

Working With Arrays

- how do you initialize large arrays?
 - can read from a file using Scanner

```
Scanner input = new Scanner(...);
for ( int i = 0 ; i < a.length ; i++ ) {
    a[i] = input.nextInt();
}
```

- how do you add to an array?
 - array size is fixed once created
 - must create a new larger array and copy elements over



Array Usage Patterns

- to hold a collection of stuff in order to easily apply operations to everything in the collection
 - example: reversing the numbers entered by the user
- for random access, to avoid a big 'if' in order to select which variable to use in a particular operation
 - example: counting how often each sum 2, 3, 4, ..., 12 comes up when rolling a pair of dice
- to allow the use of a loop when the "how does it change?" lacks a predictable pattern
 - example: rainbow color bands