

Style and layout

Ref Pseudocode

Keywords and case

Pseudocode 伪代码 is the language Cambridge writes algorithms 算法 in. It is not a real programming language — no computer runs it — but the exam marks it as if it were, so the form matters.

Every keyword 关键字 is written in **upper case**: IF, REPEAT, PROCEDURE, OUTPUT.

```
DECLARE Count : INTEGER
Count ← 3
IF Count > 0
    THEN
        OUTPUT "Ready"
ENDIF
```

- Write IF, never if or If.
- A keyword can never be used as a name of your own: you may not call a variable FOR.

Common mistakes

- Lower-case keywords. The mark scheme expects upper case.
- Inventing keywords. Only the words in this handout are in the syllabus.

Identifiers

An **identifier** 标识符 is the name you give a variable 变量, a constant 常量, a procedure 过程 or a function 函数.

```
DECLARE NumberOfPlayers : INTEGER
NumberOfPlayers ← 4
OUTPUT NumberOfPlayers
```

Four rules, all from the syllabus:

- It must **start with a capital letter**: Count, not count.
- It may hold only letters and digits — no spaces, no punctuation.
- It is **not case-sensitive** 不区分大小写, so Count and COUNT are the same name. Pick one spelling and keep it.

- Make it mean something. `NumberOfPlayers` earns the reader's time; `N` does not.

Common mistakes

- `count ← 0` — a lower-case start. `0478` requires the capital.
- `Number of players` — spaces are not allowed inside a name.

Comments and indentation

A **comment** 注释 starts with `//` and runs to the end of the line. It is for the human reader; the algorithm ignores it.

```
// Swap the values of X and Y
DECLARE X, Y, Temp : INTEGER
X ← 1
Y ← 2
Temp ← X    // temporarily store X
X ← Y
Y ← Temp
OUTPUT X, " ", Y
```

Indentation 缩进 shows which statements are **inside** a structure. The syllabus asks for four spaces per level, with one exception you must know:

```
DECLARE X, Y : INTEGER
X ← 7
Y ← 3
IF X > Y
    THEN
        OUTPUT "X is bigger"
    ELSE
        OUTPUT "Y is bigger or equal"
ENDIF
```

- `THEN` and `ELSE` are indented **two** spaces from their `IF`.
- The statements under them are indented **four**.
- `ENDIF` lines up with its own `IF`.

Common mistakes

- Putting `THEN` on the `IF` line. That is the A-Level 9618 layout — see topic 11.
- No indentation at all. A marker has to see the structure to award the structure marks.