

Exercise walk-through

Geographic Data ■ 1.2

eXercise

You must be able to

- distinguish **quantitative** 定量 from **qualitative** 定性 geographic data
- identify sources: **GIS** 地理信息系统, **GPS** 全球定位系统, **remote sensing** 遥感, **census** 人口普查, fieldwork
- explain what each source is good for
- recognise that all geographic data is tied to a **location** 位置

Method — Quantitative vs qualitative

Quantitative data are numbers (a census count, rainfall in mm). **Qualitative** data are descriptions (an interview, a field sketch, a photograph).

Method — Key data sources

GPS gives precise location; **remote sensing**/satellites image large areas; **GIS** layers and analyses spatial data; a **census** counts a population; **fieldwork** gathers local first-hand data.

Method — All data is spatial

Geographic data always answers *where* as well as *what* — every observation is tied to a location, which is what lets it be mapped and analysed.

Practice 2.1 ■ 2 marks

Define quantitative geographic data and give one example.

Solution 2.1

Worked steps

numerical data **B1**; e.g. a census population count or rainfall total **B1**.

Practice 2.2 ■ 2 marks

State what remote sensing is and one thing it is useful for.

Solution 2.2

Method: Key data sources

Worked steps

gathering data from a distance, e.g. by satellite/aircraft **B1**; useful for imaging large or hard-to-reach areas, land-cover change **B1**.

Practice 2.3 ■ 1 mark

A government wants to plan services for a growing city.

- (a) Name the data source that counts the whole population.
- (b) Name the system used to layer and analyse that data spatially.

Solution 2.3

Method: Key data sources

Worked steps

(a) the census **B1**. (b) GIS — a geographic information system **B1**.

Exam-style 3.1 ■ 1 mark

Interviews with residents about how safe they feel in a park are an example of

- A** quantitative data
- B** qualitative data
- C** remote-sensing data
- D** census data

Solution 3.1

A quantitative data

B qualitative data



C remote-sensing data

D census data

Worked steps

B. descriptions/opinions from interviews are qualitative data.

Exam-style 3.2 ■ 1 mark

A phone that records the exact coordinates of a photo is using

- A** GIS
- B** GPS
- C** a census
- D** a cartogram

Solution 3.2

A GIS

B GPS



C a census

D a cartogram

Worked steps

B. GPS supplies precise location coordinates.

Exam-style 3.3 ■ 1 mark

Modern geographers combine many data layers.

- (a) State one advantage of GIS over a single paper map.
- (b) State one limitation of relying only on satellite data.

Solution 3.3

Method: Key data sources

Worked steps

(a) it can overlay/analyse many variables and update quickly **B1**. (b) it may miss local, on-the-ground detail or people's views **B1**.