

A-Level Computer Science

Name: _____ Score: _____

1. A constant holds a fixed value that never changes while the program runs, whereas a variable can be reassigned.
☐ True ☐ False
2. A CASE statement is cleaner than nested IFs when you are:
☐ testing one value against several options
☐ repeating a block of code
☐ reading a file
☐ declaring a constant
3. The key difference between a procedure and a function is that a function:
☐ returns a value that can be used in an expression
☐ cannot take parameters
☐ never does any work
☐ must be global
4. What is the value of '7 DIV 2'?

5. After 'total = 0; FOR i = 1 TO 5: total = total + i', what is the value of total?

6. A function 'Square(x)' returns 'x * x'. What does the call 'Square(5)' return?

7. What is the value of '7 MOD 2'?

8. REPEAT...UNTIL tests its condition AFTER the body, so the body always runs at least once.
☐ True ☐ False
9. A local variable exists only inside the subroutine where it is declared, while a global variable is visible everywhere in the program.
☐ True ☐ False
10. Which symbol assigns a value to a variable in this pseudocode?
☐ ←

☐ =

☐ ==

☐ =>

1. True

Constants (like Pi or a maximum score) make code clearer and let you change a recurring value in one place.

2. testing one value against several options

CASE matches one value against many possibilities; deep nested IFs become hard to read.

3. returns a value that can be used in an expression

A function returns a value (used in an expression); a procedure performs an action and returns nothing.

4. 3

DIV is integer division: $7 \div 2 = 3$ remainder 1, so DIV gives 3.

5. 15

Adding $1+2+3+4+5 = 15$ — exactly what the trace table builds up pass by pass.

6. 25

$5 \times 5 = 25$ — the value the function hands back to its caller (the frame popped off the call stack).

7. 1

MOD gives the remainder: $7 \div 2$ leaves remainder 1.

8. True

That post-condition test is the difference from WHILE, which can run zero times.

9. True

Keeping variables local limits their scope, avoids name clashes, and makes a subroutine testable on its own — globals are best avoided.

10. ←

Assignment uses '←'; '=' is comparison.