Fall 2017 MIHS Programming Contest
Judges Data

Problems:

0. Sample Problem
Input File: practice.txt

Input:

4
ABCBCABCABT
ACBCBCABCBAB
WCBBACAACBABC
ABCDCA

Output:

T
None
W
D

1. Small Car

Input:

N/A

Output:

```
    .-----.
 __//.{)|_\\._
/___        ___:
--(_)------(_)--
```

2. Sorting Distances

Input:

```
7
198
192
16
73
79103
6910
2
```

Output:

```
79103
6910
198
192
73
16
2
```

3. Word Spelling

Input:

```
6
happiness 7 h a p p i n e
run 4 N U r u
seventy 7 y v n t e e s
Washington 17 g t a s h e b q d W i o n y a e n
Jack 4 a k c j
contest 6 c c c c c c
```

Output:

```
no
no
yes
yes
no
no
```

4. Magic Square

Input:

```
3
4 3 8
9 5 1
2 7 6
5 8 9
1 2 4
3 7 6
1 3 8
9 5 4
2 7 6
```

Output:

```
0
8
5
```

5. Valid DNA

Input:

```
3
ACTGACTGAC
ACTGACTGAC
GGGGGTTTCA
CCCCCAAAGT
TACGTCAACG
ATGCACTTGC
```

Output:

```
Invalid
Valid
Invalid
```

6. Counting Time

Input:

```
4
90067
0
86399
9876543
```

Output:

```
1 days 1 hrs 1 min 7 sec
0 days 0 hrs 0 min 0 sec
0 days 23 hrs 59 min 59 sec
114 days 7 hrs 29 min 3 sec
```

7. Playground

Input:

```
4
141 23234
6 107
50 100
1 12
```

Output:

```
1697
20
0
9
```

8. Multiplying Ducks

Input:

```
4
0 07/21
13 05/19
9053 01/10
54 10/31
```

Output:

```
0
25272
9053
1938696768
```

9. Alien Message

Input:

```
2
11  3
630 357 868
777 805 805
910 910 357
700 756 784
357 959 931
742 735 777
910 903 819
686 721 756
357 357 840
777 812 763
903 861 364
3 3
637 917 833
679 847 679
917 357 980
```

Output:

```
Good job on solving this problem!
Happy day
```

10. New Palindrome

Input:

4
sinister
the TeamsCode contest
iiiIiIi
check one two three four

Output:

3
12
2
13

11. Best Bootcamps

Input:

```
5 3
A 1 B 2 C 3 D 4 E 5
7
A B 4
C D 1
E A -4
B E -3
C A -1
D B 1
E C -1
```

Output:

```
C A B 6
```

12. Closest ZIP Codes

Input:

```
4
73195 13579
12121 98989
99978 80001
54263 38752
```

Output:

```
13579 0
22111 76878
79998 3
36542 2210
```

13. Sudoku

Input:

11
8 2 3 ? ? 9 5 4 6
6 ? 7 8 4 3 1 9 2
9 4 1 6 5 2 7 ? 8
5 ? 8 ? 3 6 2 7 4
2 3 4 5 8 7 6 1 9
7 9 6 4 ? 1 3 8 5
1 ? 2 3 9 4 8 ? 7
3 ? 9 2 7 5 4 6 1
4 7 5 1 6 8 9 2 ?

Output:

7 1 5 3 1 9 2 6 5 8 3

14. Full Bookshelf

Input:

```
3
5 5
10
5 5 5 7 5 5 4 1 1 4
3 14
9
7 6 4 3 7 6 4 3 2
1 30
11
31 10 32 10 54 10 1 1 1 1 5
```

Output:

```
3
0
4
```

15. Base Palindrome

Input:

```
6
7
999
1234
664108
86
234752210
```

Output:

```
2, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20
10, 14
None
None
6
None
```