


```

18
19     public void merge(Weight other) {
20         value = value + other.get();
21         other.set(0);
22     }
23 }
24
25 class ConstantWeightSet {
26
27     ArrayList<Weight> weights = new ArrayList<Weight>();
28
29     public ConstantWeightSet(int value) {
30         weights.add(new Weight(value));
31     }
32
33     public int size() { return weights.size(); }
34
35     public float get(int i) {
36         return weights.get(i).get();
37     }
38
39     public void split(int i) {
40         Weight splitweight = weights.get(i).split();
41         weights.add(splitweight);
42     }
43
44     public void merge(int i, int j) {
45         weights.get(i).merge(weights.get(j));
46         weights.remove(j);
47     }
48
49     public float total() {
50         float sum = 0;
51         for (int i = 0; i != weights.size(); i++)
52             sum += weights.get(i).get();
53         return sum;
54     }
55 }
56
57 class RandomRun extends Thread {
58
59     final int M = 100;
60     ConstantWeightSet weights;
61
62     public RandomRun(ConstantWeightSet weights) {
63         this.weights = weights;
64     }
65
66     public void run() {
67         Random gen = new Random();
68         for (int i = 0; i != M; i++) {
69             int op = (weights.size() == 1) ? 0 : gen.nextInt(3);
70             int a = gen.nextInt(weights.size()), b;
71             switch (op) {
72                 case 0:
73                     weights.split(a);
74                     break;
75                 case 1:
76                     do b = gen.nextInt(weights.size()); while (a == b);
77                     weights.merge(a, b);
78                     break;
79                 case 2:
80                     System.out.printf("%g\n", weights.total());
81             }
82         }
83     }
84 }
85
86 class Main {
87     public static void main(String[] args) {
88         ConstantWeightSet weights = new ConstantWeightSet(4);
89         final int N = 4;
90         for (int i = 0; i != N; i++) {
91             RandomRun rr = new RandomRun(weights);
92             rr.start();
93         }
94     }
95 }

```