

Talk Event

Input file: **standard input**
Output file: **standard output**
Time limit: 2 seconds
Memory limit: 1024 megabytes

N people have applied for a voice actor talk event. To apply for this event, a person must purchase between 1 and 4 tickets inclusive, and there are T_i people who purchased i tickets ($1 \leq i \leq 4$). **Here, people are distinguished only by the number of tickets they purchased; people with the same number of tickets are considered indistinguishable.**

In this talk event, if a person wins the lottery, they can talk with the voice actor for a duration equal to the number of tickets they purchased.

The total duration of the event is X units of time. Puffin Pataro, the god of randomness, selects the winners so that the total duration does not exceed the event time (in other words, the sum of the numbers of tickets purchased by the winners is at most X). However, to avoid complaints from those who are not selected, the following condition must be satisfied:

- For any person who is not selected, if that person were additionally selected, the total duration would exceed the event time.

Find the number of ways to select **exactly** K winners, modulo 998244353.

Solve this problem for TESTCASES test cases.

Input

The input is given in the following format:

```
TESTCASES
case1
case2
⋮
caseT
```

Each test case is given in the following format:

```
 $N$   $K$   $X$ 
 $T_1$   $T_2$   $T_3$   $T_4$ 
```

- $1 \leq \text{TESTCASES} \leq 10^4$
- $1 \leq K \leq N \leq 2.5 \times 10^8$
- $1 \leq X \leq 10^9$
- $0 \leq T_i$ ($1 \leq i \leq 4$)
- $T_1 + T_2 + T_3 + T_4 = N$
- All input values are integers

Output

Output TESTCASES lines.

On the i -th line, output the answer for the i -th test case.

Example

standard input	standard output
2	4
24 8 11	0
7 6 3 8	
24 3 28	
7 6 3 8	

Note

Let t_i be the number of winners among the people who purchased i tickets. In the first test case, there are the following 4 possible selections:

- $(t_1, t_2, t_3, t_4) = (5, 3, 0, 0)$
- $(t_1, t_2, t_3, t_4) = (6, 1, 1, 0)$
- $(t_1, t_2, t_3, t_4) = (7, 0, 0, 1)$
- $(t_1, t_2, t_3, t_4) = (7, 0, 1, 0)$

In the second test case, there is no selection that satisfies the conditions.