

**STA Online Computer Programming Contest (DWITE)  
February 2004**

**Problem 2**

**Number of Combinations of Bills and Coins**

Your job, in this program, is to calculate how many different ways possible it is, to receive back, an amount of change from a store clerk.

For example, to receive 12¢ back in change, there are 4 different possible ways:

- one dime and 2 pennies
- two nickels and 2 pennies
- one nickel and 7 pennies
- 12 pennies

For this particular program the only valid bills and coins are as follows:

- \$20.00 bill
- \$10.00 bill
- \$5.00 bill
- \$2.00 coin (twoney)
- \$1.00 coin (looney)
- 25¢ coin (quarter)
- 10¢ coin (dime)
- 5¢ coin (nickle)
- 1¢ coin (penny)

Note: There are, of course, larger bills and also the 50¢ coin available in the Canadian monetary system, but they are not include in this problem, since they are not frequently returned as change.

The input file (DATA2) will contain five lines of data. Each line will contain a real amount,  $a$ , that represents the amount of change in dollars and cents that you would receive back.  $0 \leq a < 25$ .

The output file (OUT2) will contain five lines of data, corresponding to each line of the input file. Each line will contain the number of different ways possible, to receive back the amount of change.

**Sample Input (Only three lines given)**

0.12  
0.25  
1.00

**Sample Output**

4  
13  
243