NAME _____

(1) **(4 pts.)** Write out the exact output of the following code.

```
for ( int i = 5; i > 0; i-- )
{
    System.out.print( i + ":" );
    for ( int j = 0; j <= i; j++ )
    {
        System.out.print( " " + j );
    }
    System.out.println();
}
```

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(2) (**6 pts.**) Write code that prints out the following:

```
0
0 1
0 1 2
0 1 2 3
0 1 2 3 4
0 1 2 3 4 5
```

For full points, your code should use **nested loops** (and each loop should be used to do some productive work), and the final output should look exactly like the above.

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(3) (5 pts.) Suppose that we call the following method, with input parameter `num == 4`:

```
public void loop( int num )
{
    for ( int i = num; i >= 0; i-- )
        System.out.print( i + " " );
}
```

If we do so, we will get the following output (with an extra, invisible, space at the end):

4 3 2 1 0

Rewrite the method above so that instead of a single integer input, it takes two integers, `num1` and `num2`. It should then loop and print every value from `num1` down to 0, inclusive as before, but print each value `num2` times in a row. That is, if we call `loop(5, 2)`, i.e. `num1 == 5` and `num2 == 2`, it would print:

5 5 4 4 3 3 2 2 1 1 0 0

If `num1 < 0`, or `num2 <= 0` the method should print nothing.