1. (1 point) (a) Have you checked your final exam schedule for conflicts with the scheduled
CS170 Final Exam Block time?

(a) _________

(b) If you answered no, when will you check your schedule for conflicts? *Hint: The
correct answer is “immediately.”*

(b) _________

2. Prof Summet has written the following method to find and return the maximum value
in an array (which contains at least 1 value). However, her code has a logic error in it.

```
1   public static int maxValue(int[] a) {
2       int max = 0;
3       for (int i = 0; i < a.length; i++) {
4           if (a[i] > max) {
5               max = a[i];
6           }
7       }
8       return max;
9   }
```

(a) (2 points) Give an example array of 4 elements for which Prof. Summet’s code
would return a correct answer.

```
[ ] [ ] [ ] [ ]
```

(b) (2 points) Give an example array of 4 elements for which Prof. Summet’s code
would return an incorrect answer.

```
[ ] [ ] [ ] [ ]
```

(c) (3 points) Rewrite a single line of code which would fix Prof. Summet’s error.
3. (7 points) Perform an insertion sort on the array by drawing the array as each value is sorted.

Below is the code for an insertion sort if you need it. Draw the array at the point indicated by the comment in the code. The initial state of the array has been done for you. Use only as many answer blanks as you need.

```java
int[] a = {3, 10, 6, 5, 9, 2, 7};

for(int i = 1; i < a.length; i++) {
    int currentElement = a[i];
    int k;
    for (k = i-1; k >= 0 && a[k] > currentElement; k--) {
        a[k+1] = a[k];
    }
    a[k+1] = currentElement;

    //Draw the array at this point. Exactly one (more) element
    //will be sorted.
}
```

<p>| | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>10</td>
<td>6</td>
<td>5</td>
<td>9</td>
<td>2</td>
<td>7</td>
</tr>
</tbody>
</table>

//Draw the array at this point. Exactly one (more) element
//will be sorted.