

**A+ Computer Science**

**Computer Science Competition**

**Judges Packet**

**Problem #1**  
**60 Points**

**Clothes**

**Test Input File**

```
5
6
mario logo (shirt)
red (pants)
hawaiian (shirt)
baggy (pants)
white (socks)
fancy (socks)
10
khaki (pants)
blueish green (shirt)
apple (shirt)
bright (socks)
blue (pants)
red (pants)
purple (socks)
ugly (shirt)
stupid (socks)
big red (pants)
10
khaki (socks)
blueish green (shirt)
apple (shirt)
bright (pants)
blue (pants)
red (pants)
purple (socks)
ugly (pants)
stupid (socks)
big red (pants)
12
one (shirt)
two (shirt)
three (pants)
four (pants)
five (shirt)
six (socks)
seven (pants)
eight (shirt)
nine (socks)
ten (socks)
eleven (shirt)
twelve (pants)
7
seven (pants)
one (shirt)
two (shirt)
six (socks)
three (shirt)
```

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four (shirt)  
five (shirt)

### **Test Output To Screen**

hawaiian, baggy, fancy  
mario logo, red , white

ugly, big red, stupid  
apple, red, purple  
blueish green, blue, bright

apple, big red, stupid  
blueish green, ugly, purple

eleven, twelve, ten  
eight, seven, nine  
five, four, six

five, seven, six

**Problem #2**  
**60 Points**

**Friends**

**Test Input File**

```
5
2
bill 2
greg 5
4
jim 5
phil 8
paul 7
rob 2
8
one 1
two 2
three 3
four 4
five 5
six 6
seven 7
eight 8
7
apple 43
bear 5
cable 3
dice 7
egg 34
frog 1
grass 12
1
bill 5
```

**Test Output To Screen**

```
greg, bill
phil, paul, jim, rob
eight, seven, six, five, four, three, two, one
apple, egg, grass, dice, bear, cable, frog
bill
```

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## **Problem #3 60 Points**

### **Periods**

#### **Test Input File**

```
6
You kicked my dog
No I did not.
It was the kid that did
a
a.
not much to test.
```

#### **Test Output To Screen**

```
You kicked my dog.
No I did not.
It was the kid that did.
a.
a.
not much to test.
```

**Problem #4**  
**60 Points**

**Population**

**Test Input File**

```
6
12 14
530 200
4786 3543
234 234
567 2434
96 2
```

**Test Output To Screen**

```
13
552
5165
259
828
96
```

**Problem #5**  
**60 Points**

**Presidents**

**Test Input File**

7

Franklin Grant Jackson

Hamilton Lincoln Washington

Washington Washington Washington Franklin Jackson

Hamilton Lincoln Washington Lincoln Franklin

Hamilton Jackson

Franklin Jackson Franklin Jackson Franklin Jackson

Washington Jackson Jackson

**Test Output To Screen**

\$170

\$16

\$123

\$121

\$30

\$360

\$41

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## Problem #6

60 Points

### ReWord-Wrap

#### Test Input File

```
5
40
4
Chinua Achebe was born on November 16, 1930 into the Igbo
African ethnic group in southern Nigeria.  He was raised in a
Christian family, but he was always fascinated by the
traditional African religion and culture.
35
4
Achebe uses the short story of a hard working man
in a war torn area with a bright outlook on life to act
as a model for other Africans affected by
the Nigerian Civil War.
18
4
Achebe uses the short story of a hard working man
in a war torn area with a bright outlook on life to act
as a model for other Africans affected by
the Nigerian Civil War.
1
1
a b c d e f g h i j k l m n o p q r s t u v w x y z
14
3
African ethnic group in southern Nigeria.  He was raised in a
Christian family, but he was always fascinated by the
traditional African religion and culture.
```

#### Test Output To Screen

```
Chinua Achebe was born on November 16,
1930 into the Igbo African ethnic group
in southern Nigeria.  He was raised in a
Christian family, but he was always
fascinated by the traditional African
religion and culture.
```

```
Achebe uses the short story of a
hard working man in a war torn area
with a bright outlook on life to
act as a model for other Africans
affected by the Nigerian Civil War.
```

```
Achebe uses the
short story of a
hard working man
in a war torn area
with a bright
outlook on life to
act as a model for
```



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other Africans  
affected by the  
Nigerian Civil  
War.

a  
b  
c  
d  
e  
f  
g  
h  
i  
j  
k  
l  
m  
n  
o  
p  
q  
r  
s  
t  
u  
v  
w  
x  
y  
z

African ethnic  
group in  
southern  
Nigeria. He  
was raised in  
a Christian  
family, but he  
was always  
fascinated by  
the  
traditional  
African  
religion and  
culture.

**Problem #7**  
**60 Points**

**Seasons**

**Test Input File**

```
7
1000
January 1, 1999
365
August 12, 2034
712
December 31, 1991
234
October 13, 2000
1
June 13, 2009
9456
April 30, 1952
45
May 8, 1990
```

**Test Output To Screen**

```
September 26, 1999
February 17, 2035
July 09, 1992
February 21, 2001
June 13, 2009
October 27, 1960
May 17, 1990
```

**Problem #8**  
**60 Points**

**Semiperfect**

**Test Input File**

9  
3  
6  
32  
228  
234  
186  
235  
672  
674

**Test Output To Screen**

NOT Semiperfect  
Semiperfect  
NOT Semiperfect  
Semiperfect  
Semiperfect  
Semiperfect  
NOT Semiperfect  
Semiperfect  
NOT Semiperfect

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## Problem #9 60 Points

### Spaces

#### Test Input File

```
27
sad
data
apon
sentence
him
was
because
darby
of
time
lived
everybody
alone
is
once
judges
whatever
a
problem
he
i
and
afraid
apple
an
there
la
onceaponatimetherewasadarbyandhelivedalonebecauseeverybodywasafraidofhimhewas
sadandisentenceisproblemjudgesdatalalaandwhateveranapple
```

#### Test Output To Screen

```
4 9 11 16 22 26 28 34 38 41 47 53 61 71 75 82 85 89 92 96 100 104 106 115 118
126 133 138 141 144 148 157 160
```

**Problem #10**  
**60 Points**

**Stacker**

**Test Input File**

```
5
5 5
.....
#####
...#.
...#.
#...#.
1 3 2 1 4
7 7
.....
....###
.#...##
.#...#.
###...#.
..#...#.
..#...#.
1 2 2 2 2 3 3 4 5
5 5
.####
.#...
####.
...#.
#####
6 4 3 3 1 2 3 4 4 4 1
8 8
....##..
....#...
....#...
#####...
.#...#...
.#...####
.#...#.#.
.#...#.#.
7 4 3 1 3 2 2 3
1 1
#
1 1 1
```

**Test Output To Screen**

```
Not Possible.
6
6
7
1
```

### Problem #11

60 Points

## Star

## Test Output To Screen

**Problem #12**  
**60 Points**

**Trail**

**Test Input File**

```
6
7 7
..W....
..W....
..W....
..W..FF
..W.R..
..W..R.
.....RS
35
5 10
....RF....
....RF....
...R.FF..S
..R..FF...
...R.FF...
50
10 10
.R.....
.R.....
.RWWWWWWWW
.R.....
.RFR.....
.R.R.....
...R....RR
...R....RS
.WWWWWWFFF
.WWWWR...W
72
1 3
.WS
8
7 7
.WWWWWW
.WWFFFF
...FFFF
.WWFFFF
.RRRRRF
.RWWWWF
.RS.WFF
61
5 5
.F...
.RFFF
.RFWW
.RFWS
.RFWW
30
```

**Test Output To Screen**

The Package arrived with 4 day(s) to spare.  
The Package was not delivered in time.  
The Package arrived with 15 day(s) to spare.  
The Package arrived with 0 day(s) to spare.  
The Package was not delivered in time.  
The Package arrived with 3 day(s) to spare.