

AP Computer Science A

Name: _____ Score: _____

1. An algorithm is best described as...
 - ☐ a finite, ordered set of steps that solves a problem
 - ☐ a single Java command
 - ☐ a type of computer
 - ☐ a run-time error
2. Which type stores whole numbers like 42?
 - ☐ int
 - ☐ double
 - ☐ boolean
 - ☐ String
3. Evaluate the Java expression $10 + 2 * 3$.

4. In Java, the single = sign means...
 - ☐ store the right side into the left variable
 - ☐ test for equality
 - ☐ print a value
 - ☐ declare a type
5. What is the value of (int) 3.9 in Java?

6. $x += 3$ is exactly the same as...
 - ☐ $x = x + 3$
 - ☐ $x = 3$
 - ☐ $x == x + 3$
 - ☐ $x + 3$
7. An API documents a class's methods by telling you their...
 - ☐ names, parameters, and return values
 - ☐ internal machine code

☐ memory addresses

☐ file sizes

8. What does `Math.pow(2, 3)` equal (as a number)?

9. In Java, what is the value of the int expression `7 / 2`?

10. What is `17 % 5` in Java (the remainder)?

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1. **a finite, ordered set of steps that solves a problem**

Finite, ordered steps that finish — that’s an algorithm.

2. **int**

int stores integers; double stores decimals.

3. **16**

* first ($2*3=6$), then + ($10+6=16$).

4. **store the right side into the left variable**

= is assignment; == tests equality.

5. **3**

Casting to int truncates (drops decimals) $\rightarrow$ 3, not 4.

6. **$x = x + 3$**

Compound assignment is shorthand for $x = x + 3$.

7. **names, parameters, and return values**

You program to the documented name/params/return, not the inner code.

8. **8**

2 to the power 3 = 8 (returned as the double 8.0).

9. **3**

int division drops the remainder: $7/2 = 3$.

10. **2**

$17 = 3 \times 5 + 2$, so the remainder is 2.