

4.2 Introduction to Using Data Sets

Name: _____ Class: _____ Date: _____ Total: 8 marks

KEY WORDS collection 集合 • data set 数据集 • array 数组

Objective

Build the skills to answer exam questions on **using data sets**.

You must be able to:

- understand that a **data set** 数据集 is a collection of related values processed together
- explain why a **collection** 集合 is more convenient than many separate variables
- describe common operations: storing, reading, and summarizing values

1 Worked examples

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

■ Data sets and collections

A **data set** is a collection of related values handled together. A **collection** (such as an array) is far more convenient than many separate variables — one loop can process all the values.

■ Common operations

Store values, **read** them back, and **summarize** them (sum, average, maximum, count).

2 Practice

2.1 Define a data set. [1]

2.2 State why a collection is more convenient than many separate variables. [1]

2.3 Name one common operation on a data set. [1]

3 Exam-style questions

3.1 A data set is a collection of [1]

- | | |
|---|---|
| A | B |
| C | D |
- A** unrelated values
 - B** related values processed together
 - C** methods
 - D** classes

3.2 Storing 100 scores is easier with [1]

- | | |
|---|---|
| A | B |
| C | D |
- A** 100 separate variables
 - B** one collection
 - C** no storage at all
 - D** a constructor

3.3 A program stores the daily temperatures for a month.

- (a) Name a structure that could hold them. [1]
- (b) State one operation you might perform on them. [1]
- (c) State one benefit over using separate variables. [1]