Quiz 3

(solutions)

1. What is the output of this code segment

```java
int[] data = new int[10];
int k = 0;
try {
    while(true)
    {
        data[k] = k++;
    }
} catch (ArrayIndexOutOfBoundsException e) {
    data[5]++;
} catch (IndexOutOfBoundsException e) {
    data[5]++;
} catch (NullPointerException e) {
    data[5]++;
}
finally {
    data[5]++;
}
System.out.println(data[5]);
```

a) 5
b) 6
c) 7
d) none of the above
2. Examine the following code segment

```java
public class Demo {
    public static void main(String[] args) {
        FooBar obj1 = new FooBar();
        FooBar.number = 4;
        FooBar obj2 = new FooBar();
        obj1.number++;
        System.out.println(obj2.get());
    }
}
```

```java
public class FooBar {
    private int x = 0;
    public static int number = 1;
    public FooBar () {number++;}
    public int get() {x = number; return x;}
}
```

What is the output if this code is compiled?

a) 1
b) 2
c) 6
d) 5

3. Given a doubly linked list where each node has two references (**prev** and **next**): one that points to a previous node and another that points to a next node. Assume the linked list below

```
head
    3    7    9    5    1
```

tail

and provide the output for the following code fragments. The list is restored to its initial state before each line executes:

a) __7___ head.next.next.next.prev.prev.data

b) __9___ tail.prev.prev.prev.prev.next.next.data;
4. Assume the linked list below

```
3 <-> 7 <-> 9 <-> 5 <-> 1
```

Write the statements to insert a new node

```java
Node aux = head.next.next.next;
tmp.next = aux.next;
aux.next = tmp;
```