

5 The central limit theorem – Part 2

Name: _____ Class: _____ Date: _____

Vocabulary 词汇

Write each word three times. 把每个单词抄写三遍。

English	中文	Write it 3 times (English)
central limit theorem	中心极限定理	_____

Recall

In Part A you saw that sample means vary. There is a beautiful pattern to how they vary:

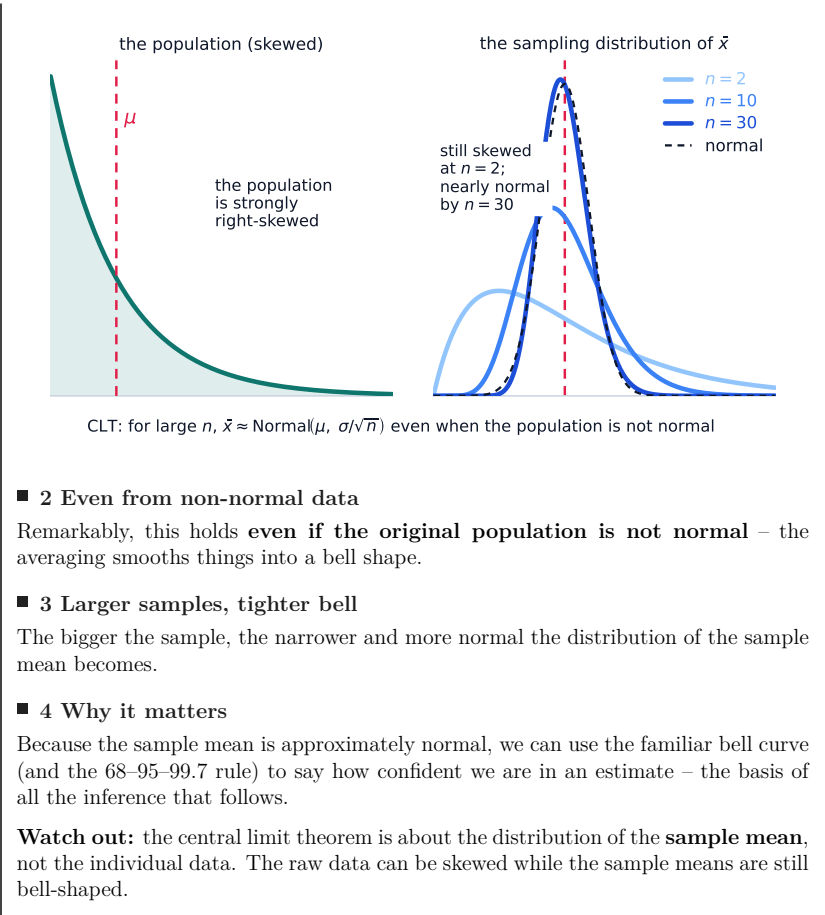
- Even if the original data are not bell-shaped, the sample means often are.
- This pattern is the key that makes statistics work.

Each idea has a worked example before the Practice.

New ideas

■ 1 The central limit theorem

The **central limit theorem** 中心极限定理 says: for a large enough sample, the distribution of the **sample mean** is approximately **normal** (bell-shaped), centered on the population mean.



Practice

Try these in order. The methods are all above.

2.1 State what the central limit theorem says about the sample mean.

[2]

2.2 State the surprising part – what it does not require of the population. [2]

2.3 State what happens to the sample mean's distribution as the sample gets larger. [2]

2.4 State why the central limit theorem is so useful in statistics. [2]

2.5 State whether the theorem is about the individual data or the sample mean. [1]
