



1.

```
struct V {
    int n;
```

```
public bool Equals(Object o) {
    (...) check type
```

```
V aux = (V) o;
```

```
return aux.n == n;
```

```
}
public String ToString() { ... }
}
main;
```

```
V v1 = new V();
```

```
Object o = v1; // box
```

```
o.ToString();
```

```
v1.ToString();
```

STACK

v1 [ n ]

o [ ]

box

HEAP

Intype  
[ n ]

RTTI  
Boxed  
Type V  
...  
ToString

RTTI V:


struct  
Type V  
...  
ToString

call

E' o uses  
we' to o

Evitar Sox no parâmetros 2.  
de Equals

↳ definir método equals auxiliar  
em  $V$ :

```
struct V {  
    int x, y;  
    public bool Equals (V v) {  
        return x == v.x &&  
            y == v.y;  
    }  
    public override bool Equals(  
        object o) {  
            (...) check type  
            return Equals((V)o);   
        }  
}
```

UnBox

```

Ansim:  v.Equaln(v2); // sem lock
        → Invoca V::Equaln(v)
        Console.WriteLine(v); // lock
        Console.WriteLine(v.ToString()); // sem lock
        ↳ estado redefinido

```