Disjoint Sets Find with Compression

```
1  int DisjointSets::find(int i) {
2    // At root return the index
3    if ( arr_[i] < 0 ) {
4      return i;
5    }
6
7    // If not at the root recurse and on the return update parent
8    // to be the root.
9    else {
10     int root = find( arr_[i] );
11     arr_[i] = root;
12     return root;
13   }
14 }
15
16
```