

8. Programming

Starter Quiz · 课前小测

IGCSE Computer Science

Name: _____ Score: _____

1. What is the difference between a variable and a constant?

- ☐ a variable can change while the program runs; a constant is fixed
- ☐ a constant can change; a variable is fixed
- ☐ they are the same
- ☐ a variable cannot hold a number

2. What is '17 MOD 5'?

3. An array is:

- ☐ one variable that holds many values of the same type, found by an index
- ☐ a single value
- ☐ several variables of different types
- ☐ a file on disk

4. Which structure chooses which steps to run based on a condition?

- ☐ selection (IF / CASE)
- ☐ sequence
- ☐ iteration
- ☐ a procedure

5. What is '17 DIV 5'?

6. In 'grid[2, 3]', which cell is accessed?

- ☐ row 2, column 3
- ☐ row 3, column 2
- ☐ the 23rd element
- ☐ column 2 only

7. A WHILE loop tests its condition before the body (so it may run zero times), while a REPEAT...UNTIL loop tests after the body (so it always runs at least once).

- ☐ True
- ☐ False

8. What does 'LENGTH("Computer")' return?

9. You should always close a file when you have finished using it.

- ☐ True
- ☐ False

10. Which line keeps a running total?

- ☐ total ← total + value
- ☐ count ← count + 1
- ☐ total ← 0
- ☐ OUTPUT total

1. **a variable can change while the program runs; a constant is fixed**

A variable's value can change; a constant is set once and never changes.

2. **2**

MOD gives the remainder: $17 \div 5 = 3$ remainder 2.

3. **one variable that holds many values of the same type, found by an index**

An array stores many same-type values under one name; each is accessed by its index.

4. **selection (IF / CASE)**

Selection branches on a condition; sequence runs in order; iteration repeats.

5. **3**

DIV gives the whole-number part: $17 \div 5 = 3$ (remainder discarded).

6. **row 2, column 3**

The first index is the row, the second the column — row 2, column 3.

7. **True**

Pre-condition (WHILE) can skip entirely; post-condition (REPEAT) always runs once — choose by whether the body must run at least once.

8. **8**

"Computer" has 8 characters.

9. **True**

Closing saves any buffered data and frees the file for other programs.

10. **total $\leftarrow$ total + value**

'total $\leftarrow$ total + value' accumulates the sum; 'count $\leftarrow$ count + 1' counts occurrences.