Methods

• Instructions chunked together and given a name.
• Also may be referred to as subroutine, procedure, function
• A subroutine inside a class is a method
• In Java, all subroutines must be inside a class, so they are all methods.
Method Definition

modifiers return-type methodName( paramList ) {
    statements for method body
}

public static void printNum(int n) {
    System.out.println(n);
}

public static int addNums(int n, int m) {
    return n+m;
}
Method modifiers

- Access modifiers (public, private)
- Static or not (At this point, we are only using static methods)
Parameters

• Allows information to be passed into a method.
• Each parameter has a name and a type.
• May have empty parameter list.
• When calling a method, the values passed as arguments are assigned to the parameters.
Return type

- A method may return a value (or not)
- May only return value of the specified return type
- Method that does not return a value has return type void
- Use a return statement to return a value

```java
return value;
```
public static void main(String[] args) {

    prettyPrintNum(42);

    int foo = 37;
    prettyPrintNum(foo);

    prettyPrintNum(3 + foo);

    int result = addAndPrint(5, 4);
    System.out.println("the result was " + result);

    System.out.println("the next result was " + addAndPrint(2, 3));
}

public static int addAndPrint(int a, int b) {
    int sum = a + b;
    prettyPrintNum(sum);
    return sum;
}

public static void prettyPrintNum(int num) {
    System.out.println("My number is " + num);
}