



Peer Instruction #9: Java Arrays



Array Declaration

Which of the following lines of code correctly declares, allocates, and initializes an array?

- A. `int iArray[5] = {1, 2, 3, 4, 5};`
- B. `short sArray[] = new short[4];`
- C. `char cArray = {'a', 'b', 'c', 'd'};`
- D. `double dArray[] = new double {11.1, 22.2, 33.3};`



Array Access

Which of the following lines of code correctly access the second element of *iArray*?

- A. `System.out.println(iArray + 2);`
- B. `System.out.println(iArray[2]);`
- C. `System.out.println([2]iArray);`
- D. `System.out.println(iArray(2));`
- E. None of the above



Array Loops

Which of the following lines of code correctly increments all elements of *iArray*?

- A. `for (int i=0; i < iArray.length(); i++) iArray[i]++;`
- B. `for (int i=1; i <= iArray.length; i++) iArray[i]++;`
- C. `for (int i=0; i < iArray.length;) iArray[i++]++;`
- D. `iArray++;`
- E. None of the above



Array Parameters

Which of the following correctly declares a method with an array parameter?

- A. `public void computeAverage(int array[]) { ... }`
- B. `public void computeAverage(double []array) { ... }`
- C. `public void computeAverage(int array []) { ... }`
- D. `public void computeAverage(double[] array) { ... }`
- E. All of the above



Returning Arrays

Which of the following correctly declares a method that returns an array?

- A. `public double[] computeAverage() { ... }`
- B. `public double[10] computeAverage() { ... }`
- C. `public double computeAverage() { ... }`
- D. `public double*10 computeAverage() { ... }`
- E. None of the above



Passing Arrays

Which of the following correctly passes an integer array called *iArray* to the method?

- A. `myMethod(iArray);`
- B. `myMethod(iArray[]);`
- C. `myMethod(iArray[10]);`
- D. `myMethod(int iArray[]);`
- E. All of the above



Array Modification

What are the values of the elements of the integer array *iArray* after the following code?

```
// Code fragment
int iArray[] = {1, 2, 3, 4, 5};
myMethod(iArray);

// Method definition
static void myMethod(int a[]) {
    for (int i=1; i<a.length-1; i++)
        a[i] *= 2;
}
```

- A. 1, 2, 3, 4, 5
- B. 1, 4, 6, 8, 5
- C. 1, 4, 6, 8, 10
- D. 2, 4, 6, 8, 5
- E. None of the above