If they continue playing like this, soon the basketball players of the world's best league, the NBA, will put a ball in the basket every second. So there will no longer be any defense, tactics nor basketball.
Let's imagine observing one of these future matches between Team A and Team B. We know how many points both Team A and Team B have scored and the exact second when it happened. Within a second, it will not be possible to score more than one point.
King James is observing the task input and wants to answer the following two questions:

1. How many points have been scored during the first half-time, that is in the first half of the game, if we know that the entire game lasts 4 × 12 minutes?
2. How many "turnarounds" have happened during the match, i.e. how many times has a team come from a losing situation (has strictly fewer points scored than the other team) to a leading one (has strictly more points scored than the other team)?

INPUT

The first line contains a positive integer A ($1 \leq A \leq 2879$), the number of points Team A has scored.
In the following A lines there are positive integers As ($1 \leq As \leq 2880$), the seconds in which Team A was scoring points ordered from the smallest to the largest number.
In the $(A + 2)^{th}$ line there is a positive integer B ($1 \leq B \leq 2879$), the number of points Team B has scored. In the following B lines there are positive integers Bs ($1 \leq Bs \leq 2880$), the seconds in which Team B was scoring points ordered from the smallest to the largest number.

OUTPUT

In the first line print an integer value, the answer to the first question from the text of the task.
In the second line print an integer value, the answer to the second question from the text of the task.

SCORING

The correct output of the first line is worth 2 points, and the correct output of the second one is worth 3 points. If you do not know how to solve some part of the task, print anything in the corresponding line.

SAMPLE TESTS

input	input	input
3 10 1400 1500 2 7 2000	6 15 30 35 55 60 2065 7 20 25	11 1402 1412 1428 1430 1441 1444 1453 1483 1485

```
40
45
50
2070
2075
```

output

```
10
5
```

```
1489
1490
9
1403
1405
1409
1435
1459
1460
1461
1487
1495
```

output

```
8
2
```

```
3
1
```

Clarification of the second example:

Results' progress „Team A : Team B“	Turnaround (YES/NO)
1:0 (15th second, 1st half-time)	NO
1:1 (20th second, 1st half-time)	NO
1:2 (25th second, 1st half-time)	YES (Team B)
2:2 (30th second, 1st half-time)	NO
3:2 (35th second, 1st half-time)	YES (Team A)
3:3 (40th second, 1st half-time)	NO
3:4 (45th second, 1st half-time)	YES (Team B)
3:5 (50th second, 1st half-time)	NO
4:5 (55th second, 1st half-time)	NO
5:5 (60th second, 1st half-time)	NO
6:5 (2065th second, 2nd half-time)	YES (Team A)
6:6 (2070th second, 2nd half-time)	NO
6:7 (2075th second, 2nd half-time)	YES (Team B)