Critical Thinking Chapter 9

1. What index value does the third element of an array have?

In Java, arrays start at 0. So, the first would be 1 and so the third element of an array that would have an index of 2.

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2. Write the declaration for an array named quantities that stores 20 integers.

This array will now have a value ranging from 0 to 19, where each element can store an integer value.

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3. Write a declaration for an array named heights storing the numbers 1.65, 2.15, and 4.95.

double[] heights = {1.65, 2.15, 4.95};

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4. Write a for-each statement that displays the integer values stored in an array named grades.

for (int grade : grades) {
 System.out.println(grade);
}
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6. How does passing an entire array to a method differ from passing a single element of the array?

When passing an entire array, you're passing a reference to the array. Any changes inside the method will affect the original array. When passing a single element of the array, you're passing a copy of that element's value. Changes inside the method do not affect the original array.

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7. Why are offset array indexes required in some cases?

When you're working with arrays or data structures in low-level programming, memory isn't always laid out in a simple way. Sometimes, you need to use offsets

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8. What output is displayed by the statements below?

String name = "Elaine";
System.out.println(name.charAt(3));

the string name is initialized to "Elaine".
The method charAt(int index) is used to get the character at a specific thing of the string.

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