



UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS  
International General Certificate of Secondary Education

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**GEOGRAPHY**

**0460/23**

Paper 2

**May/June 2011**

**1 hour 30 minutes**

Candidates answer on the Question Paper.

Additional Materials: Ruler  
Plain paper

1:50 000 Survey Map Extract is enclosed with this question paper.

**READ THESE INSTRUCTIONS FIRST**

Write your Centre number, candidate number and name on all the work you hand in.

Write in dark blue or black pen.

You may use a soft pencil for any diagrams, graphs or rough working.

Do not use staples, paper clips, highlighters, glue or correction fluid.

**DO NOT WRITE ON ANY BARCODES.**

Answer **all** questions.

The Insert contains Photographs A and B for Question 3.

Sketch maps and diagrams should be drawn whenever they serve to illustrate an answer.

The Survey Map Extract and the Insert are **not** required by the Examiner.

At the end of the examination, fasten all your work securely together.

The number of marks is given in brackets [ ] at the end of each question or part question.

This document consists of **14** printed pages, **2** blank pages and **1** Insert.



1 The map extract is for Bulawayo, Zimbabwe. The scale is 1:50 000.

(a) Fig. 1 shows the positions of some features in the north east of the map extract.

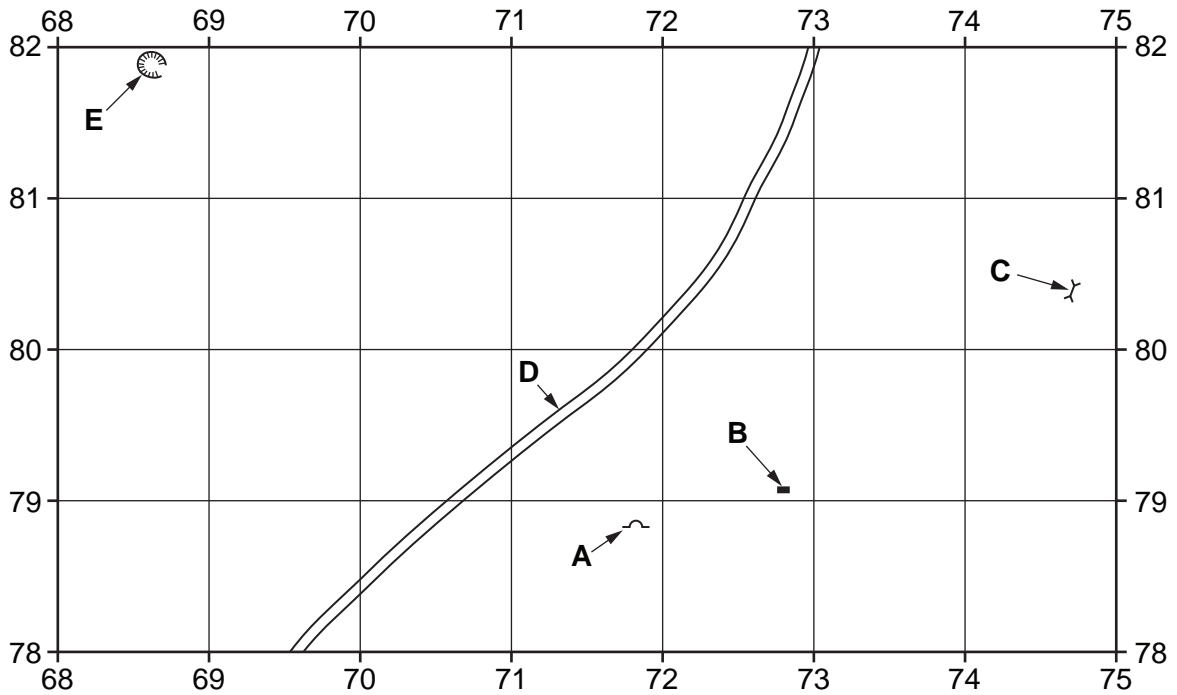
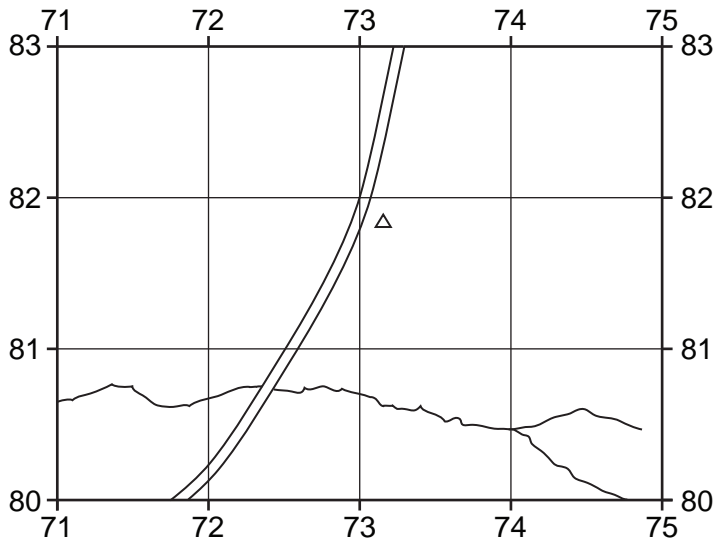


Fig. 1

Study the map and identify the following features shown on Fig. 1:

- (i) the type of house at **A**;  
 ..... [1]
- (ii) the type of public building at **B**;  
 ..... [1]
- (iii) the feature used by farmers at **C**;  
 ..... [1]
- (iv) the type of road marked **D**;  
 ..... [1]
- (v) the feature at **E**.  
 ..... [1]

(b) Fig. 2 shows the area of the map extract to the east of grid line 71 and north line 80.



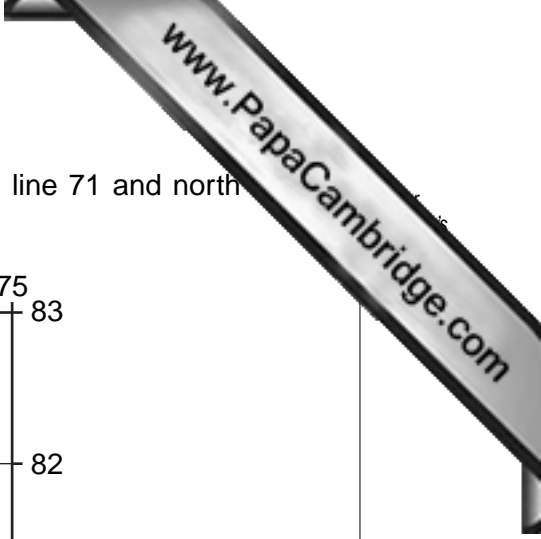
**Fig. 2**

Describe the area under the following headings:

- slope; .....
- height of highest point; ..... metres
- compass direction of flow of the stream. ....[3]

(c) Describe the road patterns in:

- (i) grid square 6766; .....  
.....[1]
- (ii) the north west of grid square 5776. ....  
.....[1]



(d) Fig. 3 shows an area of cultivation in and around grid square 6480.

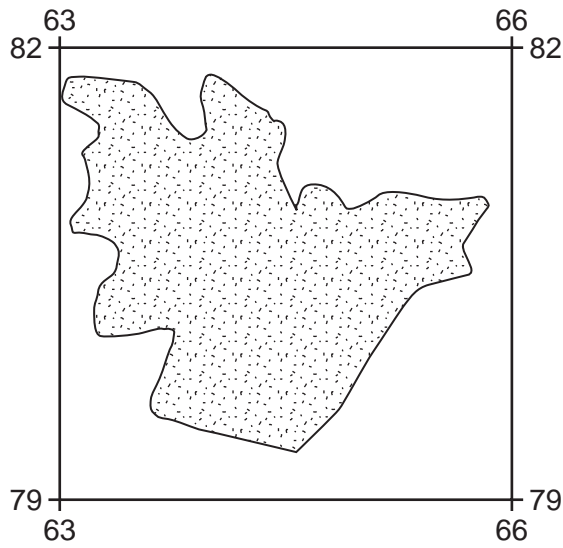


Fig. 3

How is this area of cultivation irrigated?

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

(e) In 1980 the city of Bulawayo occupied much of the map area. Using map evidence **only**, suggest reasons for its site and growth.

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

- (f) Table 1 shows land uses in Bulawayo. Complete Table 1 to show the main land use in each of the four grid squares. Use **one** tick only for each grid square.

**Table 1**

| grid square | recreational | high density residential | industrial | low density residential |
|-------------|--------------|--------------------------|------------|-------------------------|
| 6173        |              |                          |            |                         |
| 6267        |              |                          |            |                         |
| 6778        |              |                          |            |                         |
| 7070        |              |                          |            |                         |

[3]

- (g) What feature is at grid reference 675802?

.....[1]

[Total: 20 marks]

2 (a) Fig. 4 shows dispersed, linear and nucleated settlement patterns.

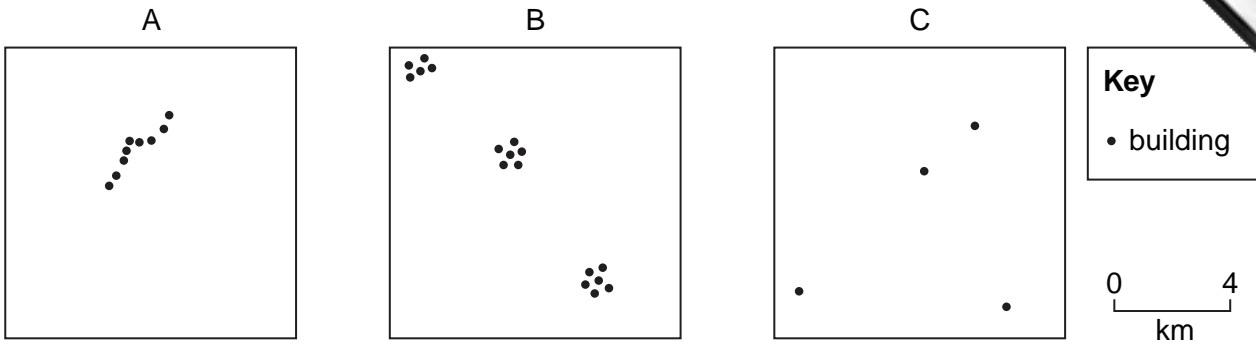


Fig. 4

Using letters A, B and C **once** only, identify the settlement patterns shown in Fig. 4.

dispersed                      letter .....

linear                            letter .....

nucleated                      letter .....

[2]

(b) Fig. 5A is a map of a valley in a mountainous area **in the northern hemisphere** and Fig. 5B (page 7) is a block diagram of the same valley.

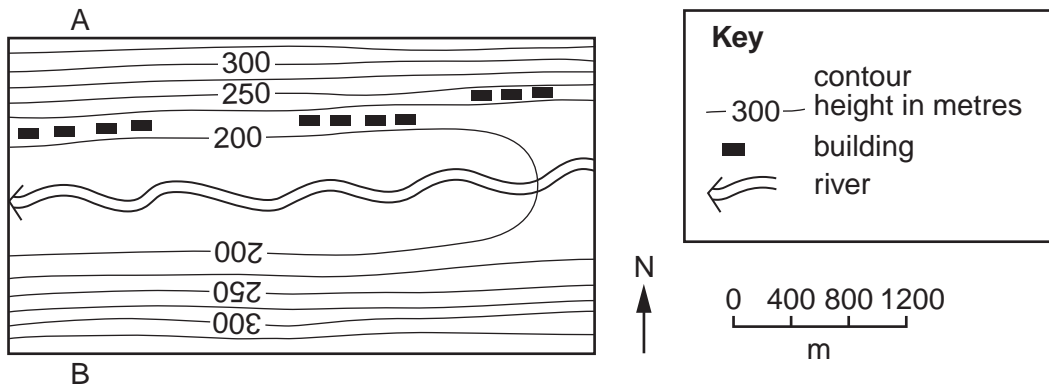


Fig. 5A









4 (a) Fig. 6 shows the world distribution of tropical desert vegetation.

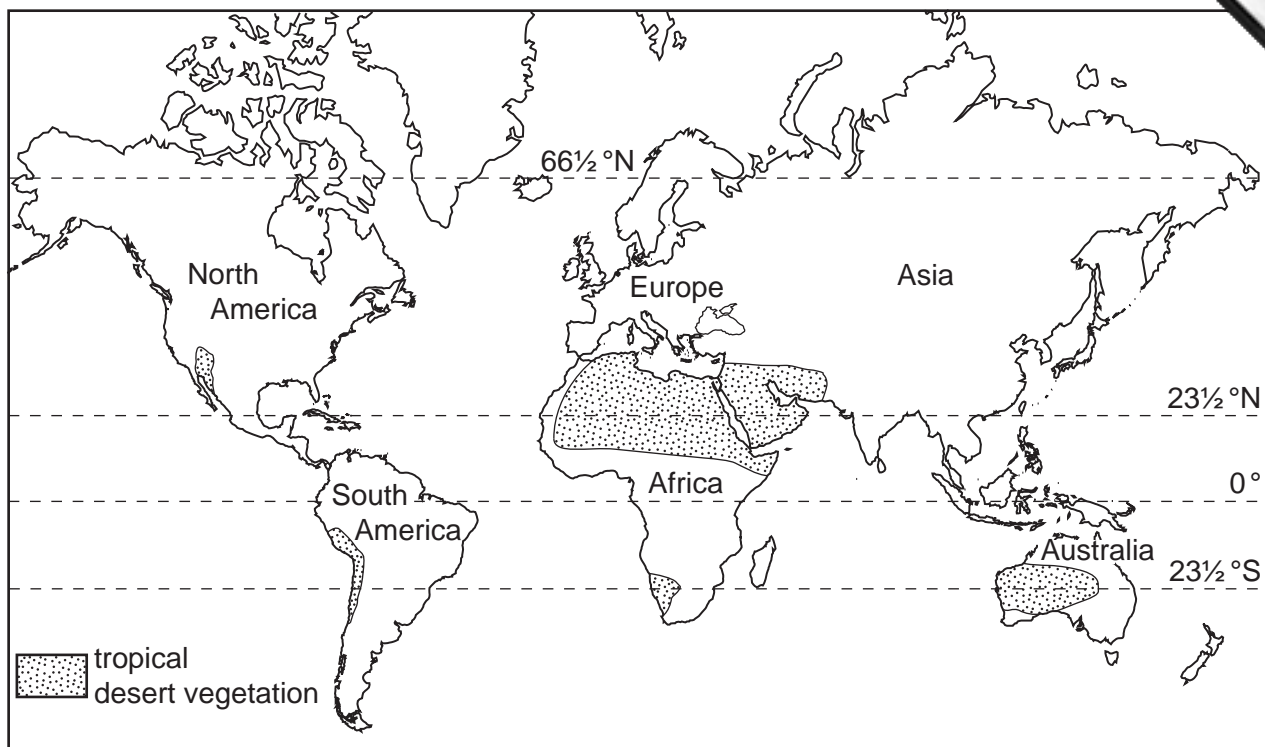


Fig. 6

(i) Circle the correct word to complete the following sentence about the distribution of tropical desert vegetation.

east    north    south    west

Tropical desert vegetation occurs mainly on the ..... side of the continents. [1]

(ii) Compare the extent of tropical desert vegetation in North America and North Africa.

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

(iii) Why is the name tropical desert vegetation not entirely correct for the vegetation shown on the map?

.....  
 ..... [1]

(b) Some of the ways in which plants adapt to the tropical desert climate are listed below.

- to be able to live in salty soils;
- to reduce transpiration;
- to reflect the sun;
- to store water;
- to use rainwater before it evaporates;
- to use water in the soil most of the year.

Complete Table 2 by choosing **one** reason for each adaptation from the list above. You may use a reason more than once.

**Table 2**

| Adaptation                        | Main reason for the adaptation |
|-----------------------------------|--------------------------------|
| deep roots                        | .....                          |
| fleshy stems                      | .....                          |
| very thin and small thorny leaves | .....                          |
| leaves curl inwards               | .....                          |

[4]

[Total: 8 marks]

- 5 (a) Fig. 7 shows tourist visitors to the island of Lanzarote and its resident population in millions from the years 1970 to 2008.

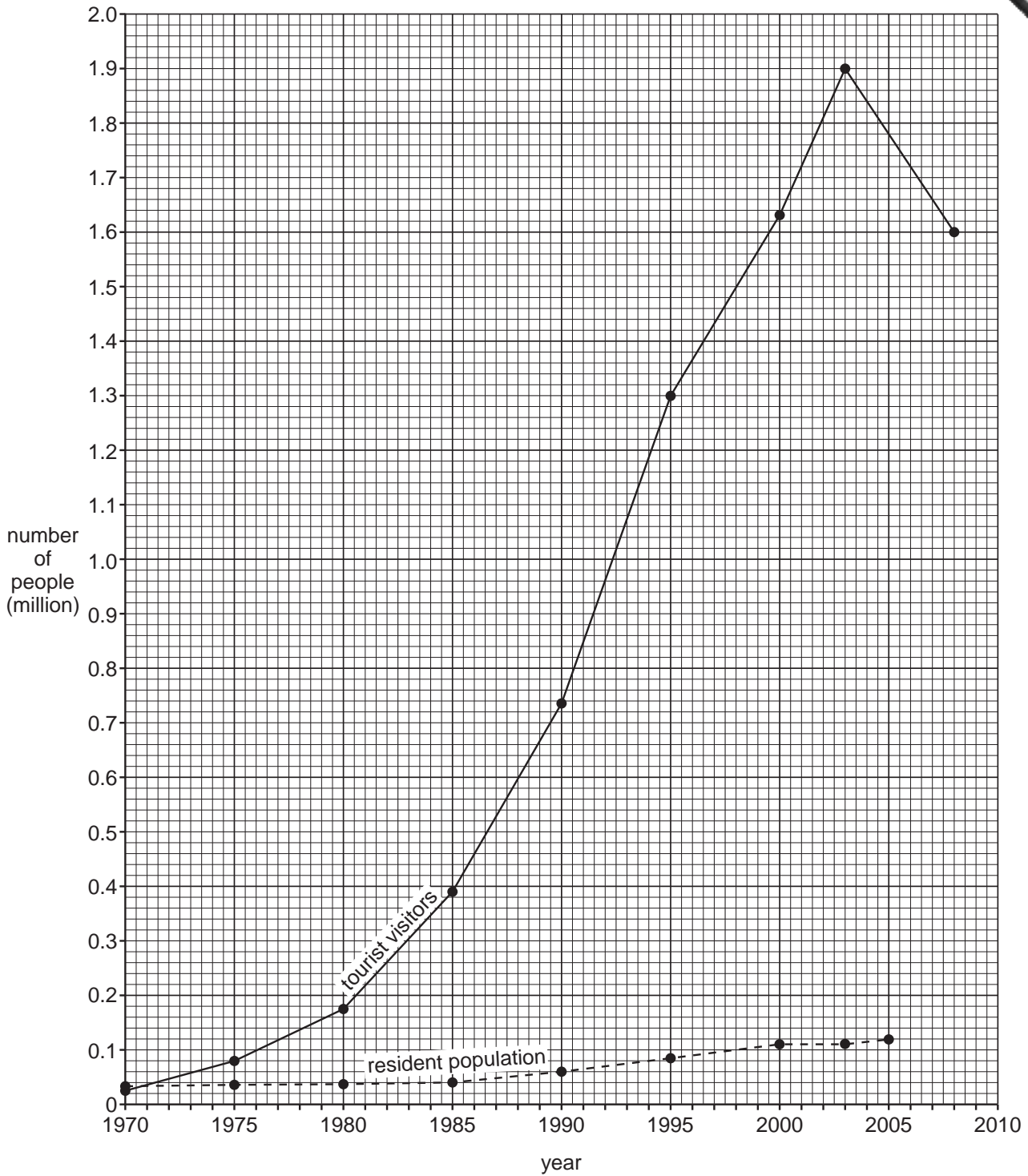


Fig. 7

(i) Complete the graph to show that the resident population in 2008 was 1.14 million (0.14 million).

(ii) How many more tourist visitors were there than residents in 2003?

..... million [1]

(iii) Compare the changes in tourist visitors with the changes in resident population between 1970 and 2008.

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

(b) Fig. 8 gives information about Lanzarote.

Lanzarote is a small island of only 800 square kilometres, which lies off the west coast of Africa near the Sahara Desert. Its barren surface is covered by lava and ash from over 300 volcanic vents. As it has no surface water, forest or mineral wealth, there were few ways of earning a living before 1970. The majority of residents worked in fishing or subsistence farming, using dry farming techniques. By 2009 the island had seen many changes and the government proposed to stop further hotel and apartment construction.

Fig. 8

Use Fig. 8 to answer the following questions:

(i) What was the greatest problem facing the developers of mass tourism on the island?

..... [1]

(ii) Suggest **three** reasons why, in 2009, the government wanted to stop further construction of hotels and apartments.

1 .....

.....

2 .....

.....

3 .....

..... [3]

[Total: 8 marks]

- 6 (a) Fig. 9 shows the average size of subsistence farms in a village in the highlands of Lesotho and the average size of commercial farms in Lesotho.

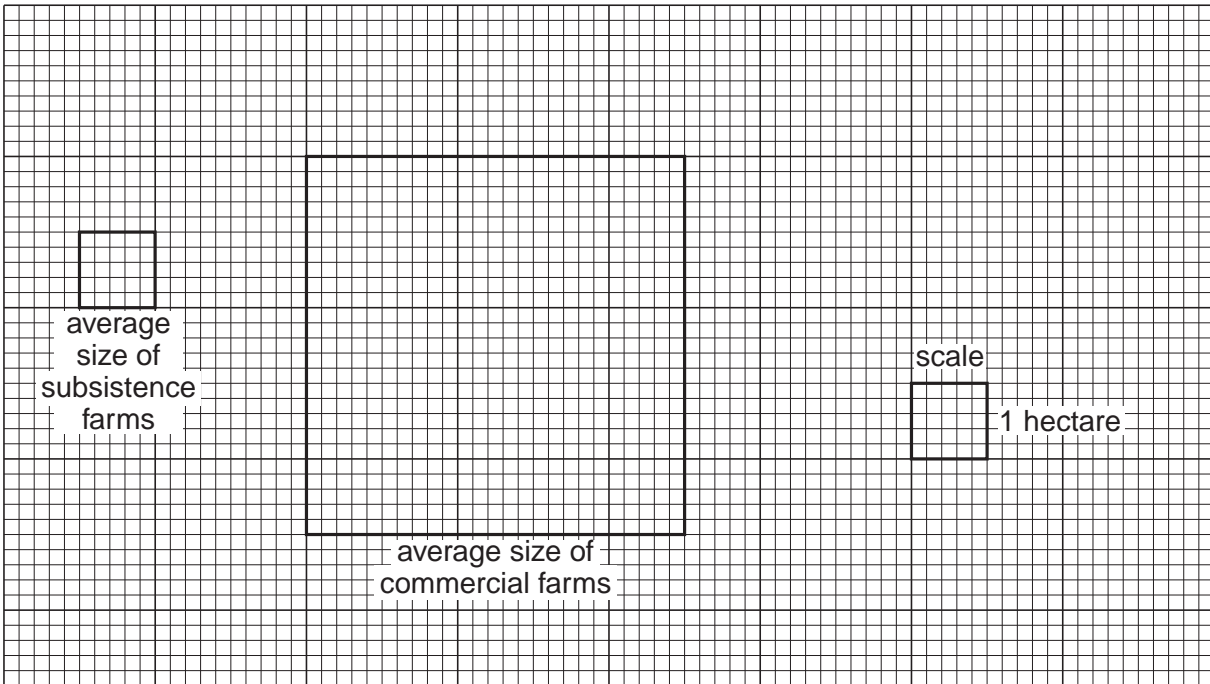


Fig. 9

- (i) What is the average size of a commercial farm in Lesotho?

..... hectares [1]

- (ii) How many times larger is the average commercial farm than the average subsistence farm?

..... [1]

(b) Fig. 10 gives information about the labour used on subsistence farms in the highland. It also shows farming processes from September in one year to July in the next.

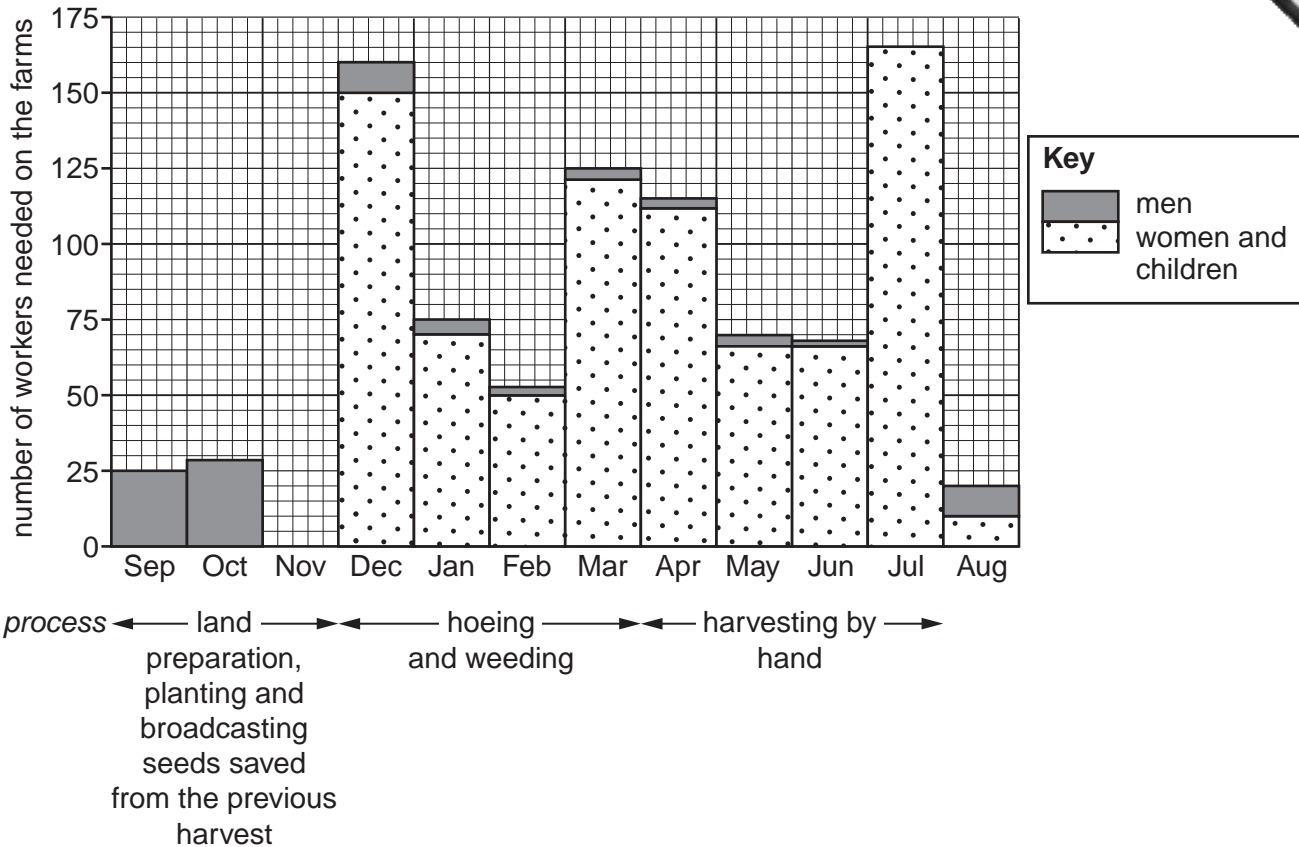


Fig. 10

(i) Table 3 shows the number of workers needed on the farms for November. Use this information to complete Fig. 10.

Table 3

| Total | Men | Women and children |
|-------|-----|--------------------|
| 95    | 25  | 70                 |

[2]

(ii) In which month are most workers needed and which farming process takes place then?

month .....

process ..... [1]

(iii) What work will be done in August by

the women, .....

the men? .....

[2]

(iv) Why does a serious drought in one year reduce yields in the next year?

.....

..... [1]

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