

# Disjoint Sets Find

```
1 int DisjointSets::find(int i) {
2     if ( s[i] < 0 ) { return i; }
3     else { return _find( s[i] ); }
4 }
```

```
1 void DisjointSets::unionBySize(int root1, int root2) {
2     int newSize = arr_[root1] + arr_[root2];
3
4     // If arr_[root1] is less than (more negative), it is the larger set;
5     // we union the smaller set, root2, with root1.
6     if ( arr_[root1] < arr_[root2] ) {
7         arr_[root2] = root1;
8         arr_[root1] = newSize;
9     }
10
11     // Otherwise, do the opposite:
12     else {
13         arr_[root1] = root2;
14         arr_[root2] = newSize;
15     }
16 }
```