

For the following short-answer questions, check your work carefully, since no partial credit can be given. Note that "output" means what will be printed on the display screen.

1. (20 points) Given the following code fragment, state clearly and precisely what the output will be:

```
int j = 5;
int k = 3;
k = j;
System.out.println(j + " and " +
k);
```

5 and 5

2. (20 points) Given the following code fragment, state clearly and precisely what the output will be:

```
int b = 7;
System.out.println("First " + --b);
System.out.println("Then " + b);
```

First 6  
Then 6

3. (20 points) Given the following while loop, write it as a for loop.

```
int sum = 0;
int num = 0;
while (num <= 4){
    sum += num;
    num++;
}
```

```
int sum = 0;
for (int num = 0; num <= 4; num++){
    sum += num;
}
```

4. (20 points) Write the following if statement using a logical operator.

```
if (gender == 1) {
    if (age >= 65) {
        ++seniorFemales;
    }
}
```

```
if ((gender == 1) && (age >= 65)){
    ++seniorFemales;
}
```

5. (20 points) What's the difference between a while loop and a do...while loop?

do ... while loop will execute the code inside the loop at least once.