

3.6 Age Structure Diagrams

Name: _____ Class: _____ Date: _____

Total: 9 marks

KEY WORDS age structure diagram 年龄结构图

Objective

Build the skills to answer exam questions on **age structure diagrams**.

You must be able to:

- read an **age structure diagram** 年龄结构图 (population pyramid)
- predict future growth from its shape
- link a wide base to rapid growth

1 Worked examples

Study these first. Each one shows the method for a question type used later — follow the steps and you can do the Practice and Exam-style questions yourself.

■ What the diagram shows

An **age structure diagram** shows the number of people in each age group by sex, stacked youngest at the bottom. Its **shape** predicts future growth.

■ Shapes and growth

- **Wide base** (many young) → **rapid growth** (many future parents).
- **Even/straight sides** → **stable** population.
- **Narrow base** (few young) → **declining** population.

■ Reading momentum

A wide base gives **population momentum**: even if fertility drops, the large young group will still have children, so growth continues for a while.

■ A worked prediction

A pyramid with a very wide base and narrow top predicts a **fast-growing** population, typical of a developing country.

2 Practice

Now apply the methods above.

2.1 What does a wide base on an age structure diagram indicate? [1]

2.2 What shape indicates a stable population? [1]

2.3 What does a narrow base indicate? [1]

3 Exam-style questions

3.1 A population pyramid with a very wide base is likely to [1]

A	B
C	D

A decline rapidly

B grow rapidly

C stay perfectly stable

D have no children

3.2 A country's age structure diagram has a wide base and narrows sharply toward the top.

(a) Predict its future population trend. [1]

(b) Explain your prediction. [2]

3.3 Explain what population momentum means and why a wide-based pyramid causes it. [2]