Momo's Hanoi Tower

問題描述：

Momo brings a Hanoi Tower toy to Lala's house, there are initially K disks, numbered from 1 to K, and three pillars. Let D_i denote the i_{th} disk. At any time in any pillar, D_i should be above D_j with i<j.

Lala is naughty, she uses her invention "co-copier" to create a lot of replica! Then D_i has n_i replica($1<=i<=K$)! Now all the disks are in pillar one, Momo wants to move all the disks to pillar three, how many steps does she need?

輸入說明：

Input begins with an integer *T(1<=T<=100)*, the number of test case. Each test case would be in the following format.

Line 1 : K : the number of disk at initial. *(1<=K<=30)*

Line 2 : $n_1\ n_2\ \ldots\ n_K$: K integers, the number of D_i ($1<=n_i<=100$)

輸出說明：

Each test case outputs one line, the minimum steps for Momo move all the disks from pillar 1 to pillar 3.

範例：

Sample Input:	**Sample Output:**
2 3 1 2 3 2 3 3	11 9