Quiz 7

Name: __________________________________________

1. Write the Java code for a method named `starz` with one integer parameter named `num`, that prints a specified number of asterisks, i.e., “*” `num` times. For example, if the method is invoked with the value 5, it should print ***** in a new line.

2. Suppose this method is modified, and now it returns a String composed of the specified number of asterisks, rather than print it.

   a) How would the method heading differ from the method heading you used in (1), above?

   b) State one other way in which the code for the method would need to change (you do not need to rewrite all of the code, just point out one difference apart from the heading).

3. Assume `starz()` as described in (2) is defined as a static method in some class. Write a code fragment that could be used in the `main()` method of that class to invoke `starz()` so as to print the following pattern:

   ****
   ***
   **
   *

   ****
   ***
   **
   *
Quiz 7

Name:______________________________

1. Write the Java code for a method named RandomInRange with two integer parameters named \( a \) and \( b \) that returns a random integer in the range \([a, \ldots, b]\). For example, if the method is invoked with the values -1 and 3, it should return an integer in the range \([-1, 0, 1, 2, 3]\).

Random class refresher:

Instantiating a Random object:
Random rand = new Random();

Expression:  
Possible values:
\[
\begin{align*}
\text{rand.nextInt(5)} & : 0, 1, 2, 3, 4 \\
\text{rand.nextInt(5) + 10} & : 10, 11, 12, 13, 14
\end{align*}
\]

2. Suppose this method is to be modified so as print (instead of returning) the random integer. State one way that the code for the method would need to change (you do not need to rewrite all of the code, just point out one difference).

3. Assume the method RandomInRange() is defined as a static method in some class in one of the two ways described above. Write a code fragment that could be used in the main() method of that class to invoke RandomInRange() so as to print three number in the range 30-75. E.g.:

Three random numbers in the range 30-75 (inclusive):
62
37
50
(numbers should vary each time the code runs)

a) Using the version of RandomInRange() as described in (1) – finish writing the code here:
System.out.println("Three random numbers in the range 30-75 (inclusive): ");

b) Using the version of RandomInRange() as described in (2) – finish writing the code here:
System.out.println("Three random numbers in the range 30-75 (inclusive): ");