

6.4 The Size and Distribution of Cities

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

KEY WORDS rank-size rule 位序 • primate city 首位城市 • gravity model 引力模型
• central place theory 中心地理论 • site 地点

Objective

Build the skills to answer exam questions on the **rank-size rule** 位序-规模法则 and city distribution.

You must be able to:

- state the **rank-size rule** 位序-规模法则
- define a **primate city** 首位城市
- outline **central place theory** 中心地理论
- explain the **gravity model** 引力模型

1 Worked examples

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

Rank-size rule

The **rank-size rule** says the n th-largest city is about $1/n$ the size of the largest — the 2nd city $\approx 1/2$, the 3rd $\approx 1/3$, and so on.

Primate city

A **primate city** is far larger than all others (more than twice the second city) and dominates the country economically and culturally.

Central place & gravity

Central place theory explains the size and spacing of settlements by the services they provide. The **gravity model** predicts interaction as proportional to size and inversely to distance squared.

2 Practice

2.1 State the rank-size rule. [2]

2.2 Define a primate city. [2]

2.3 A country's largest city has 8 million people; the next largest has 1 million.
(a) Does this fit the rank-size rule or primacy? Explain. [2]

3 Exam-style questions

3.1 If the largest city has 12 million people, the rank-size rule predicts the 3rd city has about [1]

- | | |
|---|---|
| A | B |
| C | D |
- A 12 million
B 6 million
C 4 million
D 1 million

3.2 The gravity model predicts that interaction between two cities increases with their size and decreases with [1]

- | | |
|---|---|
| A | B |
| C | D |
- A their populations
B the distance between them
C their site
D their toponyms

3.3 A capital dominates its country, dwarfing every other city.
(a) Name this pattern. [1]
(b) State one problem a primate city can cause. [1]
