Unit 6 – Worksheet 02 Selection Sort Name: _____

1. If a selection sort was run on the following ***gateKeeper*** array, what would the array look like after the first pass?

   int[] gateKeeper = {9, 11, 7, 13, 1, 8, 3}

2. What is the minimum number of passes required to guarantee that an array containing 22 elements is placed in perfect numerical order?

3. Write out the result of each pass for a selection sort on the gateKeeper array.

   9 11 7 13 1 8 3

   1st Pass

   2nd Pass

   3rd Pass

   4th Pass

   5th Pass

   6th Pass

4. In question #3, the 1 and the 9 should be swapped on the first pass. Write the three lines of code that would swap these two numbers (using the array name and index numbers to do so as you would in official coding).

5. The following code is intended to search an array called ***theArray*** for a certain value called ***theNumber***. Complete the missing print statements to output what should be communicated to the user:

```
int location = 0;
while(location<theArray.length && theNumber!=theArray[location])
    location++;
if(location==theArray.length)
    System.out.print(                    )    //Complete this output statement
else
    System.out.print(                    )    //Complete this output statement
```

6. Write out the result of each pass for a selection sort on the gateKeeper array if the process sorts from high to low instead.

   9 11 7 13 1 8 3

   1st Pass

   2nd Pass

   3rd Pass

   4th Pass

   5th Pass

   6th Pass