Discussion Questions for "Method Invocation"

1. The professor uses fancy words like "invocation" or "instantiation" in an attempt to be more precise about exactly what is going on. Can you think of simpler words that convey these concepts with a similar precision?
2. Suppose you had a Money class to represent U.S. currency in dollars and cents. You may choose which field or fields you would like to model money. How would you code "add" methods. Your user would like to be able to specify the amount to add using a decimal point, or specify whole dollars, or specify whole dollars and whole cents. Show three different invocations of "add" demonstrating all three input specifications.
3. Given the following Factorial class:

```
package methods;
class Factorial {
        int n;
        public Factorial(int n) { this.n=n; }
        public int value() {
                if (n<=2) return n;
                return new Factorial(n-1).value() * n;
        }
        static public void main(String args[]) {
                int n=Integer.parseInt(args[0]);
                System.out.println("factorial(" + n +") = " + new Factorial(n).value());
        }
}
```

    a. What happens if you compile and invoke this as:
      java -cp ../../classes methods.Factorial 6
      java -cp ../../classes methods.Factorial 10
      java -cp ../../classes methods.Factorial 20
      java -cp ../../classes methods.Factorial ten
      java -cp ../../classes methods.Factorial

    b. Describe all activation records and objects that get created for the first invocation in "a."