Mt Taranaki.

---

23 Estimate the local relief experienced in a traverse from the river crossing at GR 006097 to the point where the Brames Falls Track and the Upper Lake Drive Track meet in AR 0108.

---

---

24 Describe the drainage pattern of Mt Taranaki.

---

---

**Study Figures 2.6a and 2.6b and complete the following tasks.**

25 In what direction was the camera pointing when the photograph of Mt Taranaki was taken?

---

26 Construct a photo sketch of Figure 2.6b and label the prominent features of the physical environment.

# QUEENSTOWN TOPOGRAPHIC MAP EXTRACT

**Study the Queenstown topographic map extract and complete the following tasks.**

1 What is the scale of the Queenstown map extract?

2 What is the contour interval used on the Queenstown map extract?

3 Identify the feature of the physical environment located at the following grid references:

a) 737695

b) 745707

c) 699713

d) 760710

4 Identify the feature of the human environment located at the following grid references:

a) 672668

b) 715743

c) 755692

d) 667736

5 What type of vegetation is found in AR 6767?

6 Name the type of landuse in AR 7378.

7 What creek flows into the Shotover River at GR 677731?

8 What is the direction of Coronet Peak (AR 7379) from Queenstown?

9 In what direction is the Shotover River flowing in AR 6773?

10 What is the aspect of the slope in AR 7465?

11 What is the bearing of Bowen Peak (GR 663699) from Queenstown Hill (AR 7068)?

12 What is the bearing of Queenstown Hill (AR 7068) from Peninsula Hill (AR 7365)?

13 What is the straight-line distance between the summit of Queenstown Hill (AR 7068) and Peninsula Hill (AR 7365)?

14 What is the length of the Coronet Peak ski lift?

15 Estimate the area of Lake Johnson (AR 7369).

16 What is the elevation of Lake Wakatipu?

17 On a separate piece of paper construct a cross-section from the summit of Queenstown Hill (AR 7068) to the summit of Peninsula Hill (AR 7365).

18 Calculate the vertical exaggeration of the cross-section from Queenstown Hill (AR 7068) to the summit of Peninsula Hill (AR 7365).

19 What is the gradient of the slope between the summit of Queenstown Hill (AR 7068) and the shoreline of Lake Wakatipu at GR 716674?

---

20 What is the gradient of the slope between the summit of Peninsula Hill and the bridge at GR 737667?

---

21 Is Arthur's Point (GR 69710) visible from the summit of Peninsula Hill (AR 7364)? Justify your answer.

---

**Study Figures 2.7a and 2.7b and complete the following tasks.**

22 In what direction was the camera facing when Figure 2.7b was taken?

---

23 Construct a photo sketch of either Figure 2.7a or 2.7b. Label the prominent features of the physical and human environments.

# FRANZ JOSEF GLACIER TOPOGRAPHIC MAP EXTRACT

**Study the Franz Josef Glacier topographic map extract and complete the following tasks. Refer to the legend on page 32.**

1 Identify the feature of the physical environment located at the following grid references:

a) 816446 ----------

b) 810467 ----------

c) 822539 ----------

d) 806541 ----------

e) 808480 ----------

2 Identify the feature of the human environment located at the following grid references:

a) 816505 ----------

b) 841557 ----------

3 In what general direction is the Franz Josef Glacier moving?

----------.

4 In what direction does the Waiho River flow in AR 8155?

----------.

5 What is the bearing of Mt Gunn (AR 8350) from Mt Roon (AR 8145)?

----------.

6 What is the bearing of Tower Saddle (AR 7948) from the footbridge in AR 8152?

----------.

7 On a separate piece of paper construct a cross-section of the Franz Josef Glacier from GR 813492 to GR 835459. Use a vertical scale of 1 cm = 200 m.

8 What is the vertical exaggeration of the cross-section you have constructed?

----------.

9 Calculate the gradient of the Franz Josef Glacier from GR 813492 to GR 835459.

----------.

10 Study Figures 2.8a to 2.8c. Account for the changes evident in the series of photographs.

----------.

# PAPUA NEW GUINEA: USING AN ATLAS MAP

**Study the Papua New Guinea map extract and complete the following tasks.**

1 Name the highest landform feature shown on the map of Papua New Guinea.

---

2 Name a tributary of the Fly River.

---

3 Name the river that enters the sea at Lae (lat. 6°45'S, long. 147°53'E).

---

4 State the general direction in which the Sepik River flows.

---

5 State the direction of Rabaul (lat. 4°13'S, long. 152°11'E) from Port Moresby (lat. 9°28'S, long. 147°0'E).

---

6 State the difference in latitude of Rabaul and Wewak.

---

7 Estimate the latitude and longitude of the following.

a) Mt Wilhelm ---

b) Port Moresby ---

c) Goroka ---

d) Madang ---

8 Identify the place located at the following sets of coordinates:

a) 6°45'S, 147°53'E ---

b) 7°45'S, 147°53'E ---

c) 3°35'S, 143°35'E ---

d) 5°54'S, 144°13'E ---

9 Describe the topography of mainland Papua New Guinea.

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# PAPUA NEW GUINEA: PHYSICAL ENVIRONMENT

1 On a separate piece of paper construct a climate graph for Port Moresby using the data in Table 3.2a.

**Study the climate graphs (Figure 3.2a) and the climate graph you have constructed for Port Moresby and complete the following tasks.**

2 State which station or stations have:

a) The highest annual rainfall.

b) The lowest annual rainfall.

c) The highest average maximum temperature.

d) The lowest average minimum temperature.

e) The largest annual range of temperature.

f) The lowest annual range of temperature.

g) A 'winter' rainfall maximum.

3 Describe the seasonal pattern of rainfall experienced in Madang.

4 After locating Goroka on the map on page 37 account for the greater range of temperatures and lower rainfall experienced by the Goroka station.

**Study the map on page 37 and Figures 3.2b, 3.2c, 3.2g and 3.2h and complete the following tasks.**

5 Describe the pattern of rainfall received by mainland Papua New Guinea and the island of New Britain.

6 Estimate the average annual rainfall received by Port Moresby.

7 Estimate the average annual rainfall received by Madang.

8 Estimate the average annual rainfall received in the Ok Tedi area.

9 Name the dominant vegetation type in the coastal areas of the Gulf of Papua.

10 Describe the relationship between:

a) Topography and rainfall.

b) Population density and landform.

c) Population density and rainfall distribution.

11 Explain why population densities are low in the Sepik River and Fly River lowlands.

12 State the dominant type of traditional landuse in:

a) The Sepik River and Fly River lowlands.

b) Papua New Guinea's mountainous interior.

c) The island of New Britain.

13 Library research activity:

a) Explain why there are a number of German place names in Papua New Guinea.

b) Outline the nature of Australia's relationship with Papua New Guinea since 1918.

c) Describe the difficulties encountered by Australian military forces fighting in Papua New Guinea during World War II.

# MOROBE TOPOGRAPHIC MAP EXTRACT

**Study the Morobe topographic map extract and complete the following tasks.**

1 What is the scale of the Morobe topographic map extract?

2 What is the contour interval of the Morobe map extract?

3 Identify the feature of the physical environment located at the following grid references:

a) 797241

b) 791199

c) 732386

d) 769294

4 Identify the feature of the human environment located at the following grid references:

a) 647442

b) 727353

c) 638419

d) 703305

5 What is the dominant vegetation type found in the following area references?

a) 7621

b) 6044

c) 7034

d) 7334

e) 6729

6 What is the direction of Tumo Point (AR 7338) from Cormoran Point (AR 6940)?

7 What is the direction of Babaguto Island (AR 6944) from Station Point (AR 6542)?

8 What is the bearing of Tauwara Island (GR 796241) from Mount Bernie (GR 791199)?

9 What is the bearing of Tumo Point (GR 732386) from Babaguto Island (AR 6944)?

10 Estimate the height of the landform feature located at the following grid references:

a) 688351

b) 600392

c) 665297

d) 626387

11 What is the density of buildings in AR 6825?

12 Estimate the area of the following:

a) Lake Inlet

b) Eware Inlet

13 Explain why navigation could be hazardous in the area surrounding the islands in the north-west quadrant of the Morobe map extract.

14 What evidence is there that the course of the Waria River has changed over time?

15 Estimate the distance by road from Kobo (GR 754347) to Auno (GR 770234).

16 Estimate the time it would take for a car travelling at a constant speed of 60 km/h to cover the distance from Kobo to Auno.

17 What difficulties would need to be overcome during the construction of the proposed road from Zaka Mission (AR 7235) to the end of the existing road (GR 717385)?

18 Estimate the length of the proposed road.

19 On a separate piece of paper construct a vegetation transect from Gorie (GR 600477) to Posei (GR 602359).

20 Name one commercial landuse activity found on the Morobe map extract.

21 Describe the nature of the physical environment in the area covered by the Morobe map extract.

22 Describe the pattern of settlement and landuse found on the Morobe map extract.

23 Account for the areas covered by secondary growth forest.

24 Identify the locational characteristic that most of the area's plantations have in common.

25 Library research. What is nipa? Under what conditions does it grow?

26 Hypothetical. Describe the possible environmental impacts that the development of a large open-cut mine in the headwaters of the Waria River would have on both the river system and the adjacent marine ecosystem.

# BUNDI TOPOGRAPHIC MAP EXTRACT

**Study the Bundi topographic map extract and complete the following tasks.**

1 What is the scale of the Bundi topographic map extract?

2 What is the contour interval of the Bundi map extract?

3 Identify the feature of the human environment located at the following grid references:

a) 156659 _____

b) 200642 _____

c) 001824 _____

d) 205649 _____

4 What is the main type of vegetation found in the following area references?

a) 1271 _____

b) 9868 _____

c) 1567 _____

d) 0669 _____

5 What is the length of the Braham Landing Ground?

6 Estimate the straight-line distance between Emegari (GR 979677) and Mendi (GR 002646).

7 Estimate the distance between these two villages via the most direct connecting foot track.

8 What is the direction of Bogai (GR 975703) from Bundi (AR 0464)?

9 What is the general direction in which the Baia River flows in AR 0275?

10 What is the bearing of Promisi (GR 161627) from Kousi (GR 156659)?

11 What is the bearing of Ginam (GR 083817) from Kousi (GR 156659)?

12 Estimate the height of the landform feature located at the following grid references:

a) 034704 _____

b) 126644 _____

c) 010695 _____

13 What is the aspect of the slope in AR 0975?

14 What is the density of buildings in AR 9670?

15 Calculate the average gradient of the slope between the spot height at GR 103670 and GR 136690.

16 On a separate piece of paper construct a cross-section from GR 126644 to GR 180660. Use a vertical scale of 1 cm = 200 m.

17 Calculate the vertical exaggeration of the cross-section you have drawn.

18 Construct a vegetation transect from GR 100700 to GR 230740.

19 Draw a precise map showing the distinctive landform types evident on the Bundi map extract.

20 Describe the settlement pattern evident in AR 9647.

---

21 Describe the linkages between settlements in the south-west quadrant of the map.

---

22 Why would road building be difficult in the area covered by the map extract?

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---

---

23 Account for the area of secondary forest growth in the areas adjacent to settlements and their associated shifting agriculture.

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---

24 Account for the formation of the fluvial landform features associated with the Ramu River.

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# SOGERI TOPOGRAPHIC MAP EXTRACT

**Study the Sogeri topographic map extract and complete the following tasks. Refer to the legend on page 42.**

1 What is the scale of the Sogeri topographic map extract?

2 What is the contour interval of the Sogeri map extract?

3 Identify the feature of the physical environment located at the following grid references:

a) 507544

b) 485548

c) 423582

4 Identify the feature of the human environment located at the following grid references:

a) 445583

b) 487519

c) 507577

d) 526555

5 Name the village located at GR 464564.

6 What landuse is found in AR 5058?

7 What recreational facility is found in AR 4858?

8 In which quadrant of the map is Sirinumu Dam located?

9 What is the direction of Sogeri township from Sirinumu Dam?

10 What is the bearing of Meriani (AR 4656) from Ianavebai (AR 4558)?

11 In what direction does the river flow in AR 4853?

12 What is the height of the landform feature located at the following grid references?

a) 499577

b) 426511

13 What is the elevation of the surface of Sirinuma Dam?

14 What is the density of buildings in AR 5156?

15 Estimate the distance by road from Bereadabu (AR 4757) to Gurumunumu (AR 4853).

16 Identify the major commercial landuse found on the Sogeri topographic map extract. Locate, using grid area references, at least three features of the human environment related to this landuse activity.

# MADANG TOPOGRAPHIC MAP EXTRACT

**Study the Madang topographic map extract and complete the following tasks. Refer to the legend on page 42.**

1 What is the scale of the Madang topographic map extract?

2 What is the contour interval of the Madang map extract?

3 Identify the feature of the physical environment located at the following grid references:

a) 675266

b) 648140

c) 689242

d) 685240

4 Identify the feature of the human environment located at the following grid references:

a) 586224

b) 555175

c) 536205

d) 611288

5 What is the area reference of the Madang Golf Course?

6 What type of physical feature is found in AR 5212?

7 Identify the type of vegetation found in each of the following area references:

a) 5619

b) 5911

c) 5415

8 Name the type of landuse found in AR 6527.

9 What river flows into the sea in AR 6418?

10 What is the direction of Mt Hanseman (AR 6129) from Madang?

11 In what direction is the Gum River flowing in AR 6019?

12 What is the aspect of the slope in AR 5126?

13 Estimate the distance by road from the intersection at GR 605150 to the intersection at GR 646229.

14 Estimate the time it would take to travel by road between the intersection at GR 605150 to the intersection at GR 646229 at an average speed of 30 km/h.

15 What is the length of the runway at Madong Airport?

16 What is the density of the buildings in AR 5922?

17 What is the height of the landform feature located at the following grid references:

a) 507227

b) 627277

c) 518267

# RABAUL TOPOGRAPHIC MAP EXTRACT

**Study the Rabaul topographic map extract and complete the following tasks. Refer to the legend on page 42.**

1 Identify possible reasons why Simpson Harbour was selected as a site for settlement.

2 Locate the Mt Tavurvur and Vulcan craters.

3 What is the direction of the Vulcan crater from Rabaul?

4 What is the direction of the Mt Tavurvur crater from Rabaul?

5 What is the bearing of Mt Tavurvur from the Vulcan crater?

6 Estimate the straight-line distance of Mt Tavurvur from Rabaul (GR 080355).

7 Estimate the straight-line distance of Vulcan crater from Rabaul (GR 080355).

8 In what year did Vulcan and Tavurvur last erupt?

9 Identify, by name and grid reference, three additional craters that lie within 10 km of Rabaul.

10 Name the extinct volcano located to the north of Rabaul.

11 Estimate the area of the Rabaul urban area.

12 Explain why Rabaul's airport is poorly located in terms of its ability to cope with natural disasters.

13 Which wind directions were responsible for depositing large amounts of volcanic debris on Rabaul?

14 Identify the dominant landuse types in the area covered by the topographic map extract.

15 Describe the pattern of settlement and communication on the Rabaul map extract.

**Study Figures 3.7b to 3.7d and complete the following tasks.**

16 Describe the nature of the damage caused to Rabaul.

17 What difficulties did authorities face in rebuilding Rabaul?

**Study Figures 3.7b to 3.7d and complete the following task.**

18 Write an extended response (in narrative form) describing the eruption from the viewpoint of someone living in Rabaul.

# KEREMA TOPOGRAPHIC MAP EXTRACT

**Study the Kerema topographic map extract and complete the following extended answer questions on a separate sheet of paper.**

1 Describe, in detail, the nature of the physical environment shown on the Kerema map extract. Use the following headings as a guide: landform, climate, drainage pattern, vegetation.

2 Describe the ways in which people have modified the physical environment in the area covered by the map extract.

3 Describe the difficulties associated with the development of land-based forms of transport and communication in the area covered by the map extract.

4 Explain why there are two landing grounds in such close proximity.

5 List the plantation crops grown in the area covered by the Kerema map extract. How would these products be transported to market?

# PORT MORESBY TOPOGRAPHIC MAP EXTRACT

**Study the Port Moresby topographic map extract and complete the following extended answer questions on a separate sheet of paper. Refer to the legend on page 48.**

1 Describe the nature of the physical environment in the area covered by the map extract.

2 Describe the nature of the coastline in the Port Moresby area.

3 Explain how topography has influenced the pattern of urban development on the map extract.

4 Outline the evidence that suggests that Port Moresby has a high annual rainfall.

5 Study Figure 3.9b and answer the following questions:

a) Write an explanation of shifting agriculture using slash and burn practices.

b) Explain why this landuse practice can be described as being sustainable.

c) Speculate on the circumstances under which this landuse practice might become unsustainable.

# UNITED KINGDOM AND THE REPUBLIC OF IRELAND: USING AN ATLAS MAP

**Study the map on page 51 and complete the following tasks.**

1 What is the latitudinal extent of the United Kingdom?

---

---

2 What is the name of the waterway separating the United Kingdom from Ireland?

---

---

3 What is the name of the waterway separating the United Kingdom from Northern France?

---

4 What is the capital city of the Republic of Ireland?

---

5 What is the direction of Dublin from London?

---

6 What is the direction of Paris from London?

---

7 What is the straight-line distance between:

a) London and Dublin?

---

b) London and Paris?

---

8 Name the mountain range located in the west of England.

---

9 Name the mountain range to the north-west of Edinburgh.

---

10 Name the highest mountain in the United Kingdom.

---

11 Name three cities with a population of more than 1 million in the United Kingdom.

---

---

---

12 Name the river on which London is located.

---

# UNITED KINGDOM AND THE REPUBLIC OF IRELAND: WEATHER AND CLIMATE

**Study Figure 4.2a and complete the following tasks.**

1 What is the range of average monthly temperatures experienced by London?

2 Which month receives the most rainfall? Which receives the least?

3 Describe the seasonal distribution of rainfall.

**Study Figure 4.2b and complete the following tasks.**

4 What is the range of average monthly temperatures experienced by Edinburgh?

5 Which month receives the most rainfall? Which receives the least?

6 Compare Edinburgh's climate with that of London. In what ways are they similar? What differences are apparent?

**Study Figure 4.2c and complete the following tasks.**

7 Identify the synoptic features numbered 1–4.

8 Describe the atmospheric conditions prevailing over southern Europe. What type of weather would be associated with this synoptic pattern?

9 Describe the atmospheric conditions prevailing over United Kingdom. What type of weather would be associated with this synoptic pattern?

**Study Figure 4.2d and complete the following tasks.**

10 Identify the synoptic features labelled A–C.

11 Describe the pattern of air circulation associated with low-pressure systems in the Northern Hemisphere. How does this differ from the pattern of circulation associated with low-pressure systems in the Southern Hemisphere?

**Study Figures 4.2c and 4.2d and complete the following task.**

12 Comment on the likely sequence of weather to be experienced in the United Kingdom over the next two to three days.

**Study Figure 4.2e and complete the following tasks.**

13 What is the mean summer temperature range for the northern parts of the United Kingdom?

14 What is the mean summer temperature range for the south-west tip of the United Kingdom?

15 Describe the impact that proximity to the sea has on mean temperature in both winter and summer.

**Study Figure 4.2f. With the aid of the map on page 51 complete the following tasks.**

16 Describe the overall pattern of mean winter temperatures. Account for this pattern.

**Study Figures 3.7b to 3.7d and complete the following tasks.**

17 Which parts of the United Kingdom experience mean winter temperatures of less than 1.9°C?

18 Which parts of the United Kingdom experience mean winter temperatures greater than 4.6°C?

**Study Figure 4.2g and complete the following tasks.**

19 Using data from the map, describe the overall pattern of rainfall in the United Kingdom.

20 Explain the relationship between the synoptic pattern shown in Figures 4.2c and 4.2d and the rainfall pattern shown in Figure 4.2g

# FORT WILLIAM TOPOGRAPHIC MAP EXTRACT

**Study the Fort William topographic map extract and complete the following tasks. Refer to the legend on page 58.**

1 Identify the features of the physical environment located at the following grid references:

a) 116789 ----------

b) 144727 ----------

2 Identify the features of the human environment located at the following grid references:

a) 122755 ----------

b) 126719 ----------

c) 100743 ----------

d) 167723 ----------

3 Identify the productive activity occurring at the following grid references:

a) 083767----------

b) 126749----------

4 What are the physical features found in AR 1572?

----------.

5 What type of vegetation is found in AR 1575?

----------.

6 What is the direction of Ben Nevis (AR 1671) from Fort William??

----------.

7 What is the aspect of the slope in AR 1674?

----------.

8 In what direction is Allt Daim flowing in AR 1775?

----------.

9 What is the bearing of Meall Bhanabhie (AR 1178) from Ben Nevis (AR 1671)?

----------.

10 What is the height of Ben Nevis (AR 1671)?

----------.

11 What is the difference in elevation between Ben Nevis (AR 1671) and Meall an t-Suidhe (GR 139729?

----------.

12 Estimate the elevation of Lochan Meall an t-Suidhe (AR 1472).

----------.

13 Calculate the gradient of the slope from GR 170740 to GR 160750.

----------.

----------.

# WEST CUMBRIA TOPOGRAPHIC MAP EXTRACT

**Study the West Cumbria topographic map extract and complete the following tasks. Refer to the legend on page 58.**

1 What is the scale of the West Cumbria topographic map extract?

---

2 What is the contour interval used in the West Cumbria map extract?

---

3 Identify the feature of the physical environment at the following grid references:

a) 264213 ---

b) 248338 ---

c) 278193 ---

4 Identify the feature of the human environment located at the following grid references:

a) 236254 ---

b) 229316 ---

c) 278225 ---

d) 265241 ---

5 Identify the distinctive landform (rock) feature located in the following area references:

a) 2529 ---

b) 2926 ---

6 Identify the historical feature located at the following grid references:

a) 291237 ---

b) 297187 ---

7 What is the dominant vegetation type found in the following area references?

a) 2427 ---

b) 2721 ---

8 Identify the change in transport infrastructure evident in AR 2424.

---

9 Estimate the height of the following landform features:

a) Sale How (GR 277287)

---

b) Great Calva (GR 291312)

---

c) Knott (GR 295330).

---

10 Name the river that joins Derwent Water to Bassenthwaite Lake. State the direction in which it flows.

---

11 What is the grid reference of the deepest part of Bassenthwaite Lake?

---

12 Estimate the area of Derwent Water.

---

13 What is the direction of flow of Wiley Grill (stream) in AR 2931?

---

14 What is the grid reference of the confluence of Rigg Beck and Newlands Beck in the south-west quadrant of the West Cumbria map extract?

---

15 What is the bearing of Little Calva (GR 282315) from Great Cockup (GR 274333)?

16 What is the bearing of Kestrel Lodge (GR 244328) from Great Cockup (GR 274333)?

17 Estimate the distance by road from the roundabout at GR 263244 to the road junction at GR 234306.

18 Estimate the time it would take to travel from GR 263244 to GR 234306 at a constant speed of 30 km/h.

19 What is the density of chimneys or towers in AR 2524?

20 What is the gradient of the stream flowing from GR 266299 to GR 275307?

21 What is the gradient of the slope from the summit of Lonscale Fell (GR 285271) to the end of the road at GR 290254?

22 What is the aspect of the slope in AR 2626?

23 Estimate the water level of Bassenthwaite Lake.

24 On a separate piece of paper construct a cross-section from Sale How (GR 276286) to Great Calva (GR 291312). Use a vertical scale of 1 cm = 100 m.

25 Calculate the vertical exaggeration of the cross-section you have drawn.

26 Name the type of public right-of-way you would travel along to visit Skiddaw (AR 2629) having parked your car in the parking area in AR 2825.

27 List the scenic attractions and recreational activities that would attract tourists to the area covered by the West Cumbria map extract.

28 List the types of infrastructure provided to support tourism.

**Complete the following questions on a separate piece of paper.**

29 Describe the impact of topography on the pattern of transport shown on the map extract.

30 List the features of Keswick's site that led to the establishment and growth of a settlement at this location.

**Study Figure 4.4b and complete the following tasks.**

31 Construct a line drawing of Figure 4.4b and then label the following features: St Herbert's Island, Skiddow, Keswick, Lord's Island (AR 2621),and Derwent Isle.

**Study Figure 4.4c. Compare it with the West Cumbria topographic map extract and complete the following tasks.**

32 Construct a line drawing of the area shown in the photograph.

33 Locate and label the following features:

a) Derwent Water

b) Lord's Island

c) Derwent Isle

d) Swinside (mountain) (AR 2422)

e) Keswick

f) St Herbert's Island

g) Derwent Bay (AR 2521)

h) Cat Bells (AR 2419).

34 What is the direction in which the camera was facing when the photograph was taken?

---

35 Name the physical processes responsible for the development of this landscape.

---

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---

36 State whether the area shown is predominantly characteristic of the physical or built environment. Justify your answer.

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# DARTMOUTH TOPOGRAPHIC MAP EXTRACT

**Study the Dartmouth topographic map extract and complete the following tasks. Refer to the legend on page 58.**

1 What is the scale of the Dartmouth map extract?

---

2 What is the contour interval used on the Dartmouth map extract?

---

3 Identify the feature of the physical environment located at the following grid references:

a) 919497 ---

b) 888496 ---

c) 858556 ---

d) 919507 ---

4 Identify the feature of the human environment located at the following grid references:

a) 946567 ---

b) 897563 ---

c) 876521 ---

5 Identify the historical feature located at the following grid references:

a) 801606 ---

b) 888537 ---

c) 892504 ---

6 Identify the recreational activity available in the following area references:

a) 9056 ---

b) 8759 ---

7 Estimate the height of the landform feature located at the following grid references:

a) 839536 ---

b) 828559 ---

c) 869538 ---

8 Calculate the gradient of the slope from the spot height at GR 798559 to the road intersection at GR 808563.

---

9 What is the aspect of this slope?

---

10 What is the aspect of the slope in AR 8753?

---

11 Name three tributaries of the River Dart.

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---

12 State the number of vehicle ferries that cross the River Dart.

---

13 What type of road connects Kingswear (AR 8851) to Higher Brixham (AR 9255)?

---

14 What type of agricultural landuse is found near the village of Aish (GR 843589)?

---

15 What is the direction of:

a) Paignton from Berry Head?

---

b) Dartmouth from Brixham?

---

16 What is the direction of flow of the River Wash in AR 8055?

17 Estimate the length of the Breakwater in the north-east quadrant of the map extract.

18 What is the distance by road from the bus station (GR 923561) to the Totnes roundabout (GR 808605)?

19 Calculate how long it would take for a bus to travel from the bus station (GR 923561) to the Totness roundabout (GR 808605) at a constant speed of 30 km/h.

20 Estimate the distance by rail from Kingswear Station (GR 882511) to Churston Station (GR 894563).

21 Estimate the length of the tunnel through which this railway line passes. Select a, b, c or d.

a) 250 m

b) 300 m

c) 450 m

d) 600 m

22 On a separate sheet of paper describe the coastal landform features found in the area extending from Scabbacombe Head (AR 9251) and Duri Head (GR 941557). Explain how these landform features were formed.

23 What evidence is there that tourism is an industry in the area covered by the map extract?

24 What evidence is there that Dartmouth was once an important naval facility?

25 How might the local topography have favoured the location of a naval facility at the mouth of the River Dart?

**Compare Figure 4.5a with the Dartmouth topographic map extract and complete the following tasks.**

26 Identify the following features on Figure 4.5a:

a) Britannia Royal Naval College

b) One Gun Point

c) Dartmouth Harbour Pontoon

d) Kingswear

e) the Britannia Halt–Dartmouth vehicle ferry

27 What is the direction in which the camera was pointing when the photograph was taken?

28 On a separate sheet of paper construct a line drawing of the photograph. Label the main features of the physical and human environments.

29 Name the dominant physical processes responsible for the development of the landform system.

---

30 List the recreational activities available to the people of Dartmouth.

---

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**Compare Figure 4.5b with the Dartmouth topographic map extract and complete the following tasks.**

31 Identify the following features on the oblique aerial photograph of Dartmouth:

a) Britannia RN College
b) Dartmouth Harbour Pontoon
c) the course of the River Dart
d) Higher Noss Point (GR 880531)
e) Torbay and Dartmouth Railway
f) Britannia Halt vehicle ferry terminal/ramp
g) Old Mill Creek
h) Lower Point (GR 867557)

32 What is the direction in which the camera was facing when the photograph was taken?

---

33 Describe the rural landscape surrounding Dartmouth.

---

34 On a separate piece of paper construct a line drawing of the landscape shown in the photograph. Label the main features of the physical and human environments.

# KILBIRNIE TOPOGRAPHIC MAP EXTRACT

**Study the Kilbirnie topographic map extract and complete the following tasks.**

1 Identify the feature of the physical environment located at the following grid references:

a) 287568 _____

b) 309521 _____

c) 283485 _____

d) 275443 _____

2 Identify the feature of the human environment located at the following grid references:

a) 297491 _____

b) 277542 _____

c) 293474 _____

d) 334443 _____

e) 327470 _____

3 What is the direction of Auchentiber (AR 3647) from Lintseedridge Farm (AR 2951)?

_____.

4 In what direction is Lugton Water flowing in AR 3344?

_____.

5 Estimate the distance by rail from Kilwinning Station (GR 296436) to the station at GR 322528.

_____.

6 Estimate the time it would take for a train travelling at an average speed of 40 km/h to travel from Kilwinning Station to the station at GR 322528.

_____.

7 What is the area of Kilbirnie Loch?

_____.

8 What is the area of Beith township?

_____.

9 Estimate the water level of Camphill Reservoir, located in the north-west quadrant of the map extract.

_____.

10 What is the elevation of the landform feature located at the following grid references?

a) 368548

_____.

b) 281534

_____.

11 What is the elevation of West Balgray (GR 355426)?

_____.

12 Calculate the average gradient of the stream flowing from GR 275575 to GR 280562.

_____.

13 What is the density of churches and chapels in AR 3043?

_____.

14 What is the bearing of Kilwinning railway station from Dalry railway station?

_____.

15 Identify the recreational facility that has a bearing of 56° from the church or chapel with tower in Beith (AR 3453).

_____.

16 What is the aspect of the slope in AR 3254?

_____.

17 Identify one productive activity taking place in AR 2743.

---

18 Describe the pattern of settlement evident on the Kilbirnie map extract.

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19 What evidence is there that Beith and Dalry are small industrial centres?

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# DONEGAL TOPOGRAPHIC MAP EXTRACT

**Study the Donegal topographic map extract and complete the following tasks.**

1 Identify the feature of the physical environment located at the following grid references:

a) 203357 _____

b) 186312 _____

c) 157354 _____

d) 162318 _____

2 Identify the feature of the human environment located at the following grid references:

a) 161377 _____

b) 188361 _____

c) 160340 _____

d) 191326 _____

3 Name the feature of the human environment located 5.4 km to the north-west of Bridgetown (AR 1937)

_____

4 Name the urban centre that has a bearing of 165° from the summit of Truskmore Mountain (AR 1734)

_____

5 Name the settlement located approximately 40 km by National Primary Road to the south-west of Donegal.

_____

6 What is the direction of St John's Point (GR 170369) from Kildoney Point (GR 182364)?

_____

7 Identify the shortest route by road from Manorhamilton (GR 188340) to Ballyshannon (GR 187361).

_____

8 Estimate the elevation of the landform feature at GR 176311.

_____

9 Estimate the length of a journey by boat from Ballysadare (GR 167330) to Donegal (GR 193378) via the most direct route.

_____

10 Calculate the time it would take for a ferry to travel between Ballysadare and Donegal at a constant speed of 15 km/h.

_____

11 On a separate piece of paper construct a cross-section from the Drumcliff car park and boating (GR 168342) and the site (GR 186354). Use a vertical scale of 1 cm = 120 m.

12 Calculate the vertical exaggeration of the cross-section between the Drumcliff car park and boating and the site at GR 186354.

_____

13 What evidence is there that Lough Melvin (ARs 1835 and 1935) is a popular recreational facility?

_____

_____

14 Name one possible source of employment for the people of Ballyshannon.

_____

15 Describe the nature of the coastline in AR 1537.

_____

_____

16 Explain why it was necessary to construct a lighthouse on the end of St John's Point.

_____

_____

**Compare figure 4.7a with the Donegal topographic map extract and complete the following tasks.**

17 On a separate piece of paper construct a line drawing of the landscape shown in the photograph. Label the main features of the physical and human environments.

18 Outline the extent to which people have transformed the physical environment in the area shown in the oblique aerial photograph.

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19 In what direction was the camera facing when the photograph was taken?

---

# LONDONDERRY TOPOGRAPHIC MAP EXTRACT

**Study the Londonderry topographic map extract and complete the following tasks.**

1 What is the scale of the Londonderry topographic map extract?

---

2 Identify the environment located at the following grid references:

a) 242439 ----------

b) 232425 ----------

c) 231411 ----------

3 Identify the feature of the human environment located at the following grid references:

a) 254422 ----------

b) 228439 ----------

c) 275419 ----------

d) 248422 ----------

4 What is the grid reference of the following features?

a) Londonderry Cathedral

---

b) Dunagree Point lighthouse (north-east quadrant)

---

c) Londonderry railway station

---

d) Strabane information centre

---

5 What is the general direction of flow of the Owenkillew River located in the south-east quadrant of the map extract?

---

6 Identify the tourist-related facility at the following grid references:

a) 261437 ----------

b) 248383 ----------

c) 270436 ----------

7 What is the direction of Limavady from Strabane?

---

8 Estimate the elevation of the highest point on Inch Island (AR 2342).

---

9 Estimate the height of Scalp Mountain (AR 2442).

---

10 Estimate the local relief on a traverse from Scalp Mountain (GR 242427) to the summit of Slieve Snaght (AR 2443).

---

11 What is the difference in the elevation of Sawel Mountain (GR 262397) and Mullaghash (GR 264402)?

---

12 Estimate the distance by road from Londonderry railway station to the centre of Omagh via Strabane.

---

13 Calculate the time it would take to travel by car from Londonderry railway station to the centre of Omagh at an average speed of 80 km/h.

---

14 What is the bearing of the power station (AR 2442) from the summit of Slieve Snaght (AR 2443)?

---

15 Calculate the gradient of the slope between the summit of Slieve Snaght and GR 240440.

---

16 What is the aspect of the slope between the summit of Slieve Snaght and GR 240440?

---

17 Explain why it is difficult to secure the frontier between Northern Ireland and the Republic of Ireland.

---

---

18 Describe how landform has affected the pattern of transport and communication on the Londonderry map extract.

---

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---

19 On a separate piece of paper construct a line drawing of Figure 4.8a. Label the prominent features of the human and physical environments.

# ENNERDALE TOPOGRAPHIC MAP EXTRACT

**Study the Ennerdale Water topographic map extract and complete the following tasks. Refer to the legend on page 58.**

1 What is the scale of the Ennerdale Water topographic map extract?

---

2 What is the contour interval of the Ennerdale Water topographic map extract?

---

3 Identify the feature of the physical environment located at the following grid references:

a) 166154 ----------

b) 132181 ----------

c) 096197 ----------

d) 156183 ----------

4 Identify the feature of the human environment located at the following grid references:

a) 194149 ----------

b) 176170 ----------

c) 127211 ----------

d) 088154 ----------

5 Name the type of physical features found in AR 1714.

---

6 Name the type of vegetation found in AR 1314.

---

7 What rivers flow into Crummock Water in AR 1619?

---

---

8 What is the straight-line distance between Banna Fell (GR 108175) and Hen Comb (GR 132181)?

---

9 Estimate the area of Buttermere Water.

---

10 What is the direction of Crummock Water from Ennerdale Water?

---

11 In what direction is Mosedale Beck flowing in AR 1318?

---

12 What is the bearing of Hen Comb (GR 132181) from Banna Fell (GR 108175)?

---

13 What is the aspect of the slope in AR 1317?

---

14 What is the depth of Ennerdale Water?

---

15 Estimate the height of the landform features at the following grid references:

a) 117174 ----------

b) 121189 ----------

# AFRICA: USING AN ATLAS

**Study the map above and complete the following tasks.**

1 Name the capital city of the following African countries:

a) South Africa

---

b) Zimbabwe

---

c) Ethiopia

---

d) Kenya

---

e) Egypt

---

2 Name the river flowing into the Mediterranean Sea just to the North of Cairo.

---

3 Into which ocean does the Congo River flow?

---

4 Name the large lake located on the border of Rwanda, Kenya and Uganda.

---

5 How high is Mt Kilimanjaro?

---

6 Name the desert located in Namibia.

---

7 Name the mountain range running parallel to the Indian Ocean coast of South Africa.

---

8 In which African country is the Kalahari Desert located?

---

9 Name the large wetland located in northern Botswana.

---

10 Name the desert that occupies much of northern Africa.

---

11 Name the sea separating Africa from Saudi Arabia.

---

12 Name the sea that divides Africa from Europe.

---

13 What is the straight-line distance between:

a) Algiers and Cape Town

---

b) Dakar (in Senegal) to Mogadishu (in Somalia)?

---

14 Name the feature of the physical environment located at the following sets of coordinates:

a) 3°02'S, 37°20'E

---

b) 0°10'S, 37°19'E

---

c) 17°58'S, 25°45'E

---

15 Name the urban centre located at the following sets of coordinates:

a) 15°33'N, 32°32'E

---

b) 4°18'S, 15°18'E

---

c) 26°10'S, 28°02'E

---

d) 6°27'N, 3°28'E

---

# AFRICA: RELIEF AND CLIMATE

**Study the graphs and maps on this page and complete the following tasks.**

1 Describe the distribution of Africa's rainfall.

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2 Describe how this pattern varies from winter to summer.

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3 Using the map on page 65, name the African nations that have more than 80 days of rainfall per year.

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4 Describe the landform pattern of Africa.

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---

5 Using the map on page 65, name the African nations with landform features greater than 2000 m in height.

---

---

---

6 Name the climate stations located in the Southern Hemisphere.

---

7 Name the station that has:

a) The highest average monthly temperature.

---

b) The lowest average monthly temperature.

---

c) The greatest annual range in temperature.

---

d) The smallest annual range in temperature.

---

e) The lowest annual rainfall.

---

f) The highest October rainfall.

---

g) The most seasonally concentrated rainfall.

---

# CAPE TOWN TOPOGRAPHIC MAP EXTRACT

**Study Figures 5.3a and 5.3b and the topographic map extract of Cape Town and complete the following tasks.**

1 Identify the features numbered 1–12 on Figure 5.3a.

1. ----------
2. ----------
3. ----------
4. ----------
5. ----------
6. ----------
7. ----------
8. ----------
9. ----------
10. ----------
11. ----------
12. ----------

2 In what direction was the camera facing when Figure 5.3b was taken?

---

3 Identify the features numbered 1–7 on Figure 5.3b.

1. ----------
2. ----------
3. ----------
4. ----------
5. ----------
6. ----------
7. ----------

4 On a separate piece of paper construct a precise map showing the relationship between topography and urban land uses.

**Study Figure 5.3d and the Cape Town topographic extract and complete the following task.**

5 Using Figure 5.3d, identify the racial group that occupies the residential areas shown on the map extract.

---

**Study the Cape Town topographic map extract and complete the following tasks.**

6 What is the scale of the Cape Town topographic map extract?

---

7 What is the contour interval of the Cape Town topographic map extract?

---

8 Identify the feature of the physical environment located at the following grid references:

a) 606911 ----------

b) 603903 ----------

c) 613892 ----------

d) 689925 ----------

9 Identify the feature of the human environment located at the following grid references:

a) 680874 ----------

b) 641914 ----------

c) 663853 ----------

d) 655855 ----------

10 Identify the recreational facility located in the following area references:

a) 6985 ----------

b) 6381 ----------

c) 6880 ----------

11 Identify the landuse activity centred on GR 665847.

---

12 What is the vegetation feature found in AR 6385?

13 What is the direction of flow of Disa Stream in AR 6082?

14 What is the direction of Lion's Rump (AR 6188) from Devil's Peak (AR 6485)?

15 What is the bearing of the *Winton* shipwreck (GR 690944) from the wreck of the *Athens* (AR 6191)?

16 What is the bearing of Devil's Peak (GR 644851) from the summit of Signal Hill (GR 613892)?

17 Identify the historical landmarks located 3.7 km from the summit of Leeukop on a bearing of 74°.

18 Estimate the area of Duncan Dock.

19 What is the length of the northern breakwater protecting Cape Town's port facilities?

20 On a separate piece of paper construct a cross-section from the trig beacon (GR 633837) to the intersection at GR 654826.

21 Calculate the vertical exaggeration of the cross-section between the trig beacon and the intersection at GR 654826.

22 Calculate the gradient of the slope from the summit of Leeukop (GR 599872) to the waterline at GR 587873.

23 Calculate the gradient of the slope from the trig beacon at GR 633843 to the building located at GR 626857.

24 What type of landform feature is Table Mountain?

25 Identify the landform feature through which the road linking the suburbs of Camps Bay (AR 5985) and Gardens (AR 6187) passes.

26 Describe the nature of the coastal landform features shown on the Cape Town map extract.

27 What is the aspect of the slope in AR 6484?

# INYANGA TOPOGRAPHIC MAP EXTRACT

**Study the Inyanga topographic map extract and complete the following tasks.**

1 What is the scale of the Inyanga topographic map extract?

---

2 What is the contour interval used on the Inyanga map extract?

---

3 Identify the feature of the physical environment located at the following grid references:

a) 803844 ----------

b) 697838 ----------

c) 780822 ----------

4 Identify the feature of the human environment located at the following grid references:

a) 757774 ----------

b) 739809 ----------

c) 732860 ----------

d) 709785 ----------

5 What is the grid reference of Raytons Holiday Resort in Inyanga Township?

---

6 Identify the distinctive landform feature located in AR 7693 and AR 7692.

---

7 What is the direction of Chera (AR 7589) from the summit of the mountain at GR 711794?

---

8 What is the direction of Nyamziwa Falls from Inyanga township?

---

9 What is the direction of flow of the Inyangombe River in AR 7581?

---

10 Estimate the straight-line distance, in miles, from the summit of Chera (AR 7589) to the intersection at GR 790866.

---

11 Estimate the road distance (in miles) from the intersection at GR 708793 to the fuel pumps at GR 801898.

---

12 What is the bearing of the summit of Nayamakanga (AR 6983) from the summit of Chera (AR 7589)?

---

13 Name the landform feature that has a bearing of 53° and is 1.75 miles in distance from Nyamakanga (AR 6983).

---

14 Estimate the height of the landform feature located at the following grid references:

a) 745866 ----------

b) 761883 ----------

c) 775844 ----------

15 Estimate the height of the ruins located in AR 6779.

---

16 What is the difference in height of Chera (AR 7589) and the summit of the mountain located at GR 798860?

---

17 Estimate the local relief in a traverse from the hill at GR 736924 to the bridge at GR 733916.

---

18 Estimate the local relief in a traverse from the summit of Nyamakanga (AR 6983) to the summit of Nyamaka (AR 7185).

---

19 What is the density of African huts in AR 7287?

---

20 What is the aspect of the slope in AR 7490?

---

21 What is the number of falls located in a 2 mile radius of the summit of Nyamakanga (AR 6983)?

---

22 What is the productive activity taking place in the following area references?

a) 7290 ----------

b) 7378 ----------

c) 7277 ----------

23 Estimate the elevation of the surface level of the dam in AR 7792.

---

24 Describe how people have modified the water cycle in the north-west quadrant of the map extract.

---

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25 Describe the settlement pattern in the north-east quadrant of the map extract.

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26 What evidence is there that the main function of non-traditional settlements is to service the needs of the tourism industry?

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27 Write a paragraph describing the nature of the physical environment shown in Figure 5.4a.

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# VICTORIA FALLS TOPOGRAPHIC MAP EXTRACT

**Study the Victoria Falls topographic map extract and complete the following tasks.**

1 What is the scale of the Victoria Falls topographic map extract?

---

2 What is the contour interval used on the Victoria Falls map extract?

---

3 Identify the feature of the physical environment located at the following grid references:

a) 782203 ----------

b) 783133 ----------

c) 793178 ----------

d) 763136 ----------

4 Identify the feature of the human environment located at the following grid references:

a) 808175 ----------

b) 779182 ----------

c) 765207 ----------

d) 775177 ----------

e) 738132 ----------

f) 819242 ----------

5 Name the two waterfalls to the east of Victoria Falls township.

---

6 What is the direction of Victoria Falls (AR 7918) from Livingstone?

---

7 What is the direction of the crocodile farm (GR 748207) from the Victoria Falls post office (GR 772178)?

---

8 What is the direction of flow of the Chiababi River in AR 8016?

---

9 Estimate the straight-line distance between Victoria Falls post office (GR 772178) and the Game Park Entrance Gate at GR 738132.

---

10 Estimate the distance by road from the intersection at GR 777182 to the intersection at GR 791269.

---

11 Estimate the area of Lwando Island.

---

12 Estimate the area of the Livingstone suburb of Linda.

---

13 What is the bearing of Bales Kopje (GR 755192) from Victoria Falls post office (GR 772178)?

---

14 What type of vegetation is found in AR 8118?

---

15 What type of vegetation is found in AR 7212?

---

16 What is the density of buildings in AR 7722?

---

17 Account for the existence of rainforest (ARs 7817 and 7818) in the area adjacent to Main Falls.

---

---

---

18 List the range of recreational facilities available to residents of the Victoria Falls area.

---

---

19 What are the attractions that make Victoria Falls a popular tourist attraction? List the facilities that are provided for tourists.

---

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---

20 Describe how the Zambezi River affects the pattern of transport and communication in the area covered by the Victoria Falls map extract.

---

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---

**Study Figure 5.5a and the topographic map extract and complete the following tasks.**

21 On a separate piece of paper construct a line drawing of the photograph of Victoria Falls.

22 State the direction in which the camera was pointing when the photograph was taken.

---

# FALSE BAY TOPOGRAPHIC MAP EXTRACT

**Study the False Bay topographic map extract and complete the following tasks. Refer to the legend and Linear scale on page 68.**

1 Identify the feature of the physical environment located at the following grid references:

a) 305645 ----------

b) 292733 ----------

c) 298754 ----------

d) 250638 ----------

2 Identify the feature of the human environment located at the following grid references:

a) 285668 ----------

b) 266679 ----------

c) 316759 ----------

d) 278722 ----------

3 What type of vegetation is found in AR 2373?

---

4 What landuse type is found in AR 3176?

---

5 What settlement type is found in AR 3275?

---

6 What waterway flows into False Bay at GR 291710?

---

7 What is the direction of Brakkloofiant (AR 2670) from Kalkbaaiberg (AR 2973)?

---

8 What is the bearing of the spot height (GR 266704) from Ridge Peak (GR 294731)?

---

9 Estimate the height of the landform feature at GR 278732.

---

10 What is the local relief experienced on a traverse from Simonsberg (GR 291630) to Froggy Pond (GR 308632)?

---

11 What is the gradient of the slope between Simonsberg (GR 291630) and the shoreline at Froggy Pond (GR 308632)?

---

12 Is the Zandvlei Bird Sanctuary (AR 3176) visible from the summit of Brakkloofiant (AR 2670)?

---

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# UNITED STATES AND CANADA USING AN ATLAS MAP

**Study the map above and complete the following tasks.**

1 State the width (in km) of the United States from west to east along 40º latitude.

---

2 Name the river system that drains into the Gulf at Mexico at New Orleans.

---

3 Name the desert in Southern California.

---

4 Name four Canadian cities with a population greater than 1 000 000 but less than 5 000 000.

---

---

5 Name five cities with a population greater than 5 million.

---

---

6 Name the capital of the following states:

a) California

---

b) Washington

---

c) Texas

---

7 Name the capital of Canada.

---

8 What is the direction of Washington DC from New York?

---

9 What is the direction of San Francisco from Los Angeles?

---

10 Name the mountain range that lies parallel to the east coast of the United States.

---

11 Name the mountain range that stretches from Alaska in the north to Mexico in the south.

---

12 In what state would you find the following tourist attractions?

a) Mt Whitney

---

b) Yellowstone National Park

---

c) Yosemite National Park

---

d) Mt St Helens

---

e) Disney World

---

13 Identify the feature of the physical environment located at the following sets of coordinates:

a) 46º12'N, 122º11'W

---

b) 63º02'N, 151º01'W

---

14 What is the latitude and longitude of the following cities?

a) New York

---

b) Washington DC

---

c) Atlanta

---

d) Salt Lake City

---

# UNITED STATES: DEMOGRAPHY

**Study Figure 6.2a and answer the following questions.**

1 What proportion of the US population is white?

---

2 What proportion of the US population is African American?

---

3 What proportion of the US population is Hispanic?

---

4 How many white Americans are there?

---

5 How many Americans have a Hispanic ethnic background?

---

**Study Table 6.2a. Construct the population pyramid showing the age distribution by sex in 2000 and then complete the following tasks.**

6 Calculate the proportion of the population who are male and under the age of 15 years.

---

7 Calculate the proportion of the population who are female and under the age of 15 years.

---

8 Calculate the population of the United States under the age of 15 years.

---

**Study Figure 6.2b and complete the following task.**

9 With the aid of the map on page 75, describe the distribution of older Americans.

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**Study Figure 6.2c and complete the following task.**

10 With the aid of the map on page 75, describe the distribution of Hispanic Americans.

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**Study Figure 6.2d and complete the following task.**

11 With the aid of the map on page 75, describe the distribution of African Americans.

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# YOSEMITE VALLEY TOPOGRAPHIC MAP EXTRACT

**Study Figures 6.3a and 6.3b and the Yosemite Valley topographic map extract on page 79 and complete the following tasks.**

1 On a separate piece of paper construct a photo sketch of Figure 6.3b. Label the following features: Sentinel Fall, Yosemite Point, Half Dome and Glacier Point.

2 In what direction was the photographer facing when the image in Figure 6.3b was taken?

---

**Study the Yosemite Valley topographic map extract and complete the following tasks. Refer to the legend on page 82.**

3 What is the scale of the Yosemite Valley topographic map extract?

---

4 What is the contour interval used on the Yosemite Valley map extract?

---

5 Identify the feature of the physical environment located at the following grid references:

a) 285688 ----------

b) 253660 ----------

c) 298661 ----------

d) 270687 ----------

e) 263668 ----------

f) 247698 ----------

6 What is the direction of Glacier Point (AR 2666) from Yosemite Point (AR 2469)?

---

7 What is the direction of North Dome (AR 2769) from Half Dome (AR 2968)?

---

8 What is the bearing of Glacier Point (AR 2666) from Yosemite Point (AR 2469)?

---

9 What is the bearing of Grizzly Peak (AR 2866) from the summit of Mt Broderick (AR 2967)?

---

10 Estimate the straight-line distance, in miles, between the summits of Half Dome and North Dome.

---

11 Estimate the straight-line distance, in miles, between Yosemite Point and Glacier Point.

---

12 Estimate the elevation of each of the following landform features:

a) Half Dome (AR 2968)

---

b) Ahwiyah Point (AR 2968)

---

13 Name the highest landform feature shown on the Yosemite Valley map extract.

---

14 What is the difference in elevation between Mt Broderick (AR 2967) and Liberty Cap (AR 2966)?

---

15 What is the local relief experienced on a traverse from Grizzly Peak (AR 2866) to North Dome (AR 2769) via Iron Spring?

---

16 On a separate piece of paper complete the cross-section from the summit of North Dome to the summit of Half Dome.

17 On a separate piece of paper complete the cross-section from Diving Board (GR 292681) to the road at GR 276670.

18 Calculate the average gradient along Sentinel Creek from point A to point B. The distance along the creek is 0.8 of a mile or 4224 feet.

---

19 Working in small groups, complete the following tasks:

a) On a separate piece of paper answer: Why was the Yosemite Valley site selected for development as a tourist area within the National Park?

b) On a separate piece of paper list the environmental issues that are likely to arise when large numbers of tourists are concentrated into places of such scenic attraction.

c) On a separate piece of paper answer the following question: If your group had the opportunity to redevelop the tourist facilities in Yosemite Valley what changes would you make? Justify your answers.

One person from each group should report on their group's discussion to the rest of the class.

**Study Figure 6.3b and the topographic map extract on page 79 and complete the following tasks.**

20 On a separate piece of paper construct a photo sketch of Figure 6.3c and then undertake research to investigate the geographical processes responsible for the landform features you have drawn. Annotate your sketch with some explanatory notes.

21 Locate the features shown in Figure 6.3c on the topographic map extract. Describe their location using an area reference.

---

22 Locate the feature of the human environment shown in Figure 6.3e using a grid reference.

---

# MT WHITNEY TOPOGRAPHIC MAP EXTRACT

**Study the Mt Whitney topographic map extract and complete the following tasks.**

1 What is the scale of the Mt Whitney map extract?

---

2 What is the contour interval used on the Mt Whitney map extract?

---

3 Explain what the blue contour lines in AR 8450 represent.

---

4 Identify the feature of the physical environment located at the following grid references:

a) 867507 ----------

b) 858502 ----------

c) 872478 ----------

d) 830496 ----------

5 Name the major agent of erosion responsible for the landform features shown on the Mt Whitney map extract.

---

6 Explain why areas of permanent snow and ice are all located on slopes with an easterly or northerly aspect.

---

---

7 What evidence is there to support the view that the climate of the region has become warmer over a long period of time?

---

---

---

8 Estimate the water level of Upper Boy Scout Lake (GR 862490).

---

9 Estimate the water level of Iceberg Lake (GR 852490).

---

10 Estimate the height of the following landform features:

a) Mt Irvine (AR 8746)

---

b) Wotans Throne (AR 8547)

---

c) Pinnacle (AR 8548)

---

d) Mt Carillon (AR 8550)

---

11 What is the direction of flow of the creek joining Arctic Lake (AR 8349) to Guitar Lake (AR 8247)?

---

12 What is the direction of Wotans Throne (AR 8547) from Mt Whitney (AR 4884)?

---

13 What is the bearing of Thor Peak (AR 8648) from Mt Russell (AR 8449)?

---

14 What is the bearing of Mt Muir (AR 8447) from Thor Peak (AR 8648)?

---

15 What is the aspect of the slope in AR 8348?

---

16 What is the aspect of the slope in AR 8246?

---

17 Estimate the area (in kilometres) of Tulainyo Lake.

---

18 What is the difference in elevation of the Hitchcock Lakes?

---

19 On a separate piece of paper construct a cross-section from point A (GR 829489) to point B (GR 859484) passing through the summit of Mt Whitney. Use a vertical scale of 1 cm = 200 m.

20 Calculate the vertical exaggeration of the cross-section you have just drawn.

---

21 On a separate piece of paper construct a cross-section from point D (Wotans Throne) to point C (Mt Irvine). Use a vertical scale of 1 cm = 100 m.

22 Calculate the vertical exaggeration of the cross-section you have just drawn.

---

23 On a separate piece of paper construct a cross-section from point E (GR 830510) to point F (GR 861507). Use a vertical scale of 1 cm = 200 m.

24 Calculate the average gradient of the slope from the summit of Mt Whitney (AR 8448) to GR 830480.

---

25 Calculate the average gradient of the slope from the summit of Mt Whitney to Point X (GR 850486).

---

26 Calculate the greatest variation in relief experienced on a traverse from Mt Muir (AR 8447) to Mt Hitchcock (AR 8246) passing between the Hitchcock Lakes.

---

27 Calculate the average gradient of the stream flowing into the north-west corner of Wallace Lake.

---

28 Research activity:

a) What is a moraine? How are they formed?

---

---

---

---

b) What is a cirque lake? Identify two cirque lakes on the Mt Whitney map extract.

---

---

---

29 On a separate piece of paper construct a photo sketch of Figures 6.4a and 6.4b. Use the map to identify the features you have drawn. Label these on your photo sketches.

30 What is the difference in elevation of the Hitchcock Lakes?

---

# GLEN CANYON TOPOGRAPHIC MAP EXTRACT

**Study the Glen Canyon topographic map extract and complete the following tasks.**

1 What is the grid reference of the following features?

a) Cathedral in the Desert

---

b) Holes-in-the-Rock Historical Marker

---

2 What is the grid reference of the two natural arches found in Davis Gulch?

---

3 What is the bearing of Hole-in-the-Rock Historical Marker from the Cathedral in the Desert?

---

4 What is the area reference of the confluence of the Colorado and San Juan rivers?

---

5 What is the height of the landform feature located at GR 578769?

---

6 What is the direction of the Great Bend from The Rincon?

---

7 What is the straight-line distance from GR 600760 to the confluence of the San Juan River and the Colorado River (GR 486726)?

---

8 What is the distance by river from GR 600760 to the confluence of the San Juan River and the Colorado River (GR 486726)?

---

9 What is the direction of flow of the original San Juan River in AR 5873?

---

10 On a separate piece of paper construct a cross-section along northing 79 from GR 520790 to GR 550790. Use a vertical scale of 1 cm = 100 m. Begin your vertical scale at 1100 m.

11 Calculate the vertical scale of the cross-section you have drawn.

---

12 Outline the evidence that indicates that Lake Powell is an artificial lake.

---

---

13 Research activity. The Colorado River is classified as an 'exotic' river. What does this mean?

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---

14 Explain how the landform feature known as 'The Rincon' might have been formed.

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15 Despite the existence of a large body of water what evidence is there that the Glen Canyon National Recreation Area is, in fact, quite arid?

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# NIAGARA FALLS TOPOGRAPHIC MAP EXTRACT

**Study the Niagara Falls topographic map extract and complete the following tasks. Refer to the legend on page 82.**

1 What is the scale of the Niagara Falls topographic map extract?

2 What is the contour interval of the Niagara Falls map extract?

3 Identify the feature of the physical environment located at the following grid references:

a) 569762 ----------

b) 571720 ----------

c) 565714 ----------

d) 574717 ----------

4 Identify the feature of the human environment located at the following grid references:

a) 527698 ----------

b) 585696 ----------

c) 594785 ----------

d) 555730 ----------

5 State the productive activity located in the following area references:

a) 5369 ----------

b) 5482 ----------

c) 5669 ----------

d) 5978 ----------

6 Name the three bridges that span the Niagara River.

7 In which nations are the Horseshoe and American Falls located?

8 What is the direction of The Whirlpool (AR 5675) from Navy Island?

9 What is the length of the Queenston–Chippawa power canal from GR 534696 to the generating station located at GR 590793?

10 What is the length of the aerial cableway from GR 571758 to GR 571763?

11 Estimate the area of the reservoir centred on GR 570790.

12 Estimate the area of Navy Island located in the south-east quadrant of the map extract.

13 What is the bearing of Niagara Falls City Hall (GR 575744) from the senior citizens home located at GR 539717?

14 Describe the settlement pattern in the north-west quadrant of the Niagara Falls map extract.

15 Describe the pattern of tourist-related facilities along State Highway 20 in the south-west quadrant of the map extract.

16 Describe the features of the Niagara Falls river channel from American Falls and Horseshoe Falls to GR 588803.

17 What evidence is there that Niagara Falls is a major centre of industrial production?

18 List the range of goods produced by industries in the area covered by the map extract.

19 Describe the extent to which people have modified the water cycle in the area covered by the Niagara Falls map extract.

**Study Figure 6.6a and complete the following task.**

20 In what direction was the camera facing when the photograph was taken?

# VANCOUVER TOPOGRAPHIC MAP EXTRACT

**Study the Vancouver topographic map extract and complete the following tasks. Refer to the legend on page 82.**

1 What is the scale of the Vancouver topographic map extract?

2 What is the contour interval used on the Vancouver map extract?

3 Identify the feature of the physical environment located at the following grid references:

a) 899613 ----------

b) 915609 ----------

c) 885618 ----------

d) 893585 ----------

4 Identify the feature of the human environment located at the following grid references:

a) 963614 ----------

b) 900636 ----------

c) 905600 ----------

d) 973621 ----------

5 Identify a productive activity taking place at the following area references:

a) 9262 ----------

b) 9559 ----------

c) 9057 ----------

d) 9959 ----------

6 Identify a landuse activity in AR 9357.

7 What is the direction of flow of the Capilano River in AR 9164?

8 What is the direction of Prospect Point (AR 8962) from Brockton Point (AR 9160)?

9 Estimate the elevation of the water tank in AR 8766.

10 Estimate the elevation of the base of the communication tower in AR 9566.

11 Estimate the distance travelled by the ferry from GR 921594 to GR 939619.

12 Calculate the time it would take for a ferry to travel from GR 922592 to GR 940617 at an average speed of 10 km/h.

13 Estimate the distance by road (via the Trans-Canada Highway) from the tunnel entrance at GR 977588 to the bridge at GR 894651.

14 Calculate the time it would take to travel from GR 977588 to GR 894651 at an average speed of 30 km/h.

15 What is the bearing of Elsje Point (AR 8958) from Brockton Point (AR 9160)?

16 What is the bearing of Jericho Beach navigation light (AR 8658) from the Prospect Point navigation light (AR 8962)?

17 What is the density of storage tanks in AR 9959?

18 List the potential sources of water pollution in Vancouver Harbour. State the area reference of each potential source.

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19 Identify the recreational facility located in the following area references:

a) 8960 ----------

b) 9060 ----------

20 Estimate the area of Stanley Park.

---

21 What is the general aspect of North Vancouver?

---

**Study Figure 6.7a and complete the following task.**

22 In what general direction was the camera facing when Figure 6.7a was taken?

---

**Study Figure 6.7b and complete the following tasks.**

23 What is the hottest month?

---

24 What is the coldest month?

---

25 What is the seasonal range of maximum and minimum temperatures?

---

26 Which are the wettest and driest months?

---

27 Describe the seasonal distribution of rainfall.

---

# WHISTLER TOPOGRAPHIC MAP EXTRACT

**Study the Whistler topographic map extract and complete the following tasks.**

1 What is the scale of the Whistler topographic map extract?

2 What is the contour interval used on the Whistler topographic map extract?

3 Identify the feature of the physical environment located at the following grid references:

a) 514890

b) 452865

c) 468943

d) 467871

e) 502832

4 Identify the feature of the human environment located at the following grid references:

a) 456876

b) 425906

c) 496905

d) 451968

e) 454953

5 What is the grid reference of the base station of the Village Gondola?

6 Name the type of physical feature found in AR 5190.

7 What type of landuse is found in AR 4794?

8 What creek flows into Fitzsimmons Creek at GR 481889?

9 Describe the pattern of settlement in relationship to transport infrastructure and topography.

10 What is the name of the waterway joining Green Lake and Alta Lake?

11 What creek flows into Nita Lake in AR 4290?

12 What is the direction of Blackcomb Peak (GR 514890) from the Upper Village (AR 4693)?

13 In what direction is Wedge Creek flowing in AR 5095?

14 What is the bearing of Whistler Mountain (GR 452865) from Blackcomb Peak (GR 514890)?

15 What is the bearing of the Creekside Gondola top station from its base?

16 What is the aspect of the slope in the following area references?

a) 4987

b) 4887

17 What is the vertical rise of the Glacier Express chairlift?

18 What is the elevation of Green Lake?

19 Estimate the straight-line distance between Whistler Mountain (GR 452865) and Blackcomb Peak (GR 514890).

20 Estimate the distance by road from the bridge at GR 424900 to the rail bridge at GR 454953.

---

21 What is the length of the Whistler Village Gondola?

---

22 Estimate the area of Alta Lake.

---

23 What is the difference in elevation between Blackcomb Peak and Whistler Mountain?

---

24 What is the height of the landform feature located at GR 982410?

---

25 What is the gradient of the slope from the Rendezvous Ski Chalet (AR 4990) to the shoreline of Green Lake at GR 467963?

---

26 What type of alpine transport links Whistler Village to the Roundhouse Restaurant and Ski Lodge (GR 459880)?

---

27 What type of ski lift is the Emerald Express?

---

28 How many golf courses are there in Whistler? Why do you think there would be so many courses in an alpine resort destination?

---

---

29 Identify the winter recreational activities available in the following area references:

a) 4687 ----------

b) 4694 ----------

30 Using area references, identify at least six recreational activities available to tourists during summer.

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**Study Figure 6.8a and complete the following tasks.**

31 Study Figure 6.8a. Name the features numbered 1–4.

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32 In which direction was the camera pointing when Figure 6.8a was taken?

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