

1.6 Scales of Analysis

Name: _____ Class: _____ Date: _____ **Total: 10 marks**

KEY WORDS national 国家 • scale of analysis 分析尺度 • global 全球 • region 区域 • local 地方

Objective

Build the skills to answer exam questions on **scales of analysis** 分析尺度.

You must be able to:

- list scales of analysis: **global** 全球, **regional** 区域, **national** 国家, **local** 地方
- explain how the scale chosen changes what a pattern shows
- distinguish scale of analysis from map scale
- explain how **aggregation** 聚合 of data hides local variation

1 Worked examples

Study these first. Each one shows the method for a task used later.

■ Scales of analysis

Data can be studied at **global**, **regional**, **national**, or **local** scale. The scale you choose changes the conclusions you can draw.

■ Scale changes the story

A country may look wealthy at the **national** scale, yet at the **local** scale hide poor neighbourhoods. Zooming in reveals variation the national average hides.

■ Scale of analysis vs map scale

Scale of analysis = the level (local...global) you study data at. **Map scale** = the ratio of map distance to real distance. They are different ideas.

2 Practice

2.1 List the four common scales of analysis from smallest to largest. [2]

2.2 Explain how national-scale data can hide a local pattern. [2]

2.3 A map shows average income by country.

(a) State the scale of analysis. [1]

(b) State one thing this scale cannot show. [1]

3 Exam-style questions

3.1 Studying voting results street by street in one town uses a [1]

- **A** global scale
- **B** local scale
- **C** national scale
- **D** map projection

3.2 Combining many small areas into one large-area statistic is called [1]

- **A** aggregation
- **B** diffusion
- **C** distance decay
- **D** projection

3.3 A country's literacy rate is 95%.

(a) What scale of analysis is this figure? [1]

(b) Explain why a regional government might still find low-literacy areas. [1]

Solutions

2.1 local, national, regional, global.

2.2 a national average combines everyone; it can mask rich and poor areas that only appear at the local scale.

2.3 (a) national scale. (b) differences within a country — local rich/poor areas.

3.1 B. street-by-street within a town is the local scale of analysis.

3.2 B. merging data into larger units is aggregation.

3.3 (a) national scale. (b) the national average aggregates all regions, hiding local areas below 95%.