```
1  public class Polynomial {
2    int[] coefficients; // possibly shared by several polynomials
3    int first;   // index of my constant coefficient
4    int degree;  // number of coefficients that are mine
5    public Polynomial(int d) {
6      coefficients = new int[d];
7      degree = d;
8      first = 0;
9    }
10   private Polynomial(int[] myCoefficients, int myFirst, int myDegree) {
11     coefficients = myCoefficients;
12     first = myFirst;
13     degree = myDegree;
14   }
15   public int get(int index) {
16     return coefficients[first + index];
17   }
18   public void set(int index, int value) {
19     coefficients[first + index] = value;
20   }
21   public int getDegree() {
22     return degree;
23   }
24   public Polynomial[] split() {
25     Polynomial[] result = new Polynomial[2];
26     int newDegree = degree / 2;
27     result[0] = new Polynomial(coefficients, first, newDegree);
28     result[1] = new Polynomial(coefficients, first + newDegree, newDegree);
29     return result;
30   }
31 }
```

FIGURE 16.18 The Polynomial class.