

2.3 Population Composition

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

KEY WORDS population pyramid 人口金字塔 • dependency ratio 抚养比 • sex ratio 性别比
• population composition 人口构成 • arithmetic density 算术密度

Objective

Build the skills to answer exam questions on **population composition** 人口构成 and **population pyramids** 人口金字塔.

You must be able to:

- read a **population pyramid** 人口金字塔 (age and sex structure)
- define the **dependency ratio** 抚养比 and **sex ratio** 性别比
- link a pyramid's shape to a country's development stage
- explain what a wide base or narrow base means

1 Worked examples

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

■ **Reading a population pyramid**

A **population pyramid** shows the share of each age group by sex. A **wide base** = many children (high fertility); a **narrow base** = low fertility; bulges show large cohorts.

■ **Dependency and sex ratios**

Dependency ratio compares dependents (under 15 and over 64) to the working-age population. **Sex ratio** is the number of males per 100 females.

■ **Shape and development**

A broad-based pyramid suggests a less developed, fast-growing population; a column/urn shape suggests a developed, aging one.

2 Practice

2.1 State what a wide base on a population pyramid indicates. [2]

2.2 Define the dependency ratio. [2]

2.3 A pyramid is narrow at the base and wide in the older groups.

(a) Describe this country's fertility. [1]

(b) State one challenge this age structure creates. [1]

3 Exam-style questions

3.1 A country with a broad-based population pyramid most likely has [1]

- **A** low fertility and an aging population
- **B** high fertility and rapid growth
- **C** equal numbers in every age group
- **D** more males than females at all ages

3.2 The number of males per 100 females in a population is the [1]

- **A** dependency ratio
- **B** sex ratio
- **C** arithmetic density
- **D** rate of natural increase

3.3 A country has a high youth dependency ratio.

(a) State which group makes the ratio high.

[1]

(b) Explain one demand this places on the government.

[1]

Solutions

2.1 many young children; high birth rate / fast-growing population.

2.2 the ratio of dependents (under 15 and over 64) to the working-age (15-64) population.

2.3 (a) low fertility / few children. (b) a rising elderly dependency burden — pensions, healthcare, shrinking workforce.

3.1 B. a wide base = high fertility and rapid growth.

3.2 B. males per 100 females is the sex ratio.

3.3 (a) the large number of children (under 15). (b) heavy spending on schools/child health and future job creation.