

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