

BINGO!

It's Bingo night at the Springfield Senior Center! A Bingo card is essentially a 5x5 matrix of distinct integers with the letters B-I-N-G-O across the top. The B column contains numbers in the range 1..15, the I column contains numbers in 16..30, etc. During a game of Bingo, an announcer calls out numbers (like "B5" or "O73") at random. If the announcer calls a number on your card, that cell is marked. Once a complete row, column or diagonal of cells is marked you yell "Bingo!" and win. Write a program that will find your first opportunity (if any) to yell "Bingo!"

B I N G O				
7	25	44	57	62
15	22	40	50	70
11	30	34	46	74
2	28	37	55	68
10	27	39	59	75

Input:

Input will begin with 5 lines showing your Bingo card, formatted as shown in the example below. Each row of data represents each row of the Bingo card. For instance the first 3 is under the B, the 17 is under the I, 37 is under the N, 50 is under the G, 62 is under the O, etc...This will be followed a series of games containing a sequence of Bingo calls separated by single spaces.

Output:

For each game print bingo and the first call that allowed you to win. If you cannot win, print No Bingo. Use the exact format shown below.

Example:

In this example, the card wins during the first game with a horizontal Bingo across the top row of the card (B3 I17 N37 G50 O62). In the second game, no Bingo is achieved. In the third game, a Bingo is achieved vertically down the B column. In the last game, a Bingo is achieved diagonally from the top right to the bottom left corners

Sample input data (bingo.txt)

```
3 17 37 50 62
7 20 45 57 63
15 25 31 60 64
11 19 38 48 75
6 30 40 46 70
B3 I17 N37 I30 B4 I15 B9 I20 G50 O74 I16 O62 B11
B1 B2 N38 O66 G58 I24 B6
B1 B3 B2 B7 N37 B15 B11 I17 G50 B6 O62
B2 I19 O62 N37 O71 O72 O66 N31 I23 B6 B1 G57
```



Sample Output:

Bingo Card

3	17	37	50	62
7	20	45	57	63
15	25	31	60	64
11	19	38	48	75
6	30	40	46	70

Game 1: Bingo after O62 was called

These were the calls for Game 1

B3 I17 N37 I30 B4 I15 B9 I20 G50 O74 I16 O62 B11

Game 2: No Bingo

These were the calls for Game 2

B1 B2 N38 O66 G58 I24 B6

Game 3: Bingo after B6 was called

These were the calls for Game 3

B1 B3 B2 B7 N37 B15 B11 I17 G50 B6 O62

Game 4: Bingo after G57 was called

These were the calls for Game 4

B2 I19 O62 N37 O71 O72 O66 N31 I23 B6 B1 G57

Data Set 1 – Input

3 17 37 50 62
7 20 45 57 63
15 25 31 60 64
11 19 38 48 75
6 30 40 46 70
B1 B3 B2 B7 N37 B15 B11 I17 G50 B6 O62
B2 I19 O62 N37 O71 O72 O66 N31 I23 B6 B1 G57
G52 O70 N44 I29 B12 G47 O68 O75 B2 B5 N35 I23 G58
B6 I19 N31 G57 B3 I20 N60 O62 O70
I21 I22 I23 O61 O62 O63
N37 N45 N38 N31 G46 N40 B3 B7 B15 B11 B6

Data Set 1 – Output (10 10 20 20 20 20 marks)

Bingo Card

3	17	37	50	62
7	20	45	57	63
15	25	31	60	64
11	19	38	48	75
6	30	40	46	70

Game 1: Bingo after B6 was called

These were the calls for Game 1

B1 B3 B2 B7 N37 B15 B11 I17 G50 B6 O62

Game 2: Bingo after G57 was called

These were the calls for Game 2

B2 I19 O62 N37 O71 O72 O66 N31 I23 B6 B1 G57

Game 3: No Bingo

These were the calls for Game 3

G52 O70 N44 I29 B12 G47 O68 O75 B2 B5 N35 I23 G58

Game 4: Bingo after O62 was called

These were the calls for Game 4

B6 I19 N31 G57 B3 I20 N60 O62 O70

Game 5: No Bingo

These were the calls for Game 5

I21 I22 I23 O61 O62 O63

Game 6: Bingo after N40 was called

These were the calls for Game 6

N37 N45 N38 N31 G46 N40 B3 B7 B15 B11 B6

Data Set 2 – Input

3 17 37 50 62
7 20 45 57 63
15 25 31 60 64
11 19 38 48 75
6 30 40 46 70
G52 O70 N44 I29 B12 G47 O68 O75 B2 B5 N35 I23 G58
B6 I19 N31 G57 B3 I20 N60 O62 O70
I21 I22 I23 O61 O62 O63
N37 N45 N38 N31 G46 N40 B3 B7 B15 B11 B6
O62 G57 N31 I20 B3 I19 N40 G46 O70 B6 G47 I29

Data Set 2 – Output (20 each marks)

Bingo Card

3	17	37	50	62
7	20	45	57	63
15	25	31	60	64
11	19	38	48	75
6	30	40	46	70

Game 1: No Bingo

These were the calls for Game 1

G52 O70 N44 I29 B12 G47 O68 O75 B2 B5 N35 I23 G58

Game 2: Bingo after O62 was called

These were the calls for Game 2

B6 I19 N31 G57 B3 I20 N60 O62 O70

Game 3: No Bingo

These were the calls for Game 3

I21 I22 I23 O61 O62 O63

Game 4: Bingo after N40 was called

These were the calls for Game 4

N37 N45 N38 N31 G46 N40 B3 B7 B15 B11 B6

Game 5: Bingo after B6 was called

These were the calls for Game 5

O62 G57 N31 I20 B3 I19 N40 G46 O70 B6 G47 I29