Pregunta 1

Given:

```
Collection<Number> col = new HashSet<>();

col.add(1);

var list1 = List.of(col); //1

col.add(2); //2

var list2 = List.copyOf(col); //3

System.out.println(list1+", "+list2);
```

What is the output?

A. It will not compile.

B. Exception at run time at line marked //1.

C. Exception at run time at line marked //2.

D. Exception at run time at line marked //3.

E. [[1,2]],[1,2]

F. [1],[1,2]

Pregunta 2

Given:

```
List<String> list1=new LinkedList<String>();
Set<String> set1=new HashSet<String>();
String[] data={"a","b","c","b","a"};
for(String s:data){
        list1.add(s);
        set1.add(s);
}
System.out.print(set1.size()+" "+list1.size()+" ");
HashSet set2=new HashSet(list1);
LinkedList list2=new LinkedList<>(set1);
System.out.print(set2.size()+" "+list2.size()+" ");
```

What is the result?

A. 3 5 3 3
B. 3 3 3 3
C. 3 5 3 5
D. 5 5 3 3

Pregunta 3

Given

```
String[] sa = { "charlie", "bob", "andy", "dave" };

Collections.sort(Arrays.asList(sa), null);

 System.out.println(sa[0]);
```

What will the following code print when run?

A. charlie
B. andy
C. dave
D. It will throw a NullPointerException
E. It will not compile

Pregunta 4

Given :

```
import java.util.*;

class MyStringComparator implements Comparator{

   public int compare(Object o1, Object o2)    {

     int s1 = ((String) o1).length();

     int s2 = ((String) o2).length();

     return s1 - s2;

   }

}
```

and

```
static String[] sa = { "d", "bbb", "aaaa" };
```

Select correct statements (2).

A. This is not a valid Comparator implementation.
B. Arrays.binarySearch(sa, "cc", new MyStringComparator()); will return -2.
C. Arrays.binarySearch(sa, "c", new MyStringComparator()); will return 0.
D. Arrays.binarySearch(sa, "c", new MyStringComparator()); will return -1.
E. Arrays.binarySearch(sa, "c", new MyStringComparator()); will throw an exception.

Pregunta 5

Which of the following are valid implementations of java.util.Comparator? (choose 2)

A.
```
Comparator<Integer> cin = new Comparator<Integer>(){
  public int compareTo(Integer i1, Integer i2){
        return i1 - i2;
  }
};
```

B.
```
var cin = new Comparator<Integer>(){
  public int compare(Integer i1, Integer i2){
        return i1 - i2;
   }
 };
```

C.
```
var cin = new Comparator<Integer>(){
  public int compareTo(Integer i1, Integer i2){
        return i1 - i2;
  }
};
```

D.
```
Comparator<Integer> cin = new Comparator<?>(){
   public int compare(Integer i1, Integer i2){
        return i1 - i2;
     }
 };
```

E.
```
var cin = new Comparator<Integer>(){
    public int compare(Integer i1, Integer i2){
        return i1.compareTo(i2);
   }
 };
```

Pregunta 6

What will the following code print?

```
var a = new int[]{ 1, 2, 3, 4, 5};

var b = new int[]{ 1, 2, 3, 4, 5, 3};

var c = new int[]{ 1, 2, 3, 4, 5, 6};


int x = Arrays.compare(a, c);

int y = Arrays.compare(b, c);

System.out.println(x+" "+y);
```

A. -1 -1
B. 1 1
C. -1 -3
D. 1 3

Pregunta 7

What will the following code print when run?

```
Deque<Integer> d = new ArrayDeque<>();
d.push(1);
d.push(2);
d.push(3);
System.out.print(d.remove()+" ");
System.out.print(d.peek()+" ");
System.out.print(d.size());
```

A. 3 2 1
B. 1 2 2
C. 3 2 2
D. 1 3 1