

QUICKSORT - Parte 1: Particionamento (Partition)

$V = [6, 0, 4, 2, 5, 3] \Rightarrow [0, 2, 3, 6, 5, 4]$

0 1 2 3 4 5
p r

$\leq x \mid \geq x \mid 0?$ X

1 1 6 0 4 2 5 3

1 6 1 0 4 2 5 3

0 1 6 1 4 2 5 3

0 1 6 4 1 2 5 3

0 2 1 4 6 1 5 3

0 2 1 4 6 5 1 3

0 2 3 6 5 4

```
int partition(int *v, int p, int r) {
```

```
    int x;
```

```
    int l, j;
```

```
    x = v[r];
```

```
    l = p - 1;
```

```
    for (j = p; j < r; j++) {
```

```
        if (v[j] <= x) {
```

```
            l++;
```

```
            troca(v, l, j);
```

```
        }
```

```
    }  
    troca(v, l + 1, r);
```

```
    return l + 1;
```

```
}
```