Problem A
Poker Card Game
Input File: pa.dat

Suppose you are given many poker cards. As you have already known, each card has points ranging from 1 to 13. Using these poker cards, you need to play a game on the cardboard in Figure 1. The game begins with a place called START. From START, you can walk to left or right to a rectangular box. Each box is labeled with an integer, which is the distance to START.
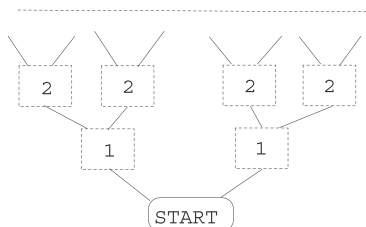

Figure 1: The poker card game cardboard.

To place poker cards on these boxes, you must follow the rules below:

(1) If you put a card with n points on a box labeled i , you got $(n * i)$ points.

(2) Once you place a card on a box b, you block the paths to the boxes behind b.

For example, in Figure 2, a player places a queen on the right box of distance 1, he gets $1 * 12$ points but the queen also blocks the paths to boxes behind it; i.e., it is not allowed to put cards on boxes behind it anymore.
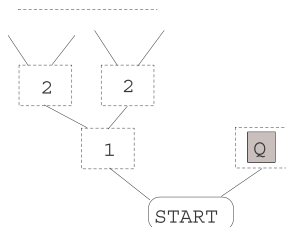

Figure 2: Placing a queen.

Your goal: Given a number of poker cards, find a way to place them so that you will get the *minimum points.* For example, suppose you have 3 cards 5, 10, and K. To get the minimum points, you can place cards like Figure 3, where the total points are $1 * 13 + 2 * 5 + 2 * 10 = 43$.
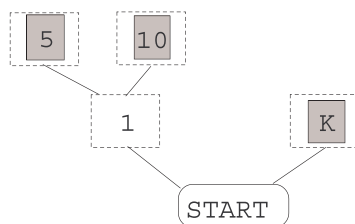

Figure 3: An example to place cards.

Input: The first line of the input file contains an integer n, $n \leq 10$, which represents the number of test cases. In each test case, it begins with an integer m, $m \leq 100000$, which represents the number of poker cards. Next, each card represented by its number are listed consecutively. Note that, the numbers of ace, 2, 3, $\cdots$, K are given by integers 1, 2, 3, $\cdots$, 13, respectively. The final minimum point in each test case is less than 5000000.

Output: List the minimum points of each test case line by line.

Sample Input

```
3
3
5 10 13
4
3 4 5 5
5
7 7 10 11 13
```

Output for the Sample Input

```
43
34
110
```