

1.2 Program Function and Purpose

Name: _____ Class: _____ Date: _____

Total: 10 marks

Objective

Build the skills to answer exam questions on **program function and purpose**.

You must be able to:

- explain the **purpose** 目的 of a program (the problem it solves)
- describe how a program **functions** as a sequence of instructions
- identify a program's **inputs** 输入 and **outputs** 输出
- explain how an **event** 事件 affects execution

1 Worked examples

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

■ Purpose vs function

The **purpose** is the problem the program solves or the value it provides; the **function** is **how** it works —the sequence of instructions it runs.

■ Inputs and outputs

Inputs can be text, clicks, images, audio, or data from another program; **outputs** can be displayed text, sound, visuals, or tactile feedback.

■ Events

An **event** is an action associated with input (e.g. a click or key press) that triggers part of the program to run.

2 Practice

2.1 State the difference between a program's purpose and its function. [2]

2.2 Give two examples of program input. [2]

2.3 Define an event in a program. [1]

3 Exam-style questions

3.1 The purpose of a program is [1]

- **A** the language it is written in
 - **B** the problem it solves
 - **C** its file size
 - **D** its author
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3.2 A mouse click that starts an action is an example of an [1]

- **A** output
 - **B** event
 - **C** variable
 - **D** loop
-

3.3 A weather app takes a city name and shows the forecast.

(a) State its input. [1]

(b) State its output. [1]

(c) State its purpose. [1]

4 Go further

- work through the **1.2 Program Function and Purpose** lesson on the **Learn** page;
- read the **Creative Development** section of the AP Computer Science Principles handout on the **Know** page.

Solutions

2.1 the purpose is the problem it solves; the function is how it works (its sequence of instructions).

2.2 any two of: text typed, a mouse click, an image, audio, sensor data.

2.3 an action associated with input that triggers part of the program to run.

3.1 B.

3.2 B.

3.3 (a) the city name. (b) the displayed forecast. (c) to give the user weather information.