



University Interscholastic League

Computer Science Competition

2014 Invitational B Programming Problem Set

JUDGE DATA PRINTOUT - 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. Printouts must remain CONFIDENTIAL. Additional copies may be made and returned to schools when other confidential contest material is returned.

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1. Beads

Judges Input:

8
AAAAAAAAAAAAAAAA
ABABAB
ABCAB
ABAb
DSFdfsfdSGsFDSFdfsfdSGsF
ACGFADHDSSACGFADHDSSV
DFSGSDKDSGSKFDSHASODAHadfkfhldfkklfdFAFAJFDAKFOfskfjasljfdsafasfdsafAFsdafjh
fsafkdshfkjdfhsfDSAFDSFDFJAFLAFDSJFDAFdsklffdjfsdkfhakjsfhkfsDSFSAFASFSAFSAfj
khdfksjafkashfdfsfdkdfasfldakfdlasjfaskjflasfaFDFASFksfjsfdhkdasfdskfkajghakjod
faksfsFSDFDSDSFFDFAFAFADFSAFAF
STARWARSSSTARWARSSSTARWARSSSTARWARSSSTARWARSSSTARWARSSSTARWARSSSTARWARSSSTARW
ARSSSTARWARSSSTARWARSSSTARWARSSSTARWARSSSTARWARSSSTARWARSSSTARWARSSSTARWARSSST
ARWARSSSTARWARSSSTARWARSSSTARWARSSSTARWARSSSTARWARSSSTARWARSSSTARWARSSSTARWAR
SSSTARWARSSSTARWARSSSTARWARSSSTARWARSSSTARWARSSSTARWARSSSTARWARSSSTARWARSSSTAR
WARSSSTARWARSSSTARWARSSSTARWARSSSTARWARSSSTARWARSSSTARWARSSSTARWARSSSTARWARSS

Judges Output:

A
AB
ABCAB
ABAb
DSFdfsfdSGsF
ACGFADHDSSACGFADHDSSV
DFSGSDKDSGSKFDSHASODAHadfkfhldfkklfdFAFAJFDAKFOfskfjasljfdsafasfdsafAFsdafjh
fsafkdshfkjdfhsfDSAFDSFDFJAFLAFDSJFDAFdsklffdjfsdkfhakjsfhkfsDSFSAFASFSAFSAfj
khdfksjafkashfdfsfdkdfasfldakfdlasjfaskjflasfaFDFASFksfjsfdhkdasfdskfkajghakjod
faksfsFSDFDSDSFFDFAFAFADFSAFAF
STARWARSS

2. Bridgeposts

Judges Input:

```
6
5
3 4 1 5 2
3
1 3 2
6
6 5 4 3 2 1
2
4 2
10
15 13 13 12 13 14 15 14 13 16
1
3
10
25 23 23 22 23 24 25 24 23 26
1
4
1
1
5
1 1 1 1 1
4
9 2 5 3
3
1 2 3
```

Judges Output:

```
1
3
13
22
1
2
```

3. Candy

Judges Input:

```
8
10 2
100 35
5 4
17 20 3 5
6 10
6 9 12 15 18 21 24 27 30 33
41 10
9695 811 6981 157 5828 6519 9914 3826 8451 4073
78 8
5604 1865 5524 850 6767 3404 2482 132
75 12
7150 3300 3450 1444 3898 2475 6850 4693 7119 1536 2790 9909
21 4
7224 4284 3624 8026
86 9
2408 602 7740 3870 6450 8686 8064 6278 5868
```

Judges Output:

```
1
2
5
1
0
3
2
7
```

4. Garden

Judges Input:

```
4
3 2 2 2
S.S
.SS
7 5 3 4
SS..SSS
.S.S..S
.SS.S..
SSS.SS.
..S.S.S
10 10 5 4
..S...S..S
.S...S.SS
...SS..S..
....SS....
.....S...S
SS.....
S.....S
.....S.S
..SSS..S.S
.....S.
25 20 8 8
...SSS..S.....S.SS..S
.S.S...S.S.S...S.S.S.S.S
.S..S..S..S..S.....S.S...
SS.SSS.S.S.S.SS.....S..S.
S.SS..SS.SS...SS.S.SS....
..SS..S.S...S.....SS....
S....S.S.SS.....S..SSS..
.....S..S.S.SS..SS.S..S..
S..SS.....SS..SSS.S.....
SS.S..S.S.S.S...S.....S.SS.
.SS...S.S..S.SS.....S.S.
S..SS..SS..S.S.SS..SS..SS
S..S.S..S.S...SS..SS...S
SSSSSS.S.S.SS.SS.S.SS...S
....SS.S....S....S.SSS.S.
.SS..SS.....SS..SSSSSS.
..SS.....S..S.SS...SSS.S
S..S.S...SS..S.S.S...SSSS
S.....S...SS.SSS..
SSS..SSSS.....SS...S.S.
```

Judges Output:

```
3
8
7
36
```

5. Grades

Judges Input:

5	KUwWAKvT 21
4 Mars	TKx 32
Liz 100	uRLUpmnJ 47
Carlos 83	pBSZZgmE 33
Ralphie 76	qoDr 59
Janet 42	pqLns 31
9 Intestines	NSnzeGhe 20
Liz 100	zGI 49
Carlos 90	AsqonSKsq 65
Ralphie 80	nZsRFUmn 46
DorothyAnn 75	iZq 63
Keesha 70	brYHSojW 81
Phoebe 89	ITcOqTPL 74
Timoty 79	uTaF 72
Wanda 74	tUWj 16
Arnold 69	jCkDemsMG 37
12 GotoConsideredHarmful	hqDOYl 23
Josh 98	Rlad 15
Jaime 12	vCsUn 76
Tres 83	XhNt 33
Will 92	vfmUwrSZ 26
Harry 1	JGyo 47
David 89	wHgHARRm 89
KT 72	XQfgoHTj 66
Vallath 100	IGxzEtp 100
JeffDean 99	naVTLtZWR 14
LinusTorvalds 99	ppBWS 57
BillGates 99	FasiqOD 68
SteveJobs 50	KSVLNAgrt 73
0 VeryToughAssignment	GTblwcyVG 81
30 RandomNamesPaper1001	

Judges Output:

Mars	C 0
A 1	D 1
B 1	F 3
C 1	VeryToughAssignment
D 0	A 0
F 1	B 0
Intestines	C 0
A 2	D 0
B 2	F 0
C 2	RandomNamesPaper1001
D 2	A 1
F 1	B 3
GotoConsideredHarmful	C 1
A 6	D 3
B 2	F 22

7. Meta

Judges Input: None

Judges Output:

```
System.out.println("This is so meta");
```

8. Poll

Judges Input:

10	szhqggrhgggcmhcs +	toqnfux -
33	49	toqnfux -
sztılqtsfjixyppaion +	kaxwrxx +	abcwhysp +
hkljbkfoivnjkjyту -	nqosr -	toqnfux -
u -	nqosr +	bwdsgrrsed +
hkljbkfoivnjkjyту +	h -	zetwlbby +
kefbdcekkmwzsvrpp -	hvvdfdchwhhmdy +	gmfmfxn -
iwnlqelgnz -	vkfxj +	kqqzzıydiltmmpcnyb +
rcdnhorziv -	ewerxrfhbtmdmuntput -	abcwhysp -
fgrkruqdhuf -	kndtnw -	bwdsgrrsed +
ivnwttmhsbcm -	lribklesnxdlitc +	abcwhysp +
ntfpeşblxn +	xlrhlmgrxalp +	zetwlbby -
sztılqtsfjixyppaion +	h -	gmfmfxn -
iwnlqelgnz +	hvvdfdchwhhmdy +	16
yhvthotouqmglyd -	ybvizoqqc +	pl -
yhvthotouqmglyd -	an +	gzhywmwhfuzxlyd -
fgrkruqdhuf +	tcs1 -	kmiuzgcqa -
gnxinv +	klnahfp +	hvkjglmmđ -
hkljbkfoivnjkjyту +	et -	gzhywmwhfuzxlyd -
ntfpeşblxn -	mtwrmqitaxr +	qđmyuxx -
sztılqtsfjixyppaion +	oroyrudvhx -	jpzzmonczu -
u +	kaakbrşxhrrh -	xxhcmsi +
yhvthotouqmglyd +	bq -	fdjxomrznqzzt +
zkjntlyjftbsjsuyym +	hvvdfdchwhhmdy +	gzhywmwhfuzxlyd +
ie +	klnahfp -	qđmyuxx +
gnxinv -	iawyd +	jpzzmonczu -
ie -	hvvdfdchwhhmdy -	qđmyuxx +
mfieqqxwfc +	xbrqvhcjfhrtđphsmak +	mbblkedcfkvsbmtn +
u -	mtwrmqitaxr -	qđmyuxx +
fmzbyglwsuhgqlđg -	iawyd +	hvkjglmmđ -
pdggkxdzqlıuzzhr -	klnahfp -	34
jfmo -	lwpxmofyopah -	kcştrgyuqnycmfrwbr -
vzeucaxayjubıysqu -	rb +	sknea -
zkjntlyjftbsjsuyym +	xbrqvhcjfhrtđphsmak +	uk +
ohxn -	tbumvf1s +	htuadbh +
14	et +	vmsuwj1ghiadxıttg -
xsbiqlqraadcvlp -	đbıpjıuq -	fjlvxzcvımmknte -
eljnekdđtfznzd -	oroyrudvhx +	sncyvkevdaa +
eljnekdđtfznzd -	zx -	ggubwgk -
eljnekdđtfznzd -	ewerxrfhbtmdmuntput -	kcştrgyuqnycmfrwbr -
lypmpzwhrrb +	hzdxfean -	fjlvxzcvımmknte -
z +	axzgkhljıtwşkrđpnx -	vmsuwj1ghiadxıttg +
vcxldpbwnnl +	ybvizoqqc +	uk -
etjvşmlepgldf -	xlrhlmgrxalp -	ocvdndguad +
z -	đbıpjıuq -	ghek -
eljnekdđtfznzd +	xbrqvhcjfhrtđphsmak +	ocvdndguad -
vcxldpbwnnl +	et -	sknea -
eljnekdđtfznzd -	xlrhlmgrxalp +	vs1sy1lbzamx +
fgybeuqretbzn -	jyknalmuıkd -	ghek -
mx +	axzgkhljıtwşkrđpnx +	lbeh -
2	tbumvf1s -	pn -
szhqggrhgggcmhcs +	13	vsofgjfcı -

lbeh -
htuadbh +
niopxgu +
bgacgicjetkpiis +
pn +
n -
dxzdcznmtj -
bgacgicjetkpiis -
fjlvxzcvimknte -
kiynobwrnmtidv -
bgacgicjetkpiis +
vmsuwjlgghiadxttg -
sncyvkevdaa -
6
lhcnehbcbn +
cstyigr +
rgemqsvtontefz -
cstyigr -
cstyigr +
rgemqsvtontefz -
41
tfdrimdl +
vfnklkqiier +
phsiksatkmbvejaccr -
qintrqddsqgljqmdqw -
aknsmm +
ojjqmazbprosswpmfl +
pthonh +
vgbmgn +
yfopbynnwtiq -
vfnklkqiier -

gqqeudw -
gmgnjakxzhddhh -
pthonh -
gsrcwa -
kbpvkxmrsosxbszhhhw +
ojjqmazbprosswpmfl -
prrx -
bsmjefutqlhqhp -
rfewhmzwxibmg +
qfwl -
ojjqmazbprosswpmfl -
bsmjefutqlhqhp -
tyworjmnxajaph -
fjusojtikjqqry +
udgnkuxobrgv -
vuwebjyivjaoratqssd +
hgvxsanmbbmdjxwgyp +
rfewhmzwxibmg -
qfwl +
uyvburlzwozfiofkwx +
qfwl +
yfopbynnwtiq +
aknsmm -
udgnkuxobrgv +
j -
cheluxsh +
j -
cheluxsh -
amdridjayurvs +
qintrqddsqgljqmdqw +
tzlxxencfod -

30
xdsfdat +
hctvkkvtikqsvjoptk -
pmnlvvhjyur -
mxhloxlsp +
qhjakkfmcz +
nozrghdjkgzmxhhcx -
hmjicxumeu +
pmnlvvhjyur +
sfmxh +
sefrjhwh -
obrxbp +
qhjakkfmcz -
xqfw +
hmjicxumeu -
lwoyvmhyfozc -
pmnlvvhjyur +
xqfw +
wb -
xupju +
mxhloxlsp +
oanioskohen -
xupju -
mxhloxlsp -
sfmxh -
hmjicxumeu +
oanioskohen +
nozrghdjkgzmxhhcx +
lwoyvmhyfozc +
oanioskohen +
mxhloxlsp -

Judges Output:

-5
-2
1
-4
0
1
-9
1
-3
1

9. Potato

Judges Input:

```
10
3 4
31 75
99 99
73 0
73 1
73 2
217 532
999 59
1000 1000
1 1
```

Judges Output:

```
21
74685
33863
1
0
73
34747
97800
41073
0
```

10. Prime Factors

Judges Input:

```
10
2 6
123 456
593215 853212
10 10
1023 12359
57321 57322
953 87213
9 19
179 971
51 89021
```

Judges Output:

```
19
30889
558083
7
5033338
28876
2571002
113
128963
6912226
```

11. Risk

Judges Input:

```
8
1234
8 8
4484
3 5
10
1 1
0
0 0
12
8 0
5466757
0 3
1379033412414
52 23
14355453
5000 5000
```

Judges Output:

```
3 0
0 5
1 0
0 0
8 0
0 3
31 0
534 0
```

12. Tree Product

Judges Input:

```
6
1
-518
2
203 -322 259
3
-29 -457 826 -778 -126 -191 -803
4
-110 484 -981 -482 -425 -646 916 774 -847 -373 426 177 685 743 941
5
196 -67 206 -491 -446 -50 832 744 -629 -458 670 -101 536 732 -712 415 -385
650 782 832 -557 759 885 221 -460 889 750 138 -736 -987 -79
6
487 864 601 286 -504 -448 857 -516 784 -804 -999 -514 848 919 -658 118 812 -
793 704 -730 9 -714 -759 -810 382 -544 -753 535 688 344 -510 339 467 74 754 -
333 589 -694 -419 471 -856 254 54 176 -88 331 340 335 -650 -34 74 -451 -673
190 392 -707 589 986 -625 769 -773 -80 -925
```

Judges Output:

```
-518
52577
4575214
-12338645220
23607161131008
156374206775669728
```