Java PS4

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R7.6

1. 25
2. 13
3. 12
4. The code will give an error as index will be out of bounds – no element exists at a[10]. The last value of total before the error was 22.
5. 11
6. 25
7. 12
8. -1

R7.13

1. for(int i : values){ total = total + i; }
2. for(int i : values){ total = total + i; }total = total – values[0];
3. int counter = 0;

for(int i : values){

if (i == target) {

return counter;

}

else{

counter = counter + 1;

}

R7.23

Set an integer ‘longestRun’ to 0

Get the array as ‘values’

For each valid index ‘i’ in the range 0 *inclusive* to (length of values) *exclusive*

Set an integer ‘currentRunIndex’ to the value of ‘i’

Set an integer ‘currentRun’ to 0

While values[currentRunIndex] equals values[i]

Set the value of ‘currentRun’ to (currentRun + 1)

Set the value of ‘currentRunIndex’ to (currentRunIndex + 1)

If ‘currentRunIndex’ equals (length of values)

Break out of the While loop

If currentRun > longestRun

Set the value of ‘longestRun’ to the value of ‘currentRun’

Print longestRun

R7.32

1. True
2. False
3. False
4. False
5. False
6. True
7. True

R7.33

## a)

ArrayList<Integer> array1 = new ArrayList<Integer>; //Initialising array list array1

ArrayList<Integer> array2 = new ArrayList<Integer>; //Initialising array list array2

if(array1.size() != array2.size()) //checking if both array lists have the same size

return false; //Returning false if they’re not the same size

//This for loop has a variable i that loops from 0 through last element,

// array1.size() - 1

for (int i = 0; i < array1.size(); i++) {

// If the ith element of array1 doesn’t equal the ith element of array2, return false

if (array1.get(i) != array2.get(i))

return false;

// We only reach here if nothing was returned from the loop above.

//This means that every ith element of array1 equals the ith element of array2.

return true; //Thus, we return true

## b)

ArrayList<Integer> array1 = new ArrayList<Integer>; //Initialising array list array1

ArrayList<Integer> array2 = new ArrayList<Integer>(array1); //Copying over array1 // into array2

## c)

ArrayList<Integer> array129/10/16 = new ArrayList<Integer>; //Initialising array list array1

//This for loop has a variable i that loops from 0 through last element,

// array1.size() - 1

for (int i = 0; i < array1.size(); i++)

array1.set(i, 0); //The set function replaces the element at index i with 0

## d)

ArrayList<Integer> array1 = new ArrayList<Integer>; //Initialising array list array1

while(array1.size() != 0)

array1.remove(0); //The remove function removes first element till the array //length is becomes 0