



University Interscholastic League

# Computer Science Competition

## 2014 District Week 2 Programming

### JUDGES PACKET - CONFIDENTIAL

#### I. Instructions

1. The attached printouts of the judge test data are provided for the reference of the contest director and programming judges. Additional copies may be made if needed for this purpose.
2. This packet must remain CONFIDENTIAL. Additional copies may be made and returned to schools when other confidential contest material is returned.

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## 1. Cows

```
==> cows.dat <==
```

```
11  
0 4  
2 5  
100 1  
100 2  
100 3  
100 4  
100 5  
100 6  
100 7  
100 8  
100 9  
5  
4 8  
1 50  
100 110  
100 160  
100 10000
```

```
==> cows.out <==
```

```
3  
22  
40  
205  
32471
```

---

## 2. Destination

```
==> destination.dat <==
```

```
5
1 2 3 4 3
north 2
east 2
south 9
8 -12 42 -12 6
east 20
south 5
west 2
east 16
north 15
south 16
-20 -40 2 5 8
south 11
north 29
west 9
east 23
south 2
east 14
north 29
west 6
0 0 0 0 3
south 8
north 3
west 27
19 12 34 -91 7
west 12
south 24
north 15
north 4
east 7
south 16
west 23
```

```
==> destination.out <==
```

```
2
5
8
0
You didn't make it
```

---

### 3. Distance

```
==> distance.dat <==
```

```
10  
36254 57  
463 678  
86523 189572  
17953 1293056  
1238057 1515  
154870 159  
23847 2847  
293864 230875  
23857 32587  
76 71239
```

```
==> distance.out <==
```

```
574.466  
519.746  
521.689  
521.244  
510.027  
518.468  
521.435  
521.764  
521.265  
522.072
```

---

## 4. Encryption

==> encryption.dat <==

10

5 817 67 164

62 2

687 512 18 78 9

658 1237 8732 109

27 7 9

6

1628 1 2 4 7 11

712 128 98

1273 129 17 21

137 923 983 210 87

==> encryption.out <==

44885980

62

13718016

387352017724

189

6

11396

558208

19541823

756995117970

---

## 5. Lottery

==> lottery.dat <==

10

42382 342

123456 654321

380 0

38 34

5 5552

892 892

298892 7892

0 400

123456 6543216

123456789 123456789

==> lottery.out <==

\$20

\$0

\$10

\$10

\$0

\$30

\$30

\$10

\$20

\$90

---

## 6. Memory

==> memory.dat <==

3	hkaf
3 5	*sdjskdaf
abc1 21 98	&oijok
jhljhkj 423 423	8 8
abkik4 98 423	a 1 2
abc1	b 3 4
&jhljhkj	c 5 6
*jhljhkj	d 2 3
&abkik4	e 6 1
abkik4	f 4 5
6 6	g 7 7
joe 15 154	h 56 457
jklin 125 8909	h
hkaf 11253 125	&h
tfgiy 154 15	*b
sdjskdaf 72394 72394	a
oijok 27349 72394	&c
joe	*d
&tfgiy	e
*hkaf	f

==> memory.out <==

98  
423  
423  
98  
423  
154  
154  
8909  
125  
72394  
27349  
457  
56  
5  
2  
5  
4  
1  
5

---

## 7. Product of Divisors

```
==> proddiv.dat <==
```

```
10  
42 109  
35 35  
70 94  
79 137  
63 127  
6 51  
82 109  
62 153  
96 138  
19 19
```

```
==> proddiv.out <==
```

```
16  
0  
5  
12  
13  
12  
7  
18  
9  
1
```



---

## 8. RNA

```
==> rna.dat <==
```

```
7
```

```
4
```

```
ATGC
```

```
UACG
```

```
4
```

```
ATGC
```

```
CGUA
```

```
3
```

```
AGQ
```

```
UCF
```

```
8
```

```
CGATAGAT
```

```
CCUAUCUA
```

```
25
```

```
CTTGCTTCGGAAGTCCCGGTGGACC
```

```
GAACGAAGCCUUCAGGGCCACCUGG
```

```
12
```

```
GGTCGTATCGCT
```

```
CCAGCATAGCGG
```

```
200
```

```
GTATTAAGGATCCAATTGGTTTCCAATGTATTGAAGCGTCCTCCGGCCATACTCAAGGACGCTGTTAAGTGCTG
```

```
GGTGTGATCATCGCTTGCTAAGCCACTCAAAAACATGACTAGGCAACGCCACGTATCTTGAGGAAGGCAGACT
```

```
GAAGCTGGGGGCAACGCGAGGACCAGCCCCGTGGGACGATCATATATATATGGA
```

```
CAUAAUCCUAGGUUAACCAAAGGUUACAUAACUUCGCAGGAGGCCGGUAUGAGUUCUGCGACAAUUCACGAC
```

```
CCACACUAGUAGCGAACGAUUCGGUGAGUUUUUGUACUGAUCCGUUGCGGUGCAUAGAACCUCUCCGUCUGA
```

```
CUUCGACCCCCGUUGCGCUCUGGUCGGGGCACCUCGUAGUAUAUAUACCU
```

```
==> rna.out <==
```

```
GOOD
```

```
BAD
```

```
BAD
```

```
BAD
```

```
GOOD
```

```
BAD
```

```
GOOD
```

---

## 9. Skyline

==> skyline.dat <==

```
10
3
5 1 4
5
5 9 3 3 9
7
1 2 3 4 5 6 7
10
1 2 3 4 5 5 4 3 2 1
10
10 9 8 7 6 5 4 3 2 3
7
50 0 50 0 50 0 50
5
1 0 0 0 1
7
1 2 3 2 3 2 1
2
2 2
20
1 2 3 4 5 6 7 8 9 10 9 9 10 11 11 10 9 9 10 10
```

==> skyline.out <==

```
3
12
0
0
1
150
3
1
0
4
```

---

## 10. Sticks into Polygons

```
==> stickspolygon.dat <==
```

```
8
3
1 2 3
3
4 1 2
4
4 2 1 3
3
1 1 1
4
1 2 1 2
5
1000 1 3 1 3
3
1 2 1
7
10 9 8 7 6 5 4
```

```
==> stickspolygon.out <==
```

```
-1
-1
4
3
4
4
-1
7
```

---

## 11. Stock

==> stock.dat <==

```
6
4 TEST
1 3 2 4
5 ABC
5 3 1 4 8
10 FB
5246 3955 8728 9561 5752 1736 7278 5682 616 3461
20 GOOG
1967 3273 4682 1287 8167 1944 3879 6875 4621 2248 4425 7513 2073 1097 8332
788 5697 4633 657 6749
15 UT
1576 272 6265 2321 9764 6890 9020 7607 6059 7236 688 5698 5825 9071 4434
100 MSOFT
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28
29 30 31 32 33 34 35 36 37 38 39 40 39 38 37 36 35 34 33 32 31 30 31 32 33
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 54 53 52
51 50 49 48 47 46 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60
```

==> stock.out <==

TEST	14 BUY
1 BUY	15 SELL
2 SELL	16 BUY
3 BUY	17 SELL
4 SELL	19 BUY
ABC	20 SELL
1 SELL	UT
3 BUY	1 SELL
5 SELL	2 BUY
FB	3 SELL
1 SELL	4 BUY
2 BUY	5 SELL
4 SELL	6 BUY
6 BUY	7 SELL
7 SELL	9 BUY
9 BUY	10 SELL
10 SELL	11 BUY
GOOG	14 SELL
1 BUY	15 BUY
3 SELL	MSOFT
4 BUY	1 BUY
5 SELL	40 SELL
6 BUY	50 BUY
8 SELL	75 SELL
10 BUY	85 BUY
12 SELL	100 SELL

---

## 12. Texas

==> texas.out <==  
Austin  
Bluebonnet  
Dallas Cowboys  
The Lone Star State