

MAKE-SET(x)

```
1   $x.p = x$   
2   $x.rank = 0$ 
```

UNION(x, y)

```
1  LINK(FIND-SET( $x$ ), FIND-SET( $y$ ))
```

LINK(x, y)

```
1  if  $x.rank > y.rank$   
2       $y.p = x$   
3  else  $x.p = y$   
4      if  $x.rank == y.rank$   
5           $y.rank = y.rank + 1$ 
```

FIND-SET(x)

```
1  if  $x \neq x.p$                                 // not the root?  
2       $x.p = \text{FIND-SET}(x.p)$                     // the root becomes the parent  
3  return  $x.p$                                     // return the root
```