

1. Program Traces (50 points)

When executed, what does each class display on the screen?

<pre>public class WhatsPrinted00 { public static void func(int x,int y,int z) { x += 2; y += x; z = (x + y) % 2; System.out.println(x + " " + y + " " + z); } public static void main(String args[]) { int x = 10, y = 20, z = 30; func(z, x, y); } }</pre>	<pre>public class WhatsPrinted01 { public static void func(int x,int y,int z) { x += 2; y += x; z = (x + y) % 2; } public static void main(String args[]) { int x = 10, y = 20, z = 30; func(z, x, y); System.out.println(x + " " + y + " " + z); } }</pre>
<p>Output:</p> <p>32 42 0</p>	<p>Output:</p> <p>10 20 30</p>

<pre>public class A { public void m1(){ System.out.println("A's m1"); m2(); } public static void m2(){ System.out.println("A's static m2"); } public void A() { System.out.println("instance A"); } } public class B { public void m1(){ A a = new A(); a.m1(); A.m2(); } public static void m2(){ System.out.println("B's static m2"); B b2 = new B(); b2.m1(); } public static void main(String args[]){ A a = new A(); B b = new B(); b.m1(); B.m2(); a.A(); } }</pre>	<p>Output:</p> <p>A's m1 A's static m2 A's static m2 B's static m2 A's m1 A's static m2 A's static m2 instance A</p>
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<pre> class Stuff { int x; public Stuff(int x) { this.x = x; } public void move() { x += 2; } public int getX() { return x; } } public class WhatsPrinted05 { public static void func(Stuff s) { s.move(); } public static void main(String args[]) { Stuff a = new Stuff(10); Stuff b = a; func(a); b.move(); System.out.println(a.getX()); System.out.println(b.getX()); } } </pre>	<p>Output:</p> <p>14 14</p>
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2) Real Problem (30 points)

Complete the SmartPhone class. The class should have a **private** string field named phoneNumber that holds the number, for example, 267-222-9876. In addition, you must provide all necessary supports for the following. (Assume to print out the exact number stored in phoneNumber of the phone by that println line.)

```

public class PhoneUser {
public static void main(String [] args) {
SmartPhone p1 = new SmartPhone("267-222-9876");
SmartPhone p2 = new SmartPhone("215-222-9876");
System.out.println(p1);
System.out.println(p1);
if (p1.eq(p2)) System.out.println("Yes, they are the same");
else System.out.println("No, they are different");
}
}

```

```
public class SmartPhone {
private String phoneNumber;
public SmartPhone (String a){
phoneNumber = a;
}

public String toString() {
return phoneNumber;
}
public boolean eq(SmartPhone a){
return (phoneNumber.equals(a.toString()));
}

} // end of class SmartPhone
```