4. Data Collections

Starter Quiz · 课前小测

AP Computer Science A Name: _____ Score: _____

1. A program that runs correctly is...

   ☐ not automatically ethical

   ☐ always ethical

   ☐ always private

   ☐ never biased

2. A structure that stores many values of the same type under one name is a(n)...

   ☐ array

   ☐ int

   ☐ boolean

   ☐ constructor

3. For int[] a = {10, 20, 30}; what is a[0]?

   ☐ 10

   ☐ 20

   ☐ 30

   ☐ there is no a[0]

4. The correct condition to traverse an array a with an index is...

   ☐ i < a.length

   ☐ i <= a.length

   ☐ i < a.length()

   ☐ i > 0

5. To find the maximum of an array, you should initialize max to...

   ☐ the first element a[0]

   ☐ 0

   ☐ the array length

   ☐ -1

6. For a = {3, 9, 5}, what is the maximum value?

   _____

7. A forward for loop with i++ and remove(i) skips the element after each removal.

   ☐ True ☐ False

8. An algorithm trained on biased data can amplify that unfairness at scale.

   ☐ True ☐ False

9. For int[] a = {10, 20, 30}; what is a.length?

   _____

10. In for (int x : a) { x = 0; }, the array a is set to all zeros.

    ☐ True ☐ False

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Answers · 答案

AP Computer Science A

1. **not automatically ethical**

   Correct code can still violate privacy or amplify bias.

2. **array**

   An array is a fixed-size, same-type collection.

3. **10**

   Arrays are indexed from 0, so a[0] is the first element, 10.

4. **i < a.length**

   Valid indices are 0..length-1, so i < a.length.

5. **the first element a[0]**

   Starting at 0 fails if all values are negative.

6. **9**

   9 is the largest element.

7. **True**

   The shifted neighbor takes index i but is never checked.

8. **True**

   Bias in data can produce unjust outcomes for many people.

9. **3**

   Three elements → length 3.

10. **False**

    x is a local copy; the array is unchanged.