```
1  public class DiffractingTree {
2    DiffractingBalancer root;
3    DiffractingTree[] child;
4    int size;
5    public DiffractingTree(int mySize) {
6      size = mySize;
7      root = new DiffractingBalancer(size);
8      if (size > 2) {
9        child = new DiffractingTree[]{
10         new DiffractingTree(size/2),
11         new DiffractingTree(size/2)};
12     }
13   }
14   public int traverse() {
15     int half = root.traverse();
16     if (size > 2) {
17       return (2 * (child[half].traverse()) + half);
18     } else {
19       return half;
20     }
21   }
22 }
```

FIGURE 12.26 The DiffractingTree class: fields, constructor, and traverse() method.