Welfare Reform

Program File: `welfare.pas, welfare.c, or welfare.cpp`
Input File: `welfare.in`
Output File: `welfare.out`

The federal government has recently passed a reform mandating that all welfare recipients must work to receive benefits. In accordance with this, parents will receive childcare subsidies for children under 13 (i.e., the child must be younger than 13 on September 1 of this year).

The portion of childcare the parent must pay (called the *parent fee*) is based on income and number of children in the family. The following chart shows an example of how parent fees are determined:

Fee	**FAM01**	**FAM02**	**FAM03**	**FAM04**	**FAM05**	**FAM06**	**FAM07**	**FAM08**	**FAM09**	**FAM10**
0.80	0	0	0	0	0	0	0	0	0	0
1.60	3735	5040	6365	7650	8955	10260	11565	12870	14175	15480
2.40	5604	7562	9550	11479	13437	15395	17353	19311	21270	23228
3.20	7470	10030	12590	15150	17710	20270	22830	25390	27950	30510
4.00	9338	12538	15739	18939	22139	25339	28540	31740	34940	38140
4.80	11205	15045	18885	22725	26565	30405	34245	38085	41925	45765
5.60	11579	15547	19515	23483	27451	31419	35387	39355	43323	47291
6.40	11953	16049	20145	24240	28336	32432	36528	40624	44720	48815
7.20	12327	16551	20774	24998	29222	33445	37669	41892	46116	50340
8.00	12701	17052	21404	25755	30107	34458	38810	43161	47513	51864
8.80	13075	17554	22033	26513	30992	35471	39950	44430	48909	53388
9.60	13449	18056	22663	27270	31877	36484	41091	45698	50305	54912

Here "FAMxx" means a family with xx children. Each entry in the chart represents a base salary; successive rows in a column define a salary range. For example, in column "FAM04", row 2 defines a salary range from $7650 up to but not including $11479. The base parent fee for this salary range is 1.60, corresponding to row 2 (the start of the range). The final row defines the base parent fee for all salaries equal to or above the entries in that row. For example, in column "FAM01", any salary equal to or above $13449 has base parent fee 9.60.

From this chart, you determine the base parent fee from the family size and income. The base parent fee applies to the youngest child under 13; the fee for each other child under 13 is half of the base parent fee. For example, a family with four children with an income of $8000 would have a base parent fee of 1.60. The parent will pay 1.60 for the youngest child and 0.80 for every other child under 13. Remember that only children younger than 13 will get the child care subsidy; thus there is no parent fee for children 13 or over. Your task is to figure out the parent fee for each child in a family.

Input

The input file has two parts: the first part contains the parent fee table and the second part contains family records.

The parent fee table is specified using the first 12 lines of the input file. Each line contains one non-negative real number (the parent fee) and 10 non-negative integers (the incomes for families with one to ten children), separated by one or more spaces. Note that the values in this table may differ from those listed in the example table above, but it is guaranteed that the numbers in each column will increase as the table is examined from top to bottom.

The family records begin on the next line. The first line of the family records section contains a positive integer n; there are n families to process. Each family record begins with the parent's name (a string of 1 to 20 characters on its own line). The next line contains an integer k, the number of children in the family ($0 \le k \le 10$) and a non-negative integer s, the family's income. The next k lines contain the children's birthdays, one per line. Each birthday consists of three integers of the form *mm dd yy* (*mm* = month, *dd* = day, *yy* = year); leading zeroes will not be used for one digit months or days. All birthdays will be valid and no child will be older than 25.

Output

For each child, output the parent name, child's age (on September 1, 1996), and parent fee. Children should be listed in the order they appear in the input. Leave a blank line after the output for each family. Follow the format illustrated in the Sample Output.

Sample Input

```
0.80      0      0      0     0     0     0     0     0     0     0
1.60   3735   5040   6365  7650  8955 10260 11565 12870 14175 15480
2.40   5604   7562   9550 11479 13437 15395 17353 19311 21270 23228
3.20   7470  10030  12590 15150 17710 20270 22830 25390 27950 30510
4.00   9338  12538  15739 18939 22139 25339 28540 31740 34940 38140
4.80  11205  15045  18885 22725 26565 30405 34245 38085 41925 45765
5.60  11579  15547  19515 23483 27451 31419 35387 39355 43323 47291
6.40  11953  16049  20145 24240 28336 32432 36528 40624 44720 48815
7.20  12327  16551  20774 24998 29222 33445 37669 41892 46116 50340
8.00  12701  17052  21404 25755 30107 34458 38810 43161 47513 51864
8.80  13075  17554  22033 26513 30992 35471 39950 44430 48909 53388
9.60  13449  18056  22663 27270 31877 36484 41091 45698 50305 54912
3
Smith
5 28000
1 1 80
1 1 90
1 1 91
1 1 92
1 1 94
Jones
2 15000
12 20 87
3 22 96
Doe
3 9500
1 1 95
2 1 96
3 3 90
```

Sample Output

```
Smith 16 0.00
Smith 6 2.80
Smith 5 2.80
Smith 4 2.80
Smith 2 5.60

Jones 8 2.00
Jones 0 4.00

Doe 1 0.80
Doe 0 1.60
Doe 6 0.80
```