2. A method declaration contains the return and parameters while the method body contains the actual code.

3. An access modifier keyword

4. visibility

5. Var1: scope: local to main method
Var2: Scope: local to the for loop in main
Var3: Scope: local to method1
Var4: Scope: local to the for loop in method1

6. A. **public static int** getVowels(String input);
B. **public static int** extractDigit(**int** number);
C. **public static** String insertString(String text, int number);

7. A. the compiler distinguishes one method from another using the method signature, which includes the method name and the parameter list. This is known as method overloading.
B. Yes two methods in the same class can have the same name as long as they have different parameter lists

8. A. the return statement is used to end the execution of a method and send the value back to the calling method
B. only one
C. A method returning a value has a return type other than a void and includes return statement to send back that value

9. The code has one logical error the variable num is declared but not assigned an initial value before doSomething() is called while this might compile because num is eventually assigned a value with num = doSomething(); the call to do something just before that line doesn't use or assign num making it redundant