Examples

WEEK 10

Where is the error???

```
1 public class ShowErrors {
2     public static void main(String[] args) {
3           ShowErrors t = new ShowErrors(5);
4     }
5 }
```

```
error: constructor ShowErrors in class ShowErrors cannot be applied to given types;
       ShowErrors t = new ShowErrors(5);
                                     ^
required: no arguments
found: int
reason: actual and formal argument lists differ in length
```

Where is the error???

```
1 public class ShowErrors {
2     public static void main(String[] args) {
3           ShowErrors t = new ShowErrors();
4           t.x();
5     }
6 }
```

```
error: cannot find symbol
                t.x();
                 ^
 symbol:   method x()
 location: variable t of type ShowErrors
```

What is the error???

```
public class Test{

	public static void main(String[] args) {
		Circle c;
		System.out.println("What is area" + c.getArea());
		c = new Circle();
	}
}

class Circle {
	double radius=1;
	Circle() {
	}
	double getArea() {
		return radius * radius * Math.PI;
	}
}
```

```
error: variable c might not have been initialized
System.out.println("What is area" + c.getArea());
                                          ^
```

What is the error???

```
public class Test{
	public static void main(String[] args) {
		C c = new C(5.0);
		System.out.println(c.value);
	}
}

class C {
	int value = 2;
}
```

```
error: constructor C in class C cannot be applied to given types;
                C c = new C(5.0);
                      ^
 required: no arguments
 found: double
 reason: actual and formal argument lists differ in length
```

What is wrong???

```
1 class Test {
2       public static void main(String[] args) {
3               A a = new A();
4               a.print();
5       }
6 }
7
8 class A {
9       String s;
10
11      A(String newS) {
12              s = newS;
13      }
14
15      public void print() {
16              System.out.print(s);
17      }
18 }
```

```
Send a string
        A a = new A("esin");
OR
Define a no-argument constructor
       A() {
       }
```

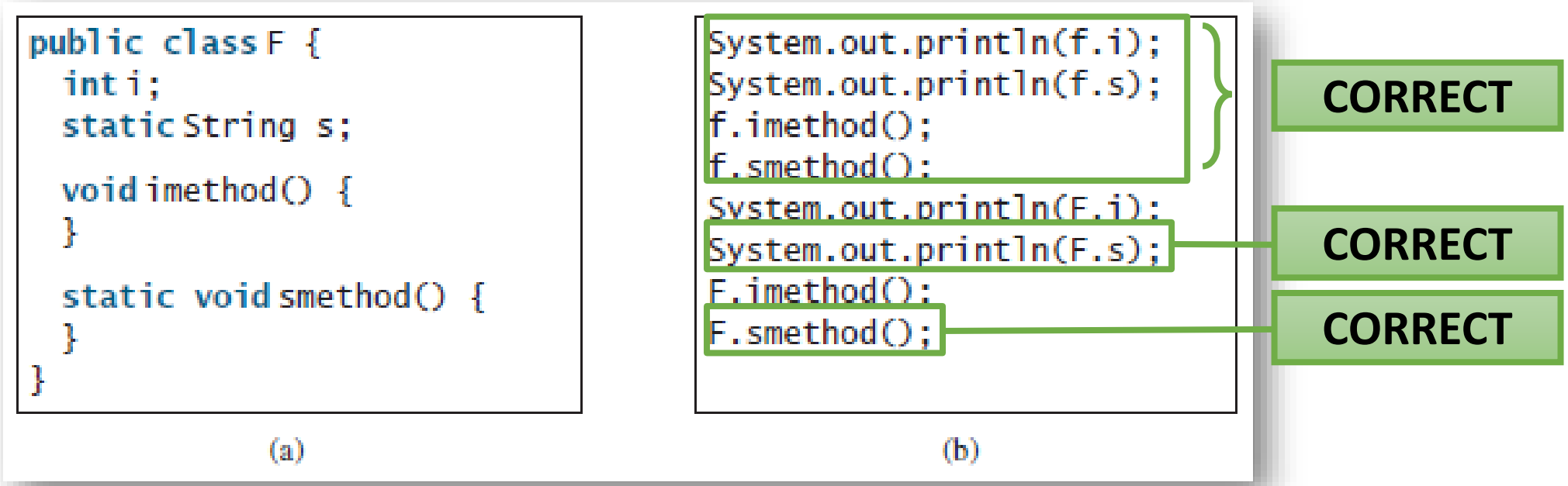
What is the output???

```
public class A {
	boolean x;
	public static void main(String[] args) {
		A a = new A();
		System.out.println(a.x);
	}
}
```

```
Output:
false
```

Static vs Instance

- Suppose that the class **F** is defined in (a). Let **f** be an instance of **F**. Which of the statements in (b) are correct?



What is wrong in the following code?

```
public class C {
	public static void main(String[] args) {
		method1();
	}
	public void method1() {
		method2();
	}
	public static void method2() {
		System.out.println("The area is: " + c.getArea());
	}
	Circle c = new Circle(4);
}
```

```
public static void method1() {
```

```
static Circle c = new Circle(4);
```

Passing Objects to Methods

```
public class Test {
	public static void main(String[] args) {
		Count myCount = new Count();
		int times = 0;
		for (int i = 0; i < 100; i++)
			increment(myCount, times);
		System.out.println("count is " + myCount.count);
		System.out.println("times is " + times);
	}
	public static void increment(Count c, int times) {
		c.count++;
		times++;
	}
}
```

```
public class Count {
	public int count;
	public Count(int c) {
		count = c;
	}
	public Count() {
		count = 1;
	}
}
```

```
Output:
count is 101
times is 0
```

What is the output???

```
public class Test {
	public static void main(String[] args) {
		T t1 = new T();
		T t2 = new T();
		System.out.println("t1's i = " + t1.i + " and j = " + t1.j);
		System.out.println("t2's i = " + t2.i + " and j = " + t2.j);
	}
}
class T {
	static int i = 0;
	int j = 0;
	T() {
		i++;
		j = 1;
	}
}
```

```
Output:
t1's i = 2 and j=1
t2's i = 2 and j=1
```

Scope of Variables - What is the output???

```
public class Test {
	private static int i = 0;
	private static int j = 0;
	public static void main(String[] args) {
		int i = 2;
		int k = 3;
		{
			int j = 3;
			System.out.println("i + j is " + i + j);
		}
		k = i + j;
		System.out.println("k is " + k);
		System.out.println("j is " + j);
	}
}
```

```
Output:
i + j is 23
k is 2
j is 0
```