

## 3.10 Lists

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Name: \_\_\_\_\_ Class: \_\_\_\_\_ Date: \_\_\_\_\_

Total: 8 marks

**KEY WORDS** list 列表 • elements 元素 • index 索引 • append 追加 • string 字符串

### Objective

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Build the skills to answer exam questions on **lists**.

**You must be able to:**

- explain how a **list** 列表 stores an ordered collection of **elements** 元素
- access or modify an element using its **index** 索引 position
- use **iteration** to traverse a list
- apply list operations such as **append** 追加, insert, and remove

### 1 Worked examples

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

#### ■ List and index

A **list** stores an ordered collection of values under one name. Each element has an **index** (position); here the first element is at index 1.

#### ■ Operations

**append** (add to the end), **insert** (add at a position), **remove** (delete an element).

#### ■ Traversing

Use **iteration** to visit and process every element. For `scores = [8, 5, 9]`, `scores[1]` is 8 and `scores[3]` is 9.

## 2 Practice

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**2.1** Define a list. [1]

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**2.2** For the list `[4, 7, 2, 9]`, state the element at index 2. [1]

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**2.3** Name one operation that changes a list's contents. [1]

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## 3 Exam-style questions

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**3.1** A list stores [1]

- **A** one value only
  - **B** an ordered collection of values
  - **C** only text
  - **D** a single Boolean
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**3.2** To process every element of a list, you use [1]

- **A** a filter only
  - **B** iteration
  - **C** a substring
  - **D** compression
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**3.3** A list `names = ["Ana", "Ben", "Cara"]` (index 1 is first).

(a) State `names[1]`. [1]

(b) State the length of the list. [1]

(c) Name the operation that adds `"Dan"` to the end. [1]

## Solutions

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**2.1** an ordered collection of values (elements) stored under one name.

**2.2** 7.

**2.3** any one of: append, insert, remove.

**3.1** B.

**3.2** B.

**3.3** (a) "Ana". (b) 3. (c) append.