CSE110 Review Questions
Prepared by Ryan Dougherty

Arrays

Question 1   What are the indices for the first and last positions of any array?
Answers: x[0], x[x.length - 1]

Question 2   Immediately after instantiating a new array of primitives (ints, doubles, etc.), what fills the array? What about an array of objects?
Answers: 0, null

Question 3   What happens when you try to access an array element past the end of the array?
Answer: The code throws an ArrayIndexOutOfBoundsException.

Question 4   Instantiate three arrays called x, y, and z of type int, String, and BackAccount (respectively), all of size 10.
Answers:

```
int[] x = new int[10];
String[] y = new String[10];
BankAccount[] z = new BankAccount[10];
```

Question 5   Write a for-loop to double each element in an array x of type int.
Answer:

```
for (int i = 0; i < x.length; i++)
        x[i] *= 2;
```

Question 6   Write code to store the largest number in an int array x into a variable called max.
Answer:

```
int max = x[0];
for (int i = 1; i < x.length; i++)
        if (x[i] > max)
                max = num[i];
```

Question 7   Write code to count how many numbers in the array are strictly larger than 4, and store that total in a variable called total.
Answer:

```
int total = 0;
for (int i = 0; i < x.length; i++)
        if (x[i] > 4)
                total++;
```

Question 8   Write code to print out every other element in an array separated by tabs.

```
for (int i = 0; i < x.length; i+=2)
        System.out.println(x[i] + "\t");
```

Question 9   Write code to shift each number one place to the right (Note: there will be 2 copies of the 1st element when the code finishes).

```
for (int i = x.length-2; i >= 0; i--)
        x[i+1] = x[i];
```

Question 10   Write code to print the contents of an array in reverse order, one element for each line.

```
for (int i = x.length-1; i >= 0; i--)
        System.out.println(x[i]);
```

Question 11   Use the following array x to answer the following questions:

 4   8   5   1   6   3   2

a) What value is given by x[1]?
b) What value is given by x[6]?
c) What value is given by x[7]?
d) What value is given by x.length?
Answers:
a) 8
b) 2
c) ArrayIndexOutOfBoundsException thrown
d) 7