Bangkok 2025

21st International Geography Olympiad

28th July 2025 – Fieldwork Exercise 2

Afternoon

Data Interpretation, Analysis, and Presentation

Student Number

2	1				

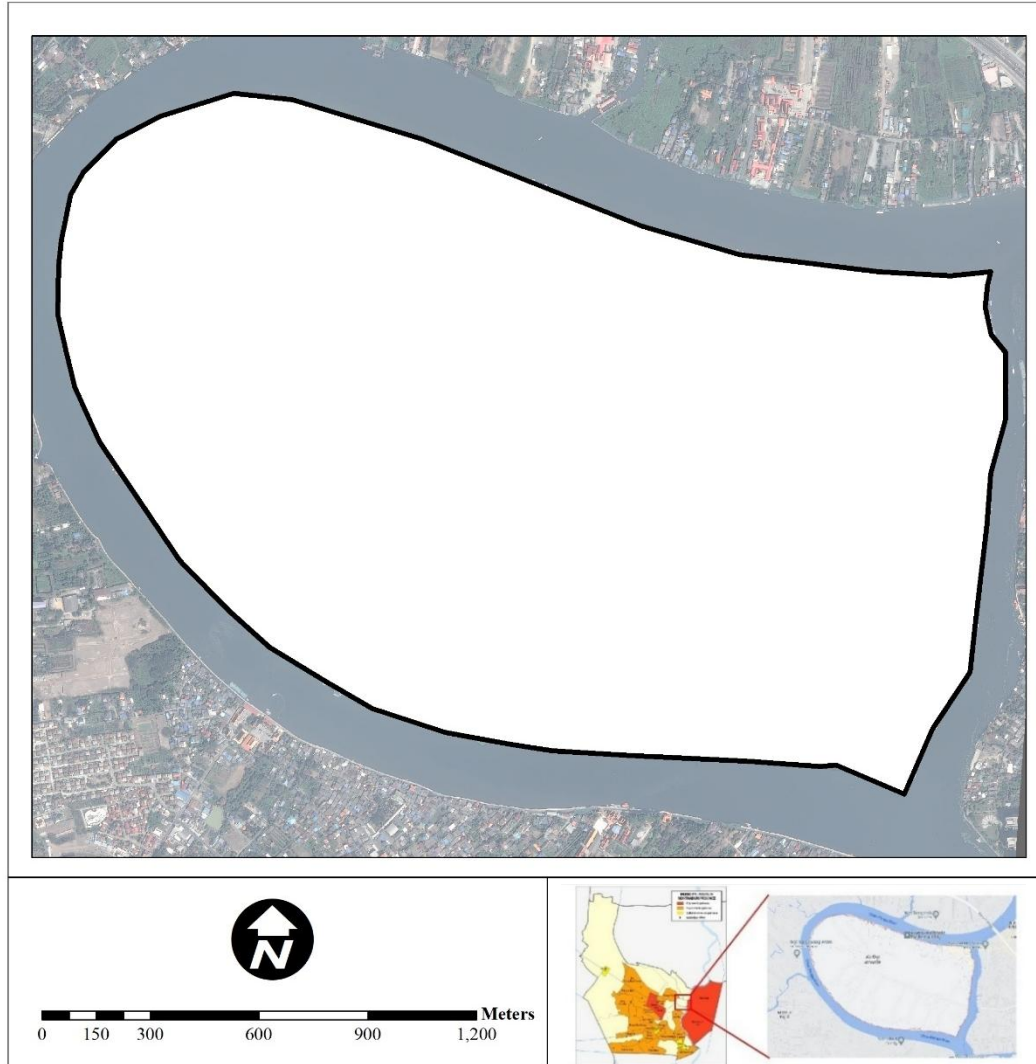| Student Number	2	1				

General Instructions

- Fieldwork Exercise 2 consists of 3 parts:
    - Task 1: Numerical, Graphical, and Geographical skills (16 marks)
    - Task 2: Mapping, Interpretation and Analysis of Observational Data (24 marks)
    - Task 3: Decision Making (Geographic Reasoning) (6 marks)
    - **Total score is 46 marks**
- Students educated in English will have 2 hours to complete the tasks.
- Students not educated in English will be provided with 30 extra minutes, for a total of 2 hours and 30 minutes.
- Remember to use information booklet, maps, and worksheets from FWE 1.

Task 1: Numerical, Graphical, and Geographical skills (16 marks)

1. Based on the satellite image below, calculate the total area of Ko Kret Island and show your calculations in the blank space provided. (2 marks)

The area of Ko Kret is _____ km^2.

Show your calculations for the area of Ko Kret Island.

2. Table 1 shows population data at the village level in Ko Kret for both 2014 and 2024. Refer to Figure 2 in the information booklet for the locations of the villages and their administrative boundaries.

Table 1: Number of male and female population at each of seven villages of Ko Kret in 2014 and 2024.

Village	2014		2024		Average annual growth rate of population
	male	female	male	female	
1	534	595	590	659	
2	533	674	494	804	
3	473	515	437	462	
4	196	199	168	184	
5	404	489	417	420	
6	339	374	293	362	
7	154	199	142	192	
Total	2,633	3,045	2,541	3,083	

2.1 Calculate the average annual growth rate of population for each village and for the total population of Ko Kret. Write down your answer using two decimal places in Table 1 (2 marks).

2.2 Use the data for 2014 and 2024 to create a graph comparing the number of males and females in the villages listed in Table 1. (3 marks)

2.3 Describe, in detail, spatial patterns and trends related to population changes in Ko Kret between 2014 and 2024, based on the data in Table 1. Also, use information from the booklet and your observations during FWE 1 to elaborate on your answers (5 marks).

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3. The photo below was taken in 1895, showing that the pagoda at Wat Poramai Yikawat was not inclined from its vertical axis as much as it is today. Based on your observations in Task 1 in FWE 1, estimate the level of river bank subsidence over the past 130 years. You can assume that the ground distance between the center of the pagoda to the river bank on the right was 3 metres in 1895. The inclination angle of the pagoda in 2025 is 20 degrees from its vertical, and the vertical pagoda axis is always approximately perpendicular to the ground surface. Show your calculations and explain your process in the white space below. (2 marks).

Source: https://www.silpa-mag.com/history/article_6198

The level of river bank subsidence was _____ meters between 1895 and 2025.

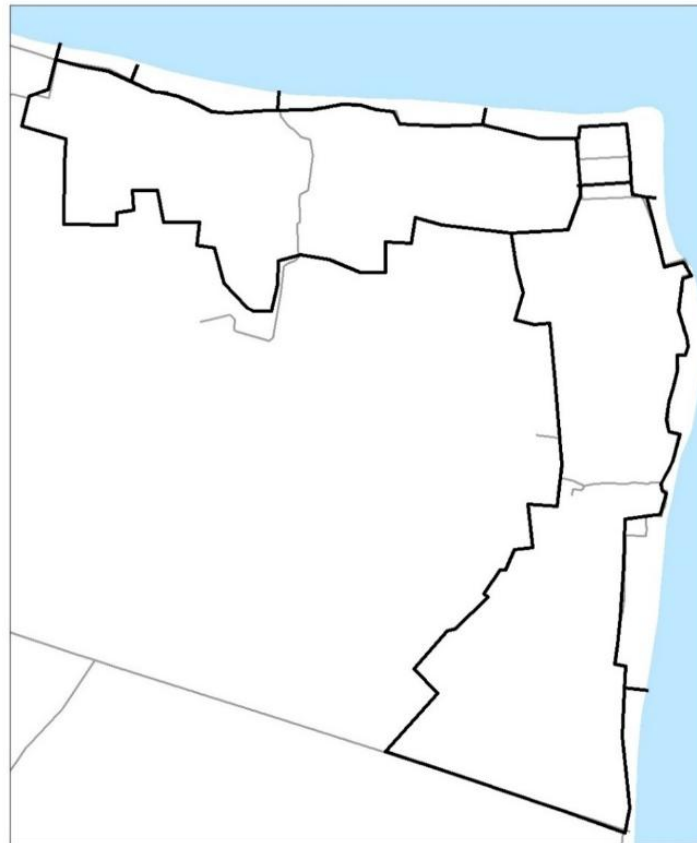Show your calculations and explain your process here:

4. The figures below show two major pagodas in Ko Kret.

Pagoda A at Wat Sao Thong Thong   **Pagoda B at Wat Chimplee Sutthawas**

Map 2-1: Locations of two pagodas.

4.1 Mark the locations of Pagoda A and Pagoda B on Map 2-1. (1 mark)

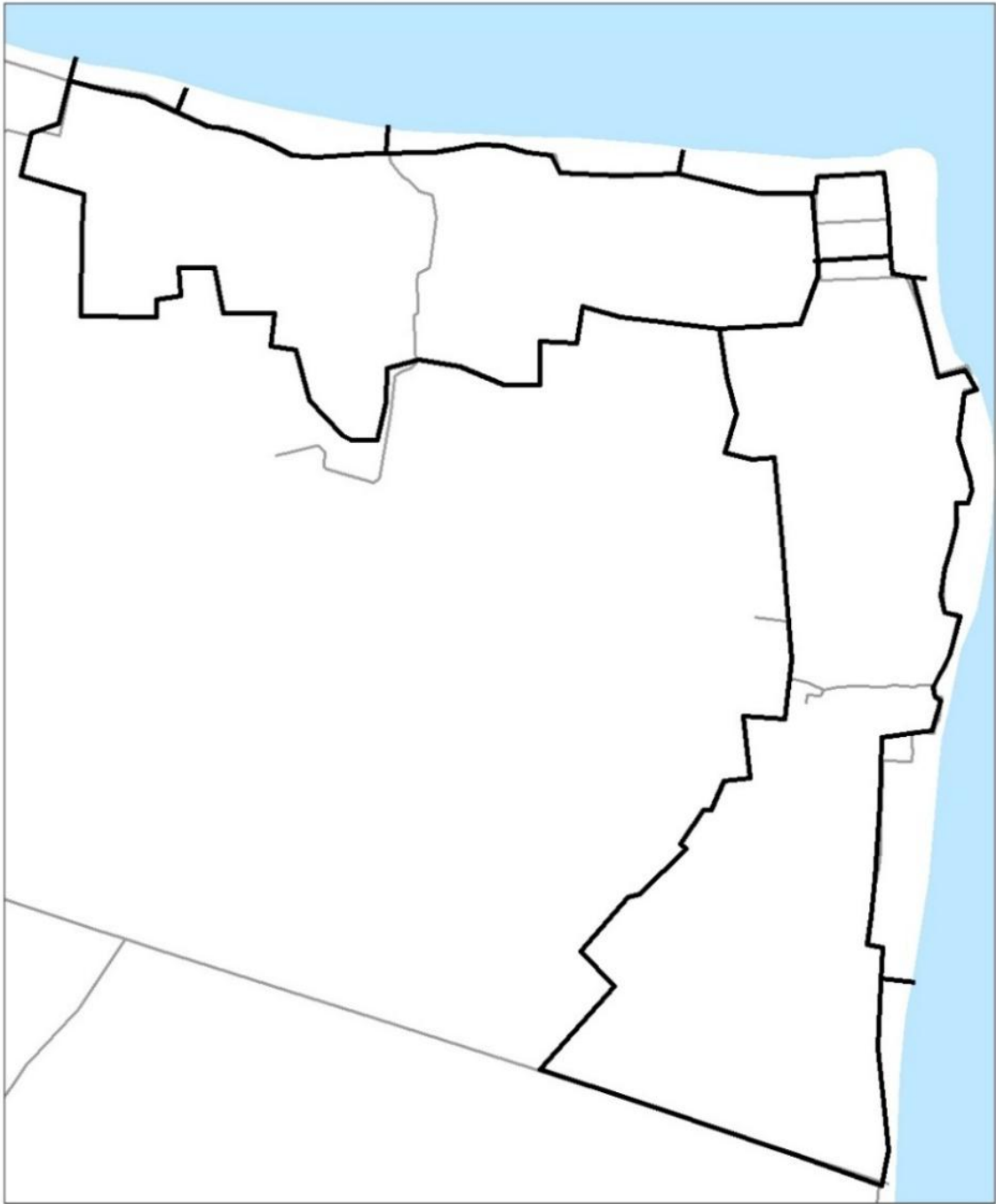4.2 Measure the compass bearings from Pagoda A to Pagoda B.
     The compass bearing is _____ degrees. (1 mark)

Task 2: Mapping, Interpretation and Analysis of Observational Data
(24 marks)

5. Using the worksheets from Fieldwork Exercise 1 (Routes 1 and 2), develop a map of Ko Kret based on Map 2-2 that includes the following details (10 marks):
   - Major types of land use and land cover
   - Two local plant clusters (Lotus and Nor Kala)
   - Key tourist attractions. These must include cultural sites, local businesses, and facilities and amenities.
   - A clear and coherent set of map symbols including annotations that are visually appropriate and intuitive for users.

Map 2-2: Information map of Ko Kret (A3-size)

6. Based on Map 2-2, describe the major land uses and spatial patterns for key tourist attractions, facilities and amenities. (5 marks)
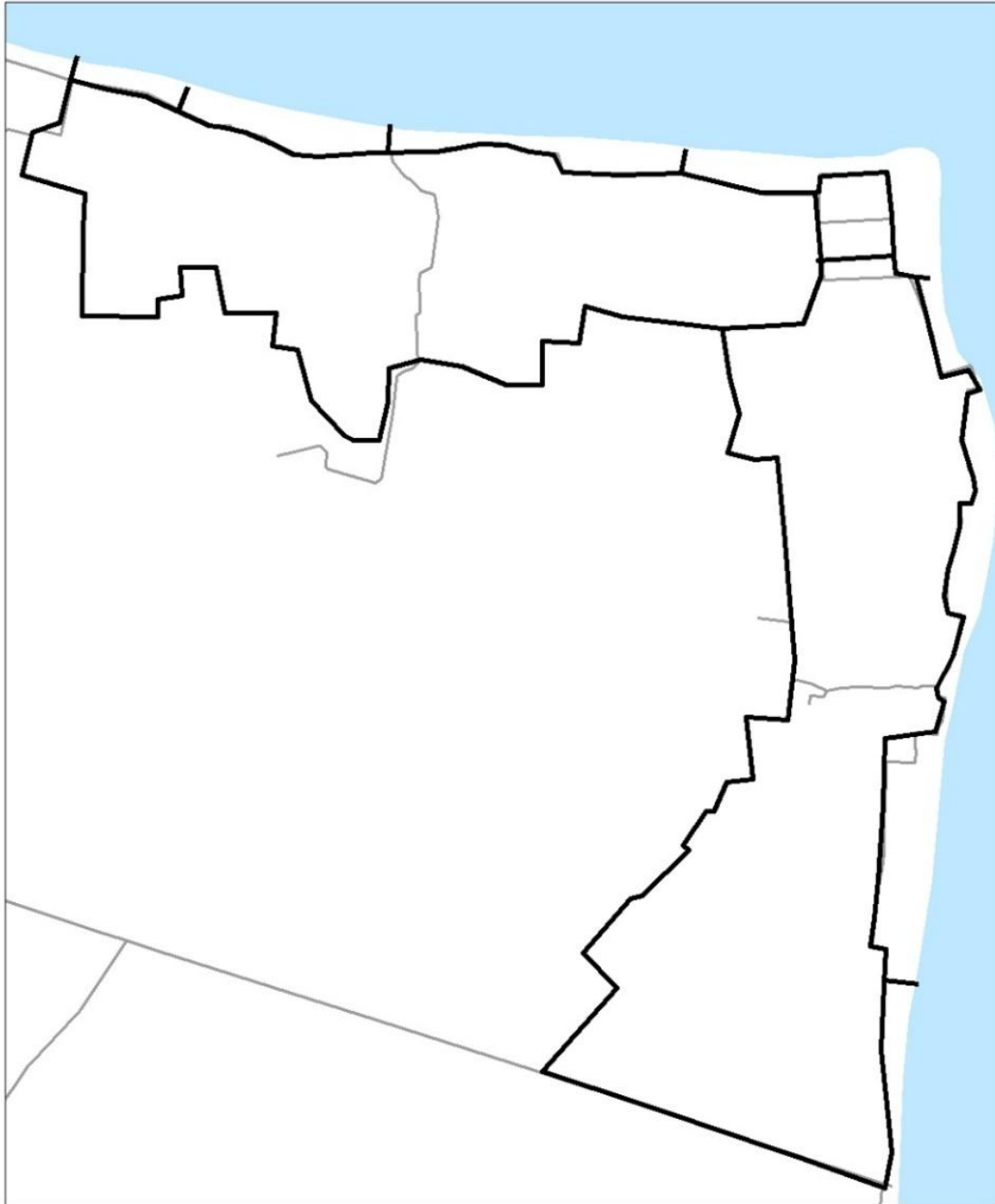
1) _____

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2) _____

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3) _____

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4) _____

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5) _____

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7. Compare and contrast the observable economic, environmental, and social and cultural characteristics on Route A and Route B. What are the main problems or challenges associated with these aspects that may affect tourism? Suggest practical ways to improve or enhance tourism experiences for future visitors – especially on the route that is less developed (9 marks).

Topic	Similarities & Differences	Problems or Challenges	Practical ways to improve the quality of the tourist attractions
Economics			
Environment			
Social			

Task 3: Decision Making (Geographic Reasoning) (6 marks)

8. If you were given the authority to build a 400-square-meter Ko Kret Museum and Cultural Centre, where would be the most appropriate location to build it? Draw a polygon, to scale of the proposed location on Map 2-6 (2 marks).

Map 2-6: Location of Ko Kret Museum and Cultural Centre

9. Explain why you chose to locate the Museum and Cultural Centre where you did. Provide 4 geographical reasons for your decision. (4 marks).

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    2) _____

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    3) _____

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    4) _____

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