Student Name …………………………………………………………………………………………………………………………………………

Student Id …………………………………………………………………………………………………………………………………………

Date …………………………………………………………………………………………………………………………………………

**Single Dimensional Arrays**

1. How do you declare an array reference variable and how do you create an array?
2. When is the memory allocated for an array?
3. What is the printout of the following code?



1. Indicate **true** or **false** for the following statements:

* Every element in an array has the same type.
* The array size is fixed after an array reference variable is declared.
* The array size is fixed after it is created.
* The elements in an array must be a primitive data type.

1. Which of the following statements are valid?



1. How do you access elements in an array? What is an array indexed variable?
2. What is the array index type? What is the lowest index? What is the representation of the third element in an array named a?
3. Write statements to do the following:

* Create an array to hold **10** double values.
* Assign the value **5.5** to the last element in the array.
* Display the sum of the first two elements.
* Write a loop that computes the sum of all elements in the array.
* Write a loop that finds the minimum element in the array
* Randomly generate an index and display the element of this index in the array.
* Use an array initializer to create another array with the initial values 3.5, 5.5, 4.52, and 5.6.
* What happens when your program attempts to access an array element with an invalid index?

1. Identify and fix the errors in the following code:



1. What is the output of the following code?



**Class & Object**

1. How do you define a class?
2. Describe the relationship between an object and its defining class.
3. How do you declare an object’s reference variable?
4. How do you create an object?
5. What are the differences between constructors and methods?
6. When will a class have a default constructor?
7. Which operator is used to access a data field or invoke a method from an object?
8. What is **NullPointerException**?
9. Is an array an object or a primitive type value? Can an array contain elements of an object type as well as a primitive type? Describe the default value for the elements of an array.
10. What is wrong in the following code?



1. What is the printout of the following code?

