**Arrays Written Practice**

**Problem # 1**

public static int mystery(int[] arr){

int x = 0;

for (int k = 0; k < arr.length; k = k + 2)

x = x + arr[k];

return x;

}

Assume this array is created in the main method: int[] nums = {3, 6, 1, 0, 1, 4, 2};

What value will be returned as a result of the call? mystery(nums) ?

**Problem # 2**

Consider this code segment:

int x = 7; int y = 3;

if ((x < 10) && (y < 0)) System.out.println("Value is: " + x \* y);

else

System.out.println("Value is: " + x / y);

What is printed as a result of executing the code segment?

**Problem # 3**

Consider the following method that is intended to determine if the double values d1 and d2 are close enough to be considered equal. For example, given a tolerance of 0.001, the values 54.32271 and 54.32294 would be considered equal.

/\*\* @return true if d1 and d2 are within the specified tolerance,

\* false otherwise

\*/

public boolean almostEqual(double d1, double d2, double tolerance)

{

/\* *missing code* \*/

}

Which of the following should replace /\* *missing code* \*/ so that almostEqual will work as intended?

* 1. return (d1 - d2) <= tolerance;
  2. return ((d1 + d2) / 2) <= tolerance;
  3. return (d1 - d2) >= tolerance;
  4. return ((d1 + d2) / 2) >= tolerance;
  5. return Math.abs(d1 - d2) <= tolerance;

**Problem # 4**

Consider the following method that is intended to return the sum of the elements in the array key.

public static int sumArray(int[] key)

{

int sum = 0;

for (int i = 1; i <= key.length; i++)

{

/\* *missing code* \*/

}

return sum;

}

Which of the following statements should be used to replace /\* *missing code* \*/ so that sumArray

will work as intended?

* 1. sum = key[i];
  2. sum += key[i - 1];
  3. sum += key[i];
  4. sum += sum + key[i - 1];
  5. sum += sum + key[i];

**Problem # 5**

Consider the following method.

public String mystery(String input)

{

String output = "";

for (int k = 1; k < input.length(); k = k + 2)

{

output += input.substring(k, k + 1);

}

return output;

}

What is returned as a result of the call mystery("computer") ?