

CSSE 220 – Object-Oriented Software Development
Rose-Hulman Institute of Technology

Worksheet 02

Name (Print): _____ Section: _____

1. **What is an Array?**

Array is a special data type that holds a (**fixed / flexible**) number of items of (**same data type / different data type**).

2. **Array Declaration and Creation.** Complete the syntax for the array of length 5:

```
int[] nums = new int[ _____ ];
```

3. **Literal Array.** Complete the array with the values 1,2,3:

```
int[] nums = _____ ;
```

4. **Default Values in Arrays**

int[] default value: _____

boolean[] default value: _____

String[] default value: _____

5. **Looping Through Arrays.** Complete the traversal patterns for int array **nums**:

```
1 for (int i = 0; i < _____; i++) {  
2     System.out.println( nums[____] );  
3 }
```

Enhanced for-loop version:

```
1 for ( int _____: _____) {  
2     System.out.println( number );  
3 }
```

6. **What is an ArrayList?**

An ArrayList is a class that holds a collection with a (**fixed / variable**) number of items.

7. Wrapper Classes for ArrayList.

Primitive	Wrapper Class
int	_____
double	_____
char	_____
boolean	_____

8. Creating an ArrayList. Complete the missing type:

```
ArrayList<_____> numbers = new ArrayList< _____ >();
ArrayList<_____> words = new ArrayList< _____ >();
```

9. ArrayList Operations. Fill in the method names:

Add value 5: list. _____(5);

Insert 10 at index 2: list. _____(2, 10);

Get element at index 1: list. _____(1);

Remove element at index 1: list. _____(1);

10. Length vs Size. Fill in the correct keyword:

- arrays use: _____
- ArrayLists use: _____

11. When to Choose: Array vs ArrayList

- Use _____ when size is known and fixed
- Use _____ when size is unknown and the size can change

12. Looping Through an ArrayList

```
1 for (int i = 0; i < list._____( ); i++) {
2     System.out.println( list.get( _____ ) );
3 }
4
```

13. Before You Leave

Write one question you still have about arrays or ArrayLists.