



Rewarding Learning

ADVANCED SUBSIDIARY (AS)
General Certificate of Education
2009

Centre Number

71	
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Candidate Number

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Geography

Assessment Unit AS 3

assessing

Module 3: Techniques in Geography

[ASG31]



ASG31

FRIDAY 5 JUNE, MORNING

TIME

1 hour.

INSTRUCTIONS TO CANDIDATES

Write your Centre Number and Candidate Number in the spaces provided at the top of this page.

Write your answers in the spaces provided in this question paper.

Answer **both** questions.

At the conclusion of this examination attach your fieldwork report and table of data securely to this paper using the treasury tag supplied.

There are two pages at the back of this question and answer booklet for use as continuation sheets as required.

You are provided with an OS map extract for use with question **2(b)**.

Do not write your answers on this insert.

INFORMATION FOR CANDIDATES

The total mark for this paper is 60.

Quality of written communication will be assessed in **all** questions.

Figures in brackets printed down the right-hand side of pages indicate the marks awarded to each question or part question.

For Examiner's
use only

Question Number	Marks
Report	
Table	
1	
2	

Total
Marks

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Submitted fieldwork report and table of data.

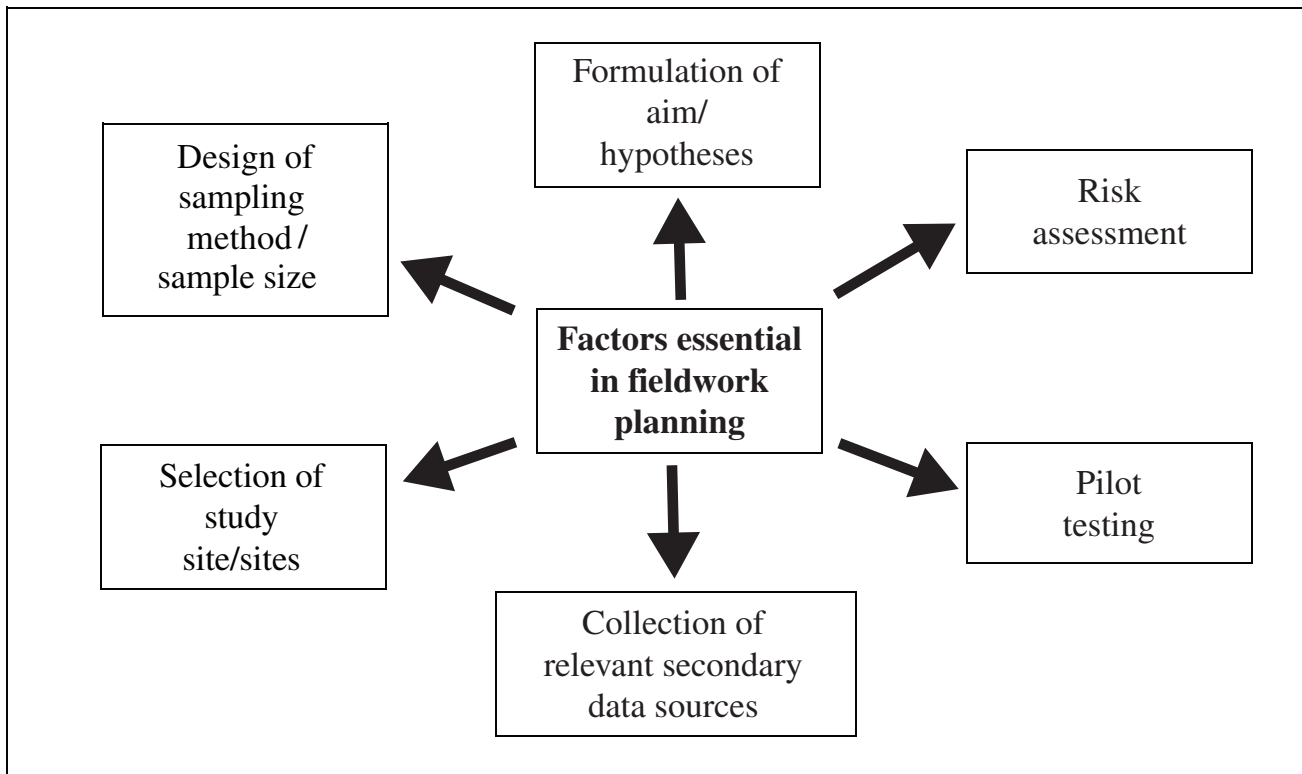
[10]

At the end of the examination these should be attached securely to this paper using the treasury tag supplied.

Examiner Only	
Marks	Remark

- 1 (a) Select **two** factors from **Resource 1** below and explain their importance in **your fieldwork** planning.

Resource 1



Factor 1:

[3]

Examiner Only	
Marks	Remark

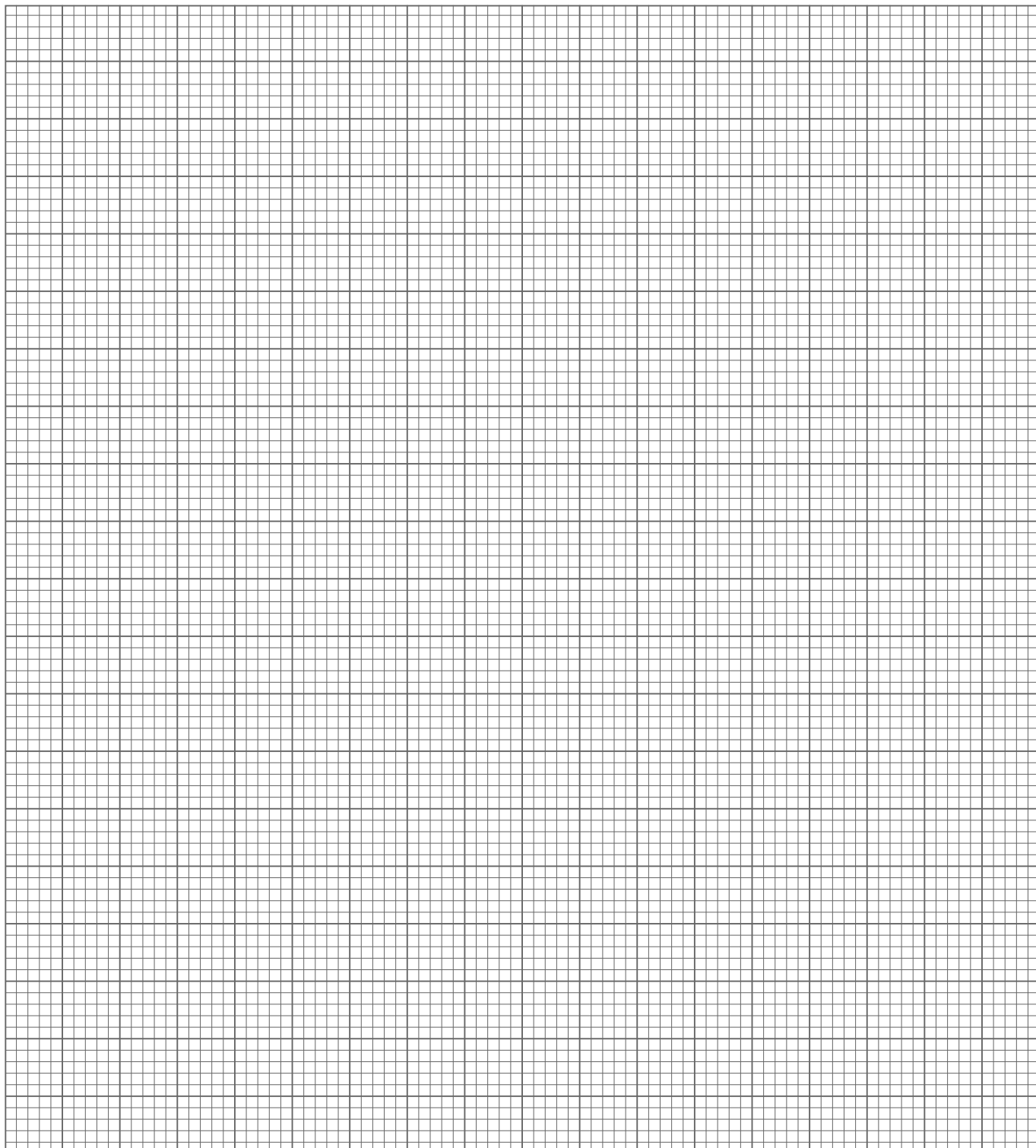
Factor 2:

[3]

Examiner Only	
Marks	Remark

- (b) (i)** Select an appropriate graphical technique to present data from your table. Your graph must be relevant to the stated aim of your investigation.

Title of Graph: _____



[7]

Examiner Only	
Marks	Remark

(d) Explain, with reference to your fieldwork, why **evaluation** is an essential part of the investigation process.

[3]

Examiner Only	
Marks	Remark

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(Questions continue overleaf)

- 2 (a) Study **Resource 2A** which relates to an investigation of altitude and mean annual temperature for 20 weather stations in North America. **Resource 2B** is a map of North America which illustrates the location of these selected weather stations.

Resource 2A

Weather Station	X Altitude (m)	Rank X	Y Mean Annual Temperature °C	Rank Y	d	d ²
1	1872	2	6.7	15.5	-13.5	182.25
2	95	10	16.7	5	5	25
3	8	17	23.9	1	16	256
4	167	7	15	8	-1	1
5	30	15	6.7	15.5	-0.5	0.25
6	61	12	18.3	4	8	64
7	2	20	20.6	2	18	324
8	200	6	-5.6	20	-14	196
9	116	8	7.2	14	-6	36
10	575	4	1.1	18	-14	196
11	3	18.5	15.6	6.5		
12	96	9	8.3	13	-4	16
13	1903	1	3.3	17	-16	256
14	70	11	10	11	0	0
15	38	13.5	10	11	2.5	6.25
16	3	18.5	18.9	3	15.5	240.25
17	251	5	10	11	-6	36
18	21	16	15.6	6.5	9.5	90.25
19	38	13.5	11.1	9	4.5	20.25
20	698	3	-0.6	19	-16	256

$$\sum d^2 = 2345.5$$

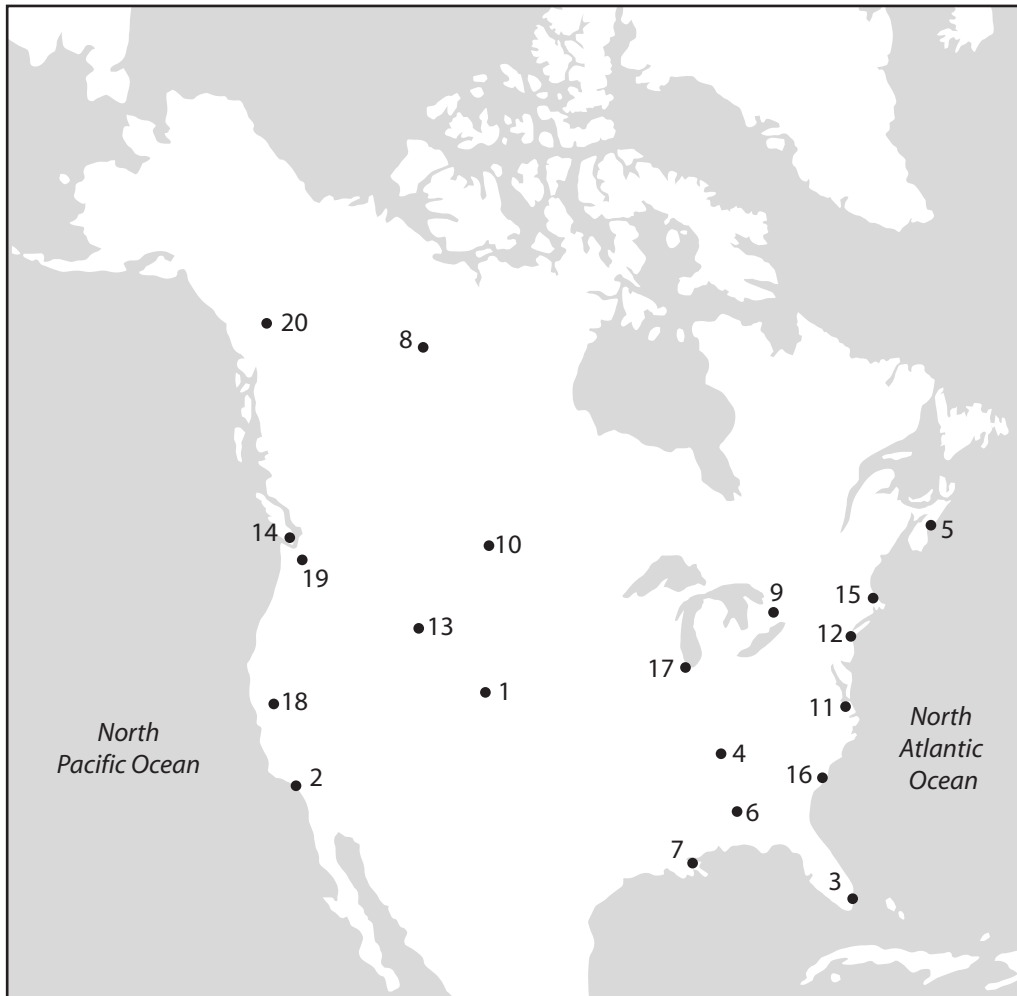
$$r_s = -0.76$$

- (i) Complete the table (**Resource 2A**) by inserting the missing values.

[2]

Examiner Only	
Marks	Remark

Resource 2B



Weather Stations (Key)

1	Cheyenne	11	Norfolk
2	Los Angeles	12	New York
3	Miami	13	Yellowstone Park
4	Nashville	14	Victoria
5	Halifax	15	Boston
6	Montgomery	16	Charleston
7	New Orleans	17	Chicago
8	Yellowknife	18	Sacramento
9	Toronto	19	Seattle
10	Regina	20	Whitehorse



1000 km

A horizontal scale bar with vertical end caps, representing a distance of 1000 kilometers.

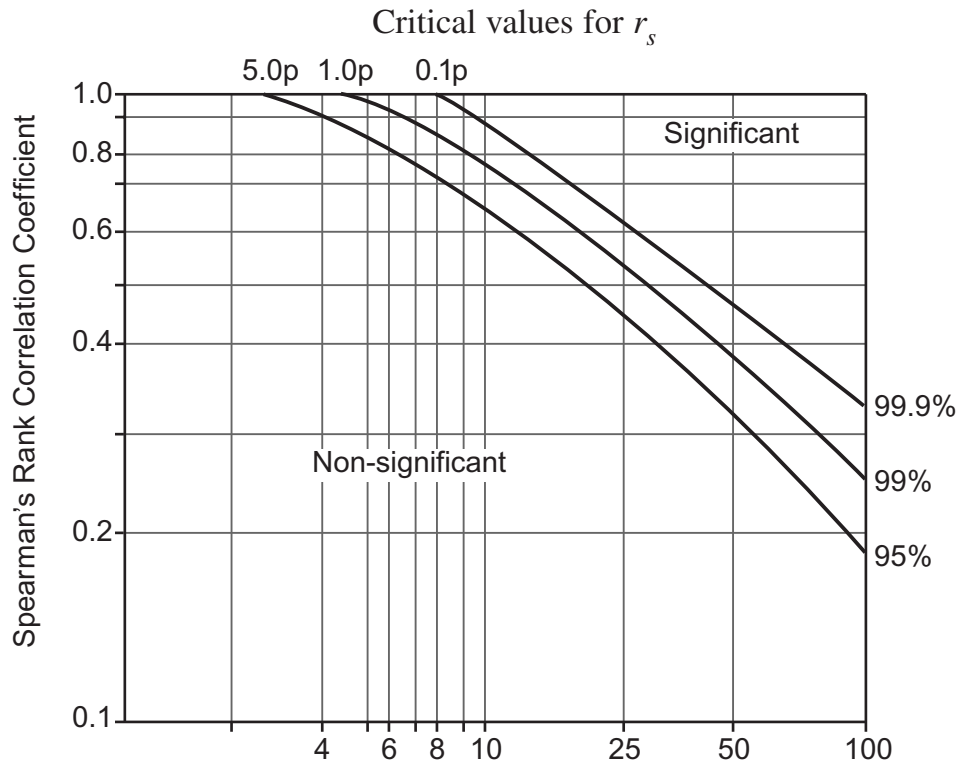
Resource 2C

Spearman's Rank Correlation Equation and Significance Charts

Formula:
$$r_s = 1 - \left(\frac{6 \sum d^2}{n^3 - n} \right)$$

where d = the difference in rank of the values of each matched pair
 n = the number of ranked pairs
 Σ = the sum of

Spearman's Rank Correlation Significance Graph and Table



Degrees of freedom [Number of ranked pairs (n) – 2]

Critical values of Spearman's Rank Correlation Coefficient, r_s

Significance level

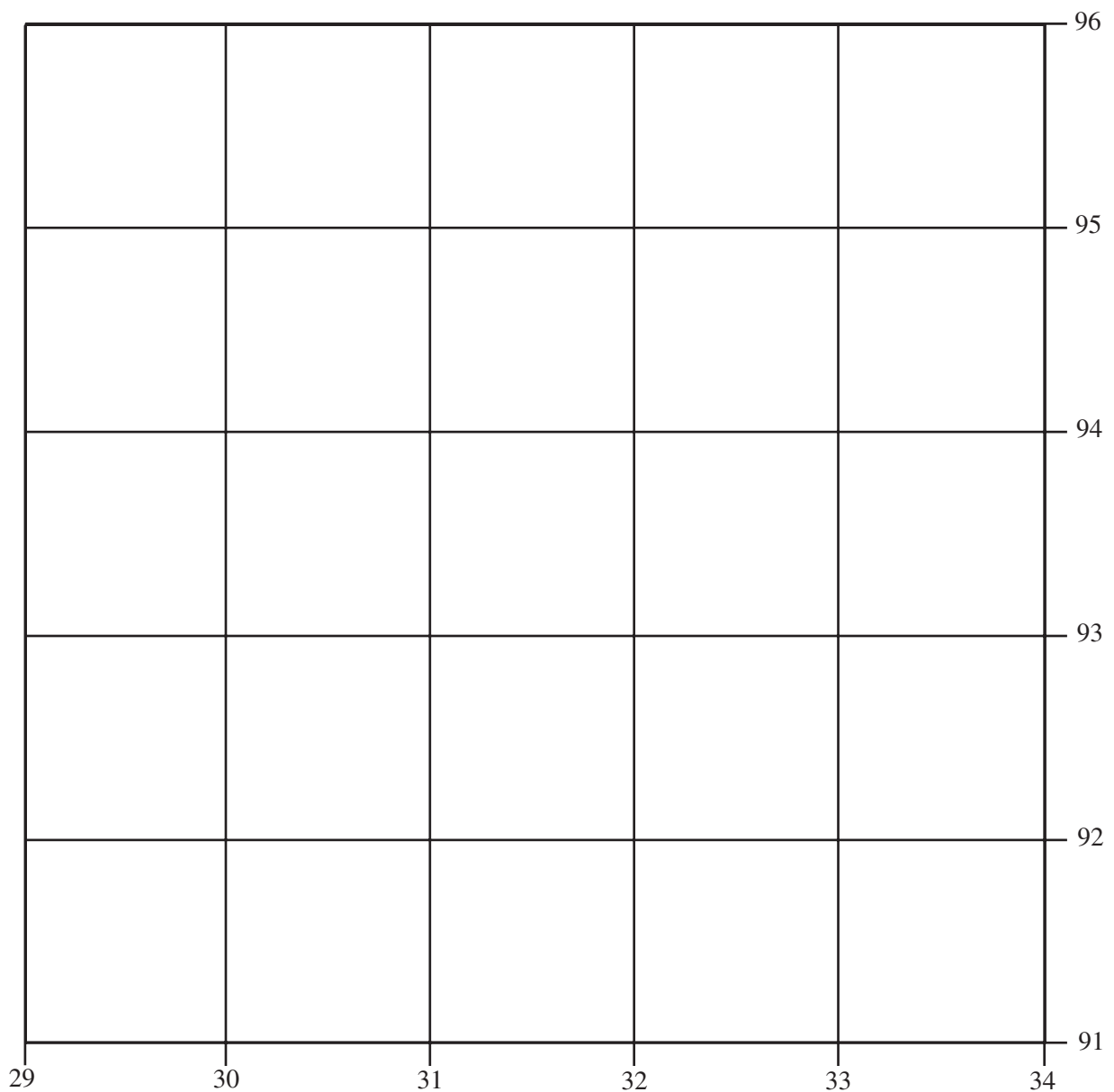
degrees of freedom	0.05 (5%)	0.01 (1%)
4	0.88	1.00
5	0.83	0.96
6	0.80	0.91
7	0.77	0.87
8	0.72	0.84
9	0.68	0.80
10	0.64	0.77
11	0.60	0.74
12	0.57	0.71
15	0.50	0.65
18	0.49	0.60
20	0.47	0.59

(b) Use the Ordnance Survey map extract of North Yorkshire, **Resource 2D** (see insert sheet), to draw a sketch map representing the area between Eastings 29 and 34 and Northings 91 and 96 in the space below.

On your sketch map, **illustrate** and **label** only the following:

- The course of the River Swale [2]
- Two named tributaries [2]
- The ox-bow lake [1]
- The built-up area of one named village [1]
- The A684 main road [1]

Examiner Only	
Marks	Remark

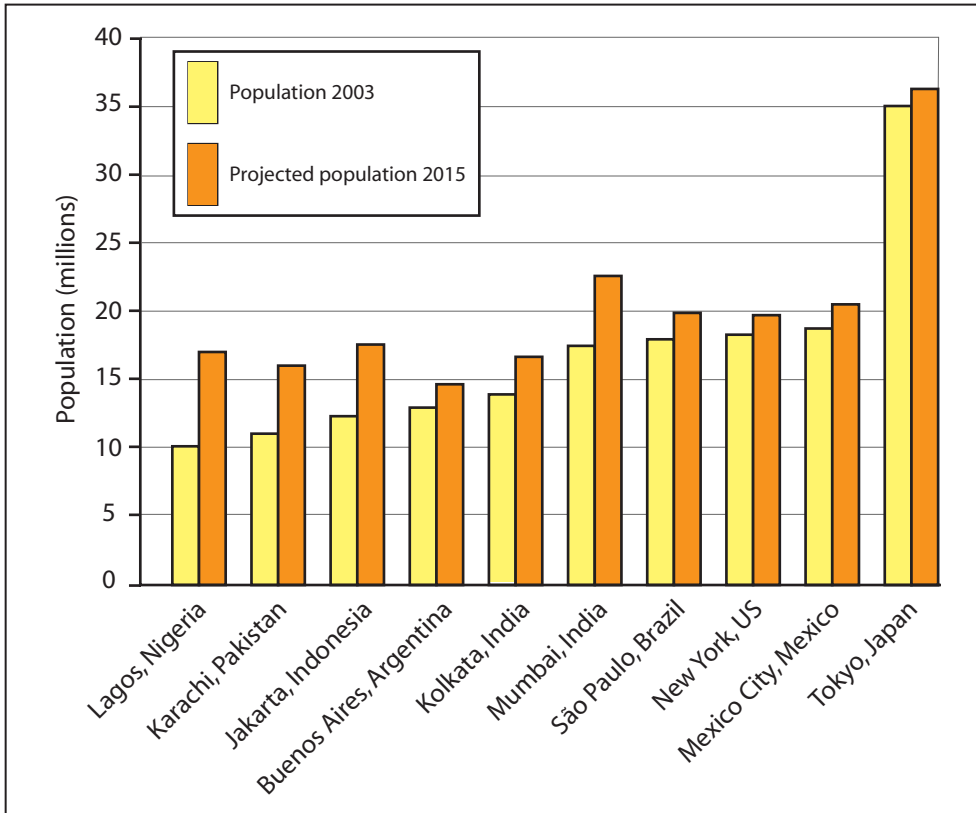
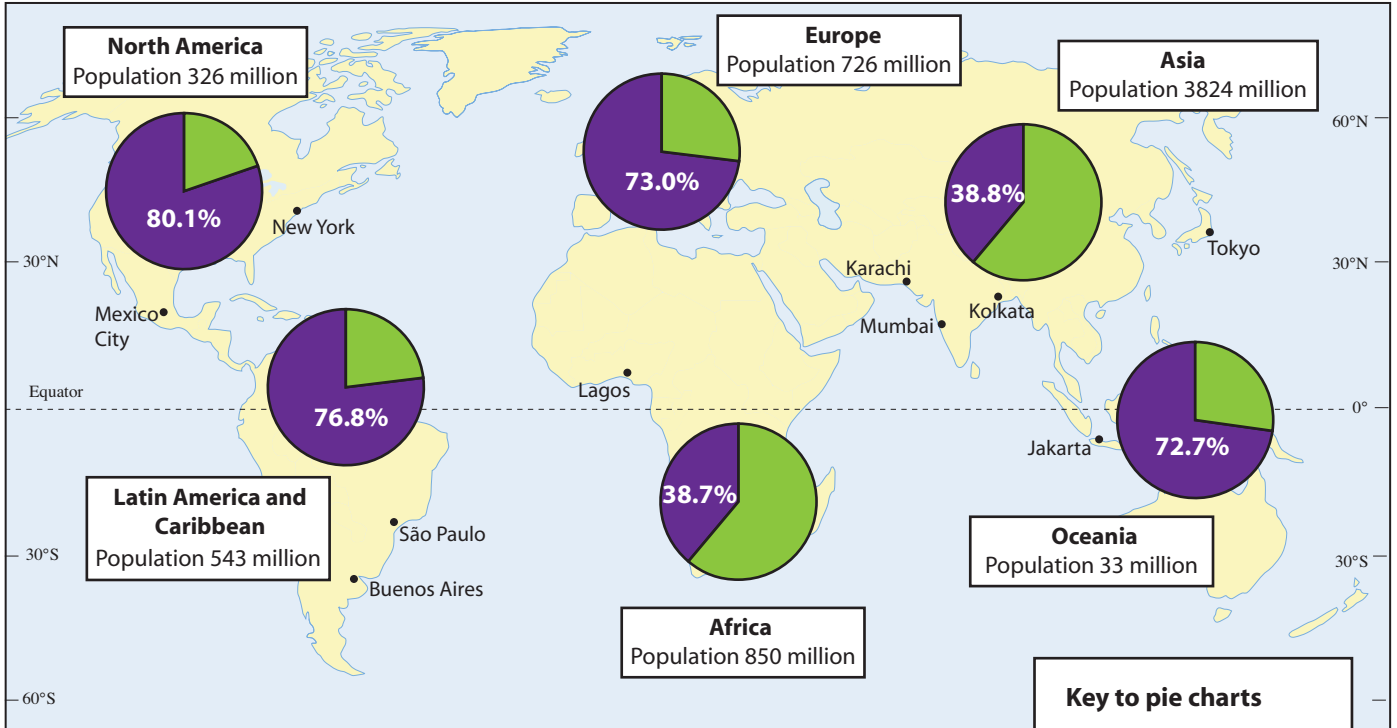


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(Questions continue overleaf)

(c) Study **Resource 2E**. The pie charts illustrate the urban and rural population for each continent. The bar charts illustrate the projected population change for some of the world's largest cities.

Resource 2E



Key to pie charts

- Rural Population
- Urban Population

- (i) How many of the cities shown are projected to exceed 20 million people by 2015?

_____ [1]

- (ii) 1. Which city shows the largest projected increase in population between 2003 and 2015?

_____ [1]

2. Explain why the projected population increase for this city is greater than that of MEDC cities such as Tokyo.

_____ [3]

- (iii) Which continent has the largest **percentage** of its population living in urban areas?

_____ [1]

- (iv) Which continent has the largest **number** of people living in urban areas?

_____ [1]

Examiner Only	
Marks	Remark

THIS IS THE END OF THE QUESTION PAPER

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