

1.1 Introducing Statistics: What Can We Learn from Data?

Name: _____ Class: _____ Date: _____ Total: 9 marks

KEY WORDS statistic 统计量 • data 数据 • individuals 个体 • statistical question 统计问题
• statistics 统计学

Objective

Build the skills to answer exam questions on **what we can learn from data**.

You must be able to:

- identify the **individuals** 个体 (cases) and the **variables** 变量 in a data set
- describe **statistics** 统计学 as the science of learning from data that vary
- pose a **statistical question** 统计问题 that anticipates variability

1 Worked examples

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

■ Individuals and variables

The **individuals** are the people or objects described; the **variables** are the characteristics recorded about them.

■ Statistics and statistical questions

Statistics is the science of learning from **data that vary**. A good **statistical question anticipates variability** — its answer is a distribution of values, not a single fixed number.

2 Practice

2.1 Define statistics. [1]

2.2 In a data set of students' heights, state the individuals and the variable. [2]

2.3 State one feature of a good statistical question. [1]

3 Exam-style questions

3.1 The people or objects described in a data set are the [1]

- | | |
|---|---|
| A | B |
| C | D |
- A variables
B individuals
C statistics
D graphs

3.2 A statistical question anticipates [1]

- | | |
|---|---|
| A | B |
| C | D |
- A a single fixed answer
B variability in the data
C no data at all
D a graph

3.3 A survey records each student's favourite sport.

- (a) Name the individuals. [1]
(b) Name the variable. [1]
(c) State whether "What is my friend's height?" is a statistical question. [1]