1. The following program will not compile. Modify it so it compiles and prints the product of the two numbers

```java
class Foo {
    public static void main(String[] args) {
        int a = 5, b = 7;
        System.out.println(bar());
    }
    static int bar() {
        return a * b;
    }
}
```

```java
class Foo {
    public static void main(String[] args) {
        int a = 5, b = 7;
        System.out.println(bar(a,b));
    }
    static int bar(int a, int b) {
        return a * b;
    }
}
```

2. What is printed by the following program?

```java
class Foo {
    public static void main(String[] args) {
        int a = 1, b = 2;
        System.out.println("a = " + bar(a, b));
        System.out.println("b = " + bar(b,a));
        System.out.println("c = " + bar(a+2,b));
    }
    static void int bar(int a, int b) {
        System.out.println("a = " + a + " b = " + b);
        if(a < b) {
            System.out.println("a < b");
            return a;
        } else {
            System.out.println("a >= b");
            return b;
        }
    }
}
```

This program prints out:

```
a = 1
b = 2
a < b
a = 1
```
3. What is printed by the following program?

```java
class Foo {
    public static void main(String[] args) {
        int one = 1, two = 2;
        System.out.println("one = " + one + ", two = " + two);
        swap(one, two);
        System.out.println("one = " + one + ", two = " + two);
    }
    static void swap(int one, int two) {
        System.out.println("one = " + one + ", two = " + two);
        one = two;
        two = one;
        System.out.println("one = " + one + ", two = " + two);
    }
}
```

This program prints out:

one = 1, two = 2
one = 1, two = 2
one = 2, two = 2
one = 1, two = 2

4. xyz() is a method that calculates the square root of a number. It is defined as follows:

```java
static double xyz(double a) {
    return Math.sqrt(a);
}
```

a. What is the return type of xyz()? double
b. What type of parameter does xyz() take? double
c. Show how you would get a number from the user, use this method to calculate the square root, and print out the result.

```java
double a = Console.in.readDouble();
double b = xyz(a);
System.out.println(b);
```

5. Write a method called twoXPlusThree() that takes a real number as a parameter and returns two times the number plus three.

```java
double twoXPlusThree(double x) {
    return 2 * x + 3;
}
```