Recently a fire broke out at Chawk Bazar, Dhaka due to cylinder blast from a pickup van. This caused a great loss of lives. Around 76 people were dead and hundreds were injured. Thus, government thought to reform the structure of old Dhaka. But this could not be done in one day. This has to be planned and continuous process. For this purpose, Suman Saha proposed a plan to the ministry. He proposed to break down few houses of old Dhaka initially to build several facilities for day to day life such as parks, playgrounds, fire brigades etc., in every little zone (contains 2-3 roads). Government liked the idea and planned to implement it.

If any regular area has 20 houses, then government decided to buy around 3-5 houses and demolish / break them. Then government will build several facilities on those empty lands. Government asked Milon Biswas to gather the holding numbers of all the houses from each zones. We do not see consecutive holding numbers in Bangladesh. Then, Md. Ashraful Islam was asked to provide the holding numbers that government will buy out and demolish.

Md. Ashraful Islam came up with a plan. Instead of taking random holding numbers or processed holding numbers, he provided his own algorithm. First, he sorted the holding numbers of each zone. Then, he used Fibonacci series to decide which houses will be saved and which needs to be demolished. The Fibonacci series is as follows: 1 1 2 3 5 8 13 21 ………

Thus, as the first number of Fibonacci series is 1, then first holding numbered house from the sorted list is saved. And it’s immediate after holding numbered house gets demolished. Then, as the second Fibonacci number is also 1, 3rd house from the sorted list gets saved and the immediate after holding numbered house gets demolished. Since, third Fibonacci number is 2, two consecutive holding numbered house gets saved and 7th house gets demolished and so on……

**House no:**

**45**

**House no:**

**35**

**House no:**

**30**

**House no:**

**26**

**House no:**

**25**

**House no:**

**18**

**House no:**

**5**



***Input:***

First line of input contains the value of n, which represents the number of test cases. The later n cases contains two consecutive line. One line is for the number of holding numbers, m. And line two represents m holding numbers.

***Output:***

Output should be three lines for each test case. First line is for the case number. Second line represent the holding numbers that are safe for now. Thirst line is for the holding numbers that government will buy and demolish.

|  |  |
| --- | --- |
| ***Sample Input:*** | ***Sample Output:*** |
| 1  10  21 36 1 5 16 22 30 23 4 11 | Result 1:  Safe List: (1)(5)(16)(21)(23)(30)(36)  Break List: (4)(11)(22) |