CS 157 Lab 3 October 1, 2009
for Loops

1. Assume that you have a variable called `count` that will take on the values 1, 2, 3, 4, and so on. You are going to formulate expressions in terms of `count` that will yield different sequences. For example, to get the sequence 2, 4, 6, 8, 10, 12, ..., you would use the expression `(2 * count)`. Fill in the table below, indicating an expression that will generate each sequence.

Sequence	Expression
4, 19, 34, 49, 64, 79, ...	
30, 20, 10, 0, -10, -20, ...	
-7, -3, 1, 5, 9, 13, ...	
97, 94, 91, 88, 85, 82, ...	

2. What output is produced by the following program? Try to determine the answer as best you can before you actually try typing the program in and running it.

```
public class Loops {
    public static void main(String[] args) {
        for (int i = 1; i <= 10; i++) {
            for (int j = 1; j <= 10 - i; j++) {
                System.out.print(" ");
            }
            for (int j = 1; j <= 2 * i - 1; j++) {
                System.out.print("*");
            }
            System.out.println();
        }
    }
}
```

3. Create a new class called **Lab3**. In it, write a static method named `drawFigure` that produces the following output. Use `for` loops to capture the structure of the figure.

```
///////////////\\\\\\\\\\\\\\\
////////////*******\\\\\\\\\\\\
//////*****************\\\\\\\
////************************\\\\
*****************************
```

4. Modify your method from the previous exercise so that it uses a variable for the figure's size. The previous output used a size of 5. Here is the output for a size of 3:

```
///////\\\\\\\
////*******\\\\
***************
```

You should be able to put in different values for the variable, and the method would draw the correct figure. Copy the file **Lab3.java** to the shared drive using netstorage.