

Centre Number						Candidate Number				
Surname										
Other Names										
Candidate Signature										

For Examiner's Use	
Examiner's Initials	
Question	Mark
1	
2	
TOTAL	



General Certificate of Education  
Advanced Subsidiary Examination  
June 2013

# Geography

# GEOG2

## Unit 2 Geographical Skills

Tuesday 21 May 2013 9.00 am to 10.00 am

**For this paper you must have:**

- a pencil
- a rubber
- a ruler
- a protractor
- compasses.

You may use a calculator.

**Time allowed**

- 1 hour

**Instructions**

- Use black ink or black ball-point pen. Use pencil only for drawing.
- Fill in the boxes at the top of this page.
- Answer **all** questions.
- You must answer the questions in the spaces provided. Do not write outside the box around each page or on blank pages.
- Do all rough work in this book. Cross through any work you do not want to be marked.

**Information**

- The maximum mark for this paper is 50.
- The marks for questions are shown in brackets.
- You will be marked on your ability to:
  - use good English
  - organise information clearly
  - use specialist vocabulary where appropriate.

**Advice**

- Where appropriate, credit will be given for the use of diagrams to illustrate answers and where reference is made to your personal investigative work. You are advised to allocate your time carefully.

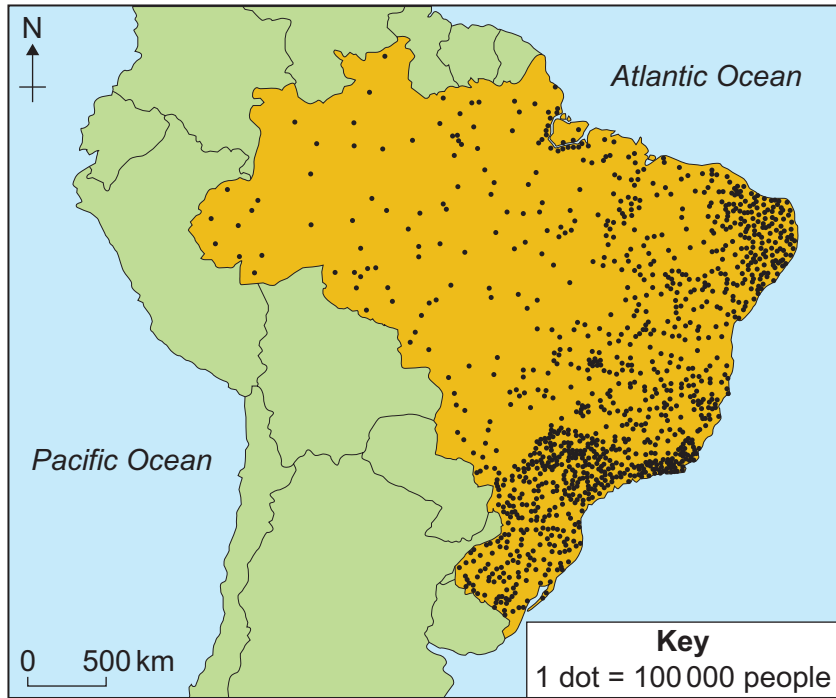


J U N 1 3 G E O G 2 0 1

Answer **all** questions in the spaces provided.

**1 (a)** Study **Figure 1**, a dot map showing the distribution of population in Brazil.

**Figure 1**



**1 (a) (i)** Using **Figure 1**, describe the distribution of population in Brazil.

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(3 marks)



**1 (a) (ii)** Outline **one** strength and **two** weaknesses associated with the dot map for displaying this data.

Strength .....

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Weakness 1 .....

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Weakness 2 .....

.....

*(3 marks)*

**Question 1 continues on the next page**

**Turn over ►**



**1 (b)** The relationship between fertility rate and infant mortality rate in selected Brazilian states in 2010 is being investigated. The null hypothesis is:

'There is no relationship between fertility rate and infant mortality rate.'

A Spearman's rank correlation test has been started in **Figure 2** below.

**Figure 2**

Due to copyright restrictions we are unable to electronically publish the table.

**1 (b) (i)** Complete **Figure 2** and, using the formula provided below, calculate the value of  $r_s$  to three decimal places.

$$r_s = 1 - \frac{6 \sum d^2}{n^3 - n}$$

$$r_s = 1 - \underline{\hspace{2cm}}$$

$$r_s =$$

(6 marks)



1 (b) (ii) Using **Figure 2**, identify the Brazilian state with the largest anomaly in the two data sets. Give a reason for your answer.

State .....

Reason .....

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(2 marks)

1 (b) (iii) Using the critical values provided in **Figure 3**, assess the statistical significance of the  $r_s$  calculation.

**Figure 3**

Numbers of paired data in sample	0.05 level of significance	0.01 level of significance
12	0.497	0.703

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(2 marks)

**Question 1 continues on the next page**

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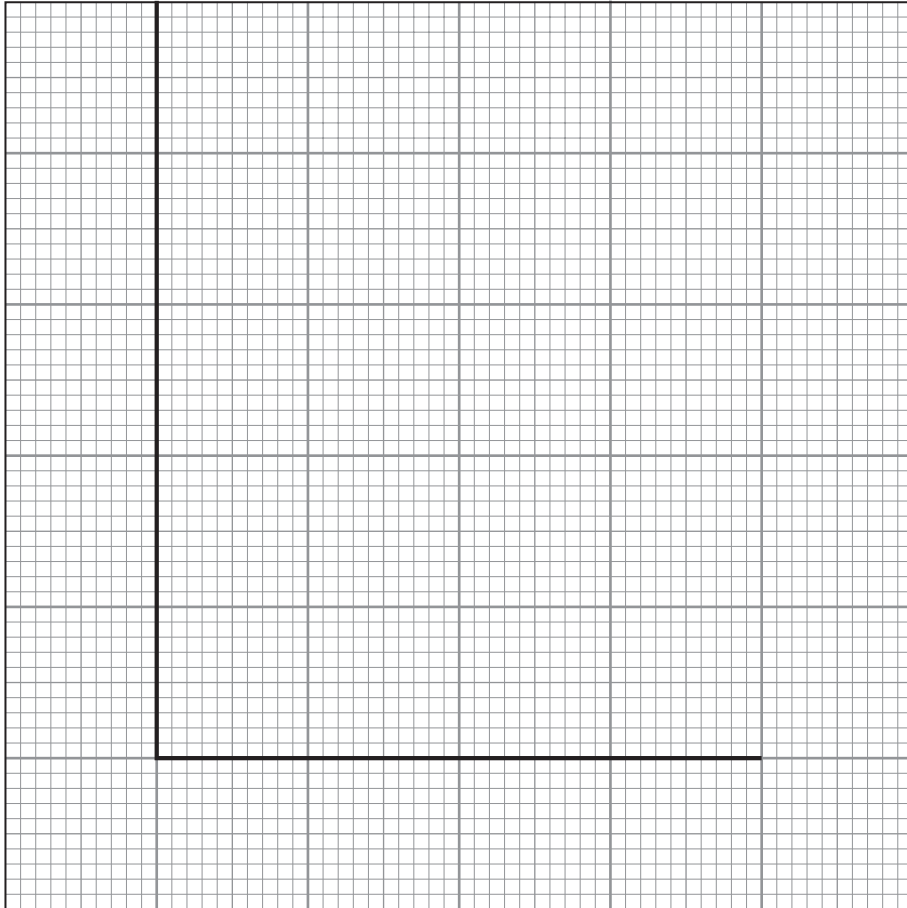


- 1 (c) Study **Figure 4** which shows birth rates and death rates for selected countries.

**Figure 4**

	<b>Brazil</b>	<b>Russia</b>	<b>India</b>	<b>China</b>
<b>Birth rate (per 1000 per year)</b>	17.8	11.1	21.0	12.3
<b>Death rate (per 1000 per year)</b>	6.4	16.0	7.5	7.0

- 1 (c) (i) Choose an appropriate technique and display the data shown in **Figure 4**, using the axes provided on the graph paper below.



(4 marks)



**1 (c) (ii)** With reference to **one or more** countries in **Figure 4**, discuss social and economic implications of the birth rates and death rates.

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(5 marks)

*Extra space* .....

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25

**Turn over for the next question**

**Turn over ▶**







**2 (a) (ii)** Draw an annotated sketch map showing the characteristics of your study area.



*(5 marks)*

**Question 2 continues on the next page**

**Turn over ►**





**2 (c)** Suggest further research opportunities arising from the conclusions of your enquiry.

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*(6 marks)*

*Extra space* .....

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<b>25</b>

**END OF QUESTIONS**



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ANSWER IN THE SPACES PROVIDED**

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Figure 1: Department for Education

Figure 2: [www.brasil.gov.br](http://www.brasil.gov.br)

Figure 4: Central Intelligence Agency World Factbook

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