Please check the examination details below before entering your candidate information

Candidate surname	Other names

Centre Number | Candidate Number

Pearson Edexcel Level 1/Level 2 GCSE (9–1)

Friday 14 June 2024

Morning (Time: 1 hour 30 minutes)

Paper reference **1GA0/03**

Geography A

PAPER 3: Geographical Investigations Fieldwork and UK Challenges

You must have:
Resource Booklet (enclosed), Calculator, Ruler

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- In Section A answer **either** Question 1 **or** Question 2.
- In Section B answer **either** Question 3 **or** Question 4.
- In Section C answer **all** questions.
- Answer the questions in the spaces provided – *there may be more space than you need.*
- Where asked you must **show all your working out with your answer clearly identified at the end of your solution**.

Information

- The total mark for this paper is 64.
- The marks for **each** question are shown in brackets – *use this as a guide as to how much time to spend on each question.*
- The marks available for spelling, punctuation and grammar are clearly indicated.

Advice

- Read each question carefully before you start to answer it.
- Check your answers if you have time at the end.

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SECTION A

Geographical Investigations – Physical Environments

Answer EITHER Question 1 OR Question 2 in this section.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

Write your answers in the spaces provided.

Question 1: Investigating Physical Environments (River Landscapes)

If you answer Question 1, put a cross in the box ☒ .

1 A group of students collected data to investigate changes at six sites along a river channel.

(a) (i) Describe **one** fieldwork method that could have been used by the students to measure river depth.

(2)

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(ii) Explain **one** disadvantage of using this fieldwork method.

(2)

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(b) The students measured the river depth at each site and presented this data on a scatter graph.

Study Figure 1a below.

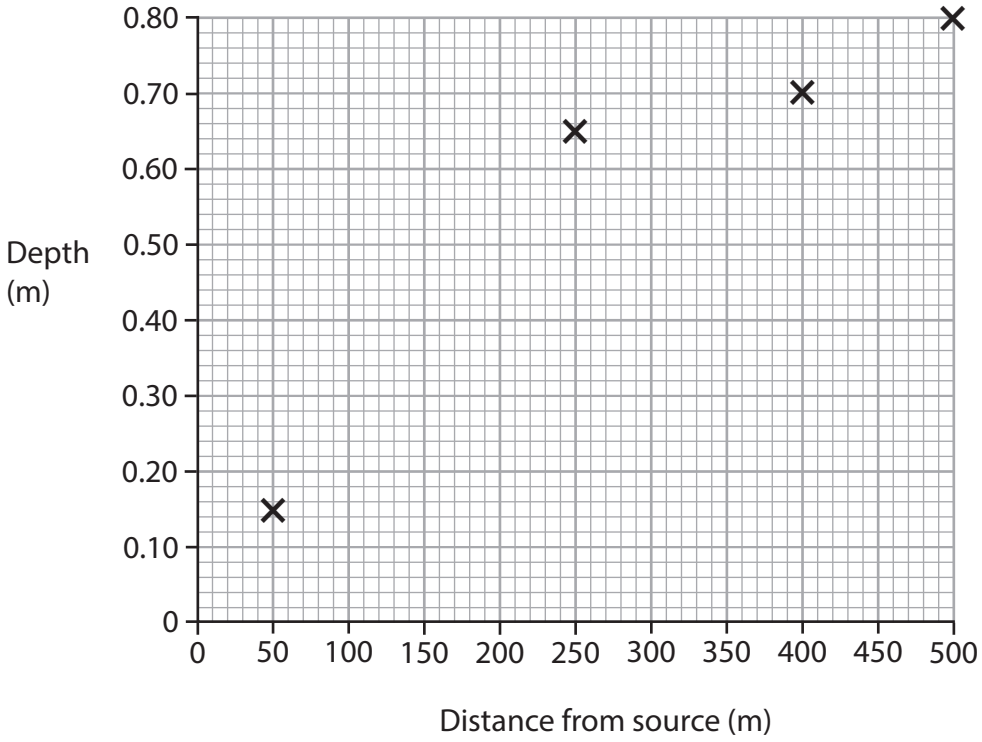

Figure 1a

A scatter graph to show the relationship between river depth and distance from source

(i) Complete Figure 1a by plotting the data below.

(2)

Distance from source (m)	Depth (m)
100	0.60
200	0.50

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(ii) Study Figure 1b in the Resource Booklet.

Calculate the mean width of the river.

Give your answer to **one** decimal place.

You must show your working in the space below.

(2)

Mean width ..... m

(iii) Identify the **two** correct statements about the river data in Figure 1b.

(2)

☒ **A** the river depth decreases between site 1 and site 6

☒ **B** the river width increases overall between site 1 and site 6

☒ **C** the river width decreases between site 3 and site 4

☒ **D** the river depth decreases between site 2 and site 3

☒ **E** the river is twice as deep at site 2 than it is at site 1

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(c) You have studied a river as part of your geographical investigation.

Evaluate the following statement about your fieldwork.

> My fieldwork data supported the expected changes to river discharge downstream (width, depth and velocity).

(8)

Title of your geographical investigation

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Do not answer Question 2 if you have answered Question 1.

Question 2: Investigating Physical Environments (Coastal Landscapes).

If you answer Question 2, put a cross in the box ☒ .

2 A group of students collected data to investigate coastal processes at six sites along a beach.

(a) (i) Describe **one** fieldwork method that could have been used by the students to measure sediment size.

(2)

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(ii) Explain **one** disadvantage of using this fieldwork method.

(2)

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(b) The students measured sediment size along the beach and presented this data on a scatter graph.

Study Figure 2a below.

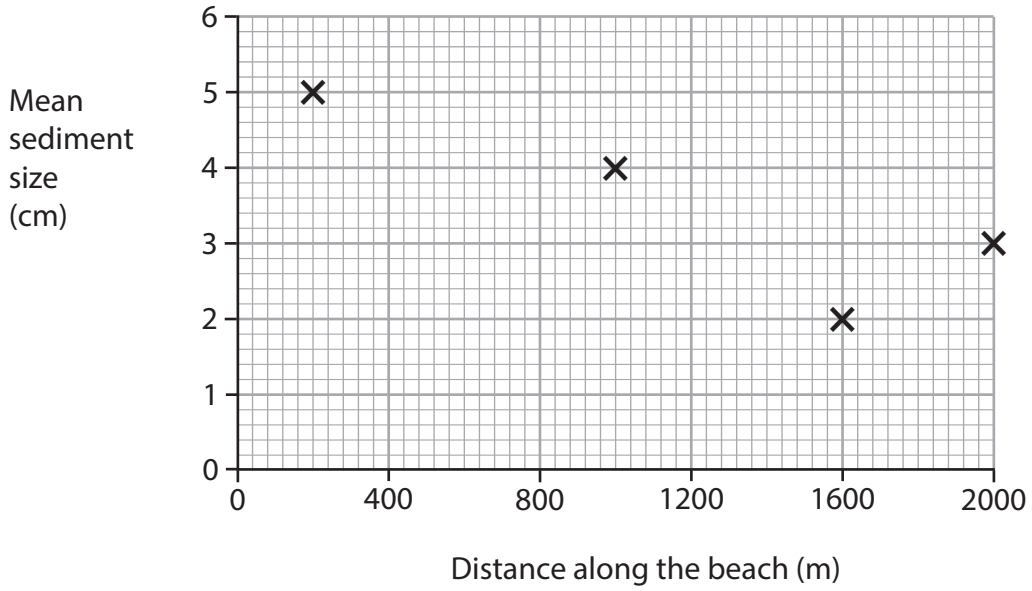

Figure 2a

A scattergraph to show the relationship between sediment size and distance along the beach

(i) Complete Figure 2a by plotting the data below.

(2)

Distance along the beach (m)	**Mean sediment size (cm)**
400	6
1200	3

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(ii) Study Figure 2b in the Resource Booklet.

Calculate the mean gradient of the beach.

Give your answer to **one** decimal place.

You must show your working in the space below.

(2)

Mean gradient ..... °

(iii) Identify the **two** correct statements about the beach data in Figure 2b.

(2)

☒ **A** the beach gradient increases between site 1 and site 6

☒ **B** the mean sediment size decreases overall between site 1 and site 6

☒ **C** the mean sediment size increases between site 3 and site 4

☒ **D** the beach gradient decreases between site 2 and site 3

☒ **E** the mean sediment size is twice as large at site 2 than it is at site 1

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(c) You have studied a coast as part of your geographical investigation.

Evaluate the following statement about your fieldwork.

My fieldwork data supported the expected changes to beach morphology (gradient and width) and sediment size.

(8)

Title of your geographical investigation

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TOTAL FOR SECTION A = 18 MARKS

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SECTION B

Geographical Investigations – Human Landscapes

Answer EITHER Question 3 OR Question 4 in this section.

Write your answers in the spaces provided.

Question 3: Investigating Human Landscapes (Central/Inner Urban Area)

If you answer Question 3, put a cross in the box ☒ .

3 (a) You have studied an urban area as part of your own fieldwork.

Explain **two** methods you used to collect your fieldwork data.

(4)

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(b) Explain **one** advantage of a technique used to present your fieldwork data.

(2)

Technique used

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(c) Explain **one** disadvantage of a sampling strategy used in your investigation.

(2)

Named sampling strategy

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(d) Explain **one** way secondary data helped to support your investigation.

(2)

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(e) Study Figure 3 in the Resource Booklet.

A group of students were investigating the quality of the environment in an urban area.

Evaluate the following statement.

The students' method shown in Figure 3 to collect data was accurate and reliable.

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(Total for Question 3 = 18 marks)

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Do not answer Question 4 if you have answered Question 3.

Question 4: Investigating Human Landscapes (Rural Settlements)

If you answer Question 4, put a cross in the box ☒ .

4 (a) You have studied a rural settlement as part of your own fieldwork.

Explain **two** methods you used to collect your fieldwork data.

(4)

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(b) Explain **one** advantage of a technique used to present your fieldwork data.

(2)

Technique used

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(c) Explain **one** disadvantage of a sampling strategy used in your investigation.

(2)

Named sampling strategy

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(d) Explain **one** way secondary data helped to support your investigation.

(2)

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(e) Study Figure 4 in the Resource Booklet.

A group of students were investigating the quality of the environment in a rural settlement.

Evaluate the following statement.

The students' method shown in Figure 4 to collect data was accurate and reliable.

(8)

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(Total for Question 4 = 18 marks)

TOTAL FOR SECTION B = 18 MARKS

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SECTION C

UK Challenges

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

Spelling, punctuation, grammar and specialist terminology will be assessed in Question 5(d).

5 (a) (i) Study Figure 5a in the Resource Booklet.

Identify the region with the lowest increase in flood risk by 2080.

(1)

☐ **A** Central & SE England

☐ **B** E Scotland

☐ **C** SW England

☐ **D** NE England

(ii) Describe the pattern of the predicted increase in flood risk in Scotland.

(2)

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(iii) State **two** possible reasons why flood risk is expected to increase in the UK by 2080.

(2)

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2 .....

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Study Figure 5b in the Resource Booklet.

(b) Explain **one** impact of flooding on people in the UK.

(3)

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(c) Explain **two** approaches to managing flood risk in the UK.

(4)

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In this question, up to four additional marks will be awarded for your spelling, punctuation, grammar and your use of specialist terminology.

(d) Use the information from the Resource Booklet (Figures 5a to 5e) as well as knowledge and understanding from the rest of your geography course.

> 'With the increasing possibility of flooding in the UK, the costs of managing the risks successfully are likely to outweigh the benefits.'

Discuss this view.

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(Spelling, punctuation, grammar and use of specialist terminology = 4 marks)
(Total for Question 5 = 28 marks)

TOTAL FOR SECTION C = 28 MARKS
TOTAL FOR PAPER = 64 MARKS

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Geography A

PAPER 3: Geographical Investigations Fieldwork and UK Challenges

Resource Booklet

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SECTION A

Geographical Investigations – Physical Environments

River characteristics	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6
Width (m)	0.80	1.50	4.00	6.00	6.50	7.5
Depth (m)	0.15	0.60	0.50	0.65	0.70	0.80

Figure 1b

Data collected by the group of students moving downstream

Beach characteristics	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6
Beach gradient (°)	15	14	12	9	7	4
Mean sediment size (cm)	5	6	4	3	2	3

Figure 2b

Data collected by the group of students at the coast

SECTION B

Geographical Investigations – Human Landscapes

The aim of the students' investigation was to find out how the quality of the urban environment changed along one of the main roads leading from the Central Business District (CBD) to the suburbs. The students collected data at 4 survey sites approximately 500m apart. The method was conducted on a cold, wet Tuesday in November.

The students worked in groups of 6 and were given 5 minutes at each of the survey sites to conduct an environmental quality survey, with the higher the score the better the quality.

Different members of the group collected the data at each site so everyone could have the opportunity to make a judgement.

	1 (Low environmental quality)	**2**	**3**	**4 (High environmental quality)**	
High levels of litter					Low levels of litter
Buildings not well maintained					Buildings well maintained
High traffic noise					Low traffic noise
High levels of vandalism					Low levels of vandalism

Figure 3

A fieldwork method used in an urban investigation

The aim of the students' investigation was to find out the views of people on the quality of a rural environment. The students collected data at 4 survey sites along one road leading out of the village, approximately 100m apart. The method was conducted on a cold, wet Tuesday in November.

The students worked in groups of 6 and were given 5 minutes at each of the survey sites to conduct a questionnaire.

Different members of the group collected the data at each site so everyone could ask questions but they were only able to complete 8 questionnaires in total.

Q.1. On a scale of 1–4 (1 = low environmental quality / 4 = high environmental quality), how would you rate the levels of litter in this village?

Q.2. On a scale of 1–4, how would you rate the quality of the buildings?

Q.3. On a scale of 1–4, how would you rate the traffic noise?

Q.4. Can you give one reason for your scores for questions 1, 2 and 3?

Figure 4

A fieldwork method used in a rural investigation

SECTION C

UK Challenges

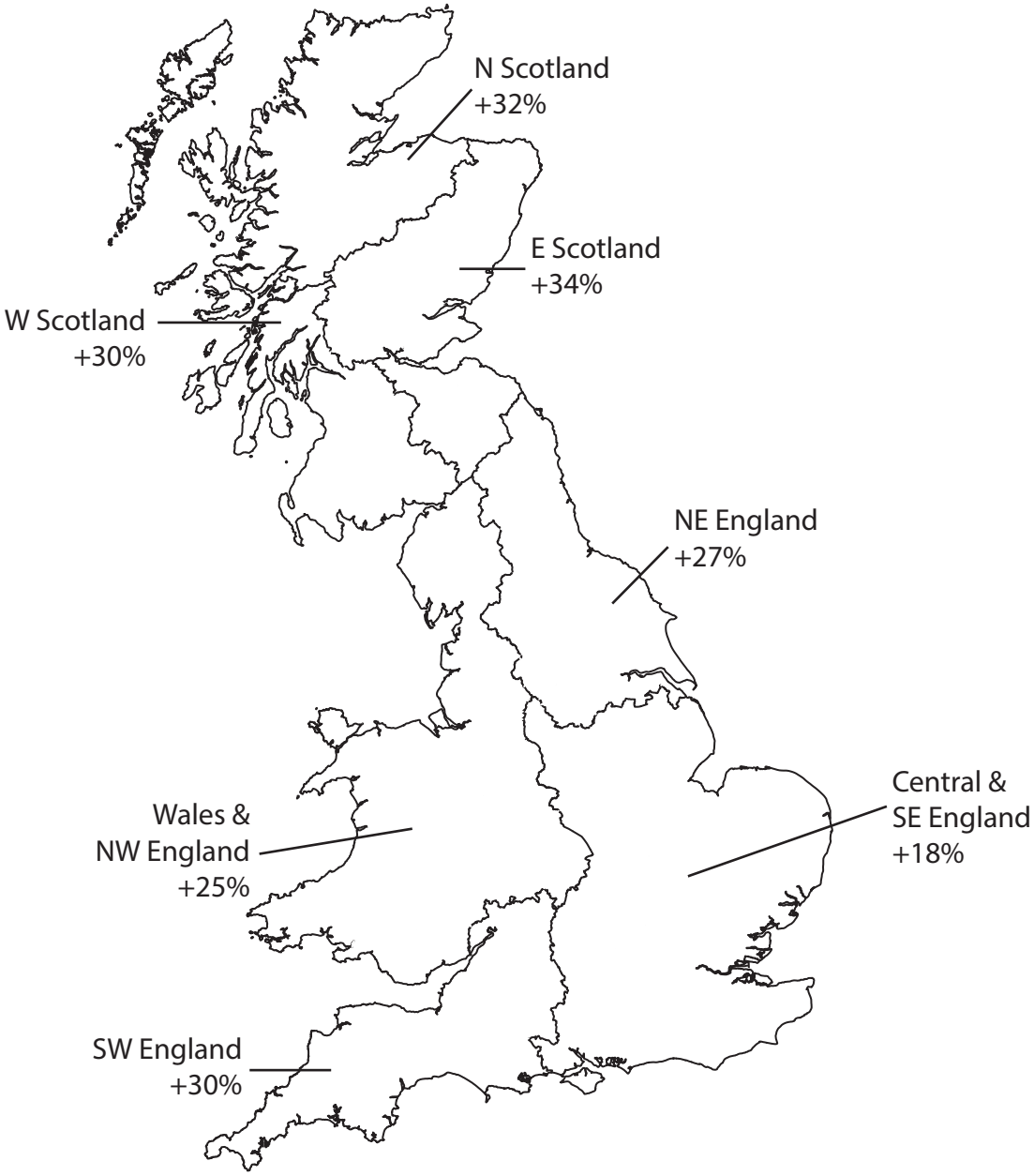

Figure 5a

Predicted increase in flood risk for regions of England, Scotland and Wales by 2080

One in six properties in the UK are located in areas where there is a significant risk of flooding.

As many as **40%** of businesses do not re-open after suffering from a flood.

Around **2.4 million** UK properties are at risk from river and coastal flooding each year.

Flooding can cost the economy up to **£100,000** per hour per major road affected.

Mental health impacts of flooding can last for more than **2 years**.

Figure 5b

The impacts of flooding in the UK

As the population of the UK grows, we are likely to see the number of properties built very close to rivers almost double by 2065.

Over the next 30 years, it is estimated a further £30 billion will need to be invested in strategies to protect against river and coastal flooding.

Over 55% of water and sewage pumping stations, 20% of railway lines, 10% of major roads, 28% of gas infrastructure and 14% of electricity sub-stations are in areas at risk of flooding.

Figure 5c

Fact file on river and coastal flooding

Region	2015–2016 £ millions	2019–2020 £ millions
East Midlands	29	65
East of England	68	53
London	16	31
North East	16	10
North West	51	52
South East	67	71
South West	41	44
West Midlands	13	31
Yorkshire and the Humber	55	119
Total	**356**	**476**

Figure 5d

Cost of reducing river and coastal flood risk in England, 2015–2016 and 2019–2020

Most of the UK is not at risk of flooding for the next few hundred years. We shouldn't waste money on flood protection, we should spend the money on something useful like health or renewable energy.

Molly, a homeowner in the East of England

Our flood defence investment program is currently £5.2 billion over the next 6 years. This is not going to be sufficient as the risk of flooding is going to keep increasing.

Callum, a spokesperson for the Environment Agency

Our business has struggled to recover from the flood damage we have experienced. The cost of the repairs and the frequency of the flooding means we may not be able to continue trading.

Sarah, cafe owner near the coast

Global warming means that sea levels are rising. We can do nothing about that in the long term. This makes me wonder what the point is of protecting the coast from flooding.

Rosemin, a Year 11 geography student

Figure 5e

Views about flood risk management in the UK

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Acknowledgements

Pearson Education Ltd. gratefully acknowledges all the following sources used in the preparation of this paper:

Figure 5a: adapted from https://www.sciencefocus.com

Figure 5b: © 2023 Rainbow Restoration

Figure 5d: data from https://www.gov.uk