

3.1 Variables and Assignments

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

KEY WORDS variable 变量 • assignment 赋值 • data types 数据类型 • string 字符串

Objective

Build the skills to answer exam questions on **variables and assignments**.

You must be able to:

- explain how a **variable** 变量 is a named reference that stores a value
- use an **assignment** 赋值 statement to store or update a value
- describe how a variable can hold different **data types** 数据类型
- trace how a variable’s value changes as a program runs

1 Worked examples

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

■ Variable and assignment

A **variable** is a named box that holds a value in memory. An **assignment** (setting x to 5) stores or updates that value.

■ Data types

A variable can hold a **number**, a **string** (text), or a **Boolean** (true/false).

■ Tracing

Follow the value line by line: set x to 3, then set x to x + 2, and x is now 5.

2 Practice

2.1 Define a variable. [1]

2.2 A program sets x to 4, then sets x to x × 3. State the final value of x. [2]

2.3 State one benefit of using descriptive variable names. [1]

3 Exam-style questions

3.1 An assignment statement is used to [1]

- | | |
|---|---|
| A | B |
| C | D |
- A print output
 - B store a value in a variable
 - C repeat code
 - D define a function

3.2 Which of these values is a Boolean? [1]

- | | |
|---|---|
| A | B |
| C | D |
- A 42
 - B "hello"
 - C true
 - D 3.14

3.3 A program runs: set a to 10; set b to a + 5; set a to 2.

- (a) State the final value of a. [1]
- (b) State the final value of b. [1]
- (c) State a good variable name for a value holding a student’s age. [1]