

3. Algorithms and Programming

Starter Quiz · 课前小测

AP Computer Science Principles

Name: _____ Score: _____

1. A variable is best described as:

- ☐ a named box that stores one value at a time
- ☐ a permanent number that never changes
- ☐ a kind of error
- ☐ the program's output

2. Data abstraction helps a programmer by:

- ☐ hiding detail so complexity is easier to manage
- ☐ making programs run on more computers
- ☐ removing all the data
- ☐ adding more variables

3. What is $2 + 3 \times 4$?

4. A string is:

- ☐ an ordered sequence of characters
- ☐ a single number
- ☐ a true/false value
- ☐ a kind of loop

5. A Boolean expression always evaluates to:

- ☐ true or false
- ☐ any number
- ☐ a string
- ☐ a list

6. A conditional statement runs a block of code:

- ☐ only when its condition is true
- ☐ always, every time
- ☐ never
- ☐ in a random order

7. Repeating a block of code with a loop is called _____.

8. In $\text{score} \leftarrow 10$, the arrow means score _____ the value 10.

9. A _____ groups many values under one name, like all the marks of a class.

10. What is $(2 + 3) \times 4$?

AP Computer Science Principles

1. **a named box that stores one value at a time**

The name is the label; the box holds the current value.

2. **hiding detail so complexity is easier to manage**

Grouping data under one name hides needless detail.

3. **14**

Multiplication first: $3 \times 4 = 12$, then $2 + 12 = 14$.

4. **an ordered sequence of characters**

Order matters, so "abc" $\neq$ "cba".

5. **true or false**

Exactly one of two values: true or false.

6. **only when its condition is true**

The condition decides whether the block runs.

7. **iteration**

Iteration lets a short program do a lot of work.

8. **gets**

Assignment stores the right-hand value into the left-hand name.

9. **list**

A list is the most common abstract data type.

10. **20**

Brackets first: $2 + 3 = 5$, then $5 \times 4 = 20$.