

```
1 import java.text.DecimalFormat;
2 public class calculate {
3     private int introll1, introll2;
4     private int rollsum;
5     private static float rolls;
6     private String[] probabilities = {"", "", "", "", "", "", "", "", "", "", ""}; //each index
    represents the % of a sum
7     private static float[] rollCount = {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0}; //each index
    represents the # of times a sum was rolled
8     DecimalFormat f = new DecimalFormat("##.00"); //format numbers into a string decimal
9
10    calculate(int iroll1, int iroll2){
11        //track number of times rolled
12        rolls++;
13        //integers for sum calculation
14        introll1 = iroll1;
15        introll2 = iroll2;
16        //calculate probabilities of each sum | [] out of 36 total combinations
17        //for loop to iterate thru list so no need for 9+ if statements
18        rollSum();
19        calculateProbability();
20    }
21
22    private void rollSum(){
23        //get the sum of each roll and increment the count of each sum
24        rollsum = introll1 + introll2;
25        for (int i = 0; i < 11; i++){
26            if (rollsum == i + 2){
27                rollCount[i] += 1;
28            }
29        }
30    }
31
32    private void calculateProbability(){
33        //string array to eliminate need for numerous if statements
34        for (int i=0; i < 11; i++){
35            //format the result of probability calculation
36            probabilities[i] = i + 2 + ": " + f.format(rollCount[i] / rolls * 100f) + "%";
37        }
38    }
39
40    public int getSum(){
41        return rollsum;
42    }
43
44    public String[] returnArray(){
45        return probabilities;
46    }
47
48    public float getRolls(){
49        return rolls;
50    }
51
52    public float[] returnRollCount(){
53        return rollCount;
54    }
55 }
```

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