

FLORIDA HIGH SCHOOLS COMPUTING COMPETITION '91  
JUDGING CRITERIA

## 1.1 RUN PROGRAM:

OUTPUT: (After the screen is cleared, the following appears):

```
COMPUTER CONTEST 1991
O          9
M          9
P          1
U
T          T
E          S
R          E
          T
C          N
O          O
N          C
T
E          R
S          E
T          T
          U
          P
          M
          O
1991 TSETNOC RETUPMOC
```

## 1.2 RUN PROGRAM:

OUTPUT: (2 random integers between -9 and 9, inclusive, are displayed, along with their sum. Output must be displayed in the form: X + Y = ZZ, where X and Y are random). Run the program four times. Make sure X and Y are random and the sum is correct. At least one space must appear between numbers and symbols.

Examples:

```
3 + -9 = -6 or
-5 + -2 = -7 or
-1 + 4 = 3 or
2 + 0 = 2
```

1.3 INPUT: Enter team name: **KING HS**  
Enter # of 1 point programs: 9  
Enter # of 2 point programs: 5  
Enter # of 3 point programs: 3

OUTPUT: **KING HS SCORED 28 POINTS**

INPUT: Enter team name: **PLANTATION HS**  
Enter # of 1 point programs: 10  
Enter # of 2 point programs: 7  
Enter # of 3 point programs: 4

OUTPUT: **PLANTATION HS SCORED 36 POINTS**

1.4 RUN PROGRAM:

OUTPUT:    **A B C D E F G H I J K L M N O P Q R S T**  
          1  
          2  
          3  
          4  
          5  
          6  
          7  
          8  
          9  
         10  
         11  
         12  
         13  
         14  
         15  
         16  
         17  
         18  
         19  
         20

1.5 INPUT: Enter number of students: 200

OUTPUT: **50 TEAMS**

INPUT: Enter number of students: 172

OUTPUT: **43 TEAMS**

1.6 INPUT: Enter word: **FLORIDA**  
Enter letter: **D**

OUTPUT:           **F**  
                  **L**  
                  **O**  
                  **R**  
                  **I**  
          **FLORIDA**  
                  **A**

INPUT: Enter word: **BRANCH**  
Enter letter: **B**

OUTPUT: **BRANCH**  
          **R**  
          **A**  
          **N**  
          **C**  
          **H**

1.7 INPUT: Enter account key: **0020071234002345678**

OUTPUT: **ORGANIZATION 002**  
          **BRANCH 007**  
          **DEALER 1234**  
          **CLASS 002**  
          **UNIT 345678**

INPUT: Enter account key: **0110220330440550660**

OUTPUT: **ORGANIZATION 011**  
          **BRANCH 022**  
          **DEALER 0330**  
          **CLASS 440**  
          **UNIT 550660**

1.8 INPUT: Enter line: **JOB** INPUT: Enter line: **JOB**  
 Enter line: **EXEC** Enter line: **EXEC**  
 Enter line: **DD** Enter line: **DD**  
 Enter line: **EXEC** Enter line: **EXEC**  
 Enter line: **DD** Enter line: **DD**  
 Enter line: **EXEC** Enter line: **DD**  
 Enter line: **DD** Enter line: **DD**  
 Enter line: **DD** Enter line: **DD**  
 Enter line: **EXEC** Enter line: **//**  
 Enter line: **DD** OUTPUT: **2 JOB STEPS**  
 Enter line: **//**

OUTPUT: **4 JOB STEPS**

1.9 INPUT: Enter sentence:  
**THE MAN-EATING TIGER MANGLED THE WOMAN'S PURSE.**

OUTPUT: **THE PERSON-EATING TIGER PERSONGLED THE WOPERSON'S PURSE.**

INPUT: Enter sentence:  
**MANY HUMAN ACTIVITIES EMANATE FROM MENTAL CONCENTRATION.**

OUTPUT: (the following sentence must extend on one line):  
**PERSONY HUPERSON ACTIVITIES EPERSONATE FROM PERSONSTAL  
 CONCENTRATION.**

1.10 INPUT: Enter team name: **MIAMI HS**  
 Enter points, time, penalties: **41, 142, 7**  
 Enter team name: **CORAL GABLES**  
 Enter points, time, penalties: **41, 234, 1**

OUTPUT: **MIAMI HS WINS**

INPUT: Enter team name: **TARAVELLA**  
 Enter points, time, penalties: **32, 210, 5**  
 Enter team name: **CORAL SPRINGS**  
 Enter points, time, penalties: **33, 234, 1**

OUTPUT: **CORAL SPRINGS WINS**

INPUT: Enter team name: **KING HS**  
 Enter points, time, penalties: **33, 210, 5**  
 Enter team name: **CORAL SPRINGS**  
 Enter points, time, penalties: **33, 234, 1**

OUTPUT: **KING HS WINS**

2.1 INPUT: Enter N: 45

OUTPUT:

```

      01
     02 03
    04 05 06
   07 08 09 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 41 42 43 44 45
    
```

INPUT: Enter N: 10

OUTPUT:

```

      01
     02 03
    04 05 06
   07 08 09 10
    
```

2.2	INPUT: Enter #: 2.2345	OUTPUT: 2.2345
	Enter #: 4.567	4.567
	Enter #: 234.56	234.56
	Enter #: 7891.027	7891.027
	Enter #: 123.456	123.456
		-----
		8255.8445

INPUT: Enter #: 1234.5	OUTPUT: 1234.5
Enter #: 123.45	123.45
Enter #: 12.345	12.345
Enter #: 1.23	1.23
Enter #: 78.901	78.901
	-----
	1450.4260

2.3 INPUT: Enter statement: **IF A >= B OR C > D**

OUTPUT: **IF A IS NOT LESS THAN B OR C IS GREATER THAN D**

INPUT: Enter statement: **IF C >< B AND A = D**

OUTPUT: **IF C IS NOT EQUAL TO B AND A IS EQUAL TO D**

2.4 INPUT: Enter N: 6

Enter team: **PAR FOUR**  
Enter wins, losses: 25, 25  
Enter team: **STRIKES**  
Enter wins, losses: 35, 15  
Enter team: **WINNERS**  
Enter wins, losses: 35, 15  
Enter team: **RUNNERS**  
Enter wins, losses: 25, 25  
Enter team: **FORCE**  
Enter wins, losses: 15, 35  
Enter team: **HIGH ROLLERS**  
Enter wins, losses: 35, 15

OUTPUT: 1 **HIGH ROLLERS** 35 , 15  
1 **STRIKES** 35 , 15  
1 **WINNERS** 35 , 15  
  
4 **PAR FOUR** 25 , 25  
4 **RUNNERS** 25 , 25  
  
6 **FORCE** 15 , 35

## 2.5 RUN PROGRAM:

OUTPUT: **GUESS 1: 64**  
INPUT: Enter H, L, or R: **L**  
OUTPUT: **GUESS 2: 32**  
INPUT: Enter H, L, or R: **L**  
OUTPUT: **GUESS 3: 16**  
INPUT: Enter H, L, or R: **L**  
OUTPUT: **GUESS 4: 8**  
INPUT: Enter H, L, or R: **L**  
OUTPUT: **GUESS 5: 4**  
INPUT: Enter H, L, or R: **H**  
OUTPUT: **GUESS 6: 6**  
INPUT: Enter H, L, or R: **H**  
OUTPUT: **GUESS 7: 7**  
INPUT: Enter H, L, or R: **R**  
OUTPUT: (program terminates)

## RUN PROGRAM:

OUTPUT: **GUESS 1: 64**  
INPUT: Enter H, L, or R: **L**  
OUTPUT: **GUESS 2: 32**  
INPUT: Enter H, L, or R: **H**  
OUTPUT: **GUESS 3: 48**  
INPUT: Enter H, L, or R: **H**  
OUTPUT: **GUESS 4: 56**  
INPUT: Enter H, L, or R: **L**  
OUTPUT: **GUESS 5: 52**  
INPUT: Enter H, L, or R: **L**  
OUTPUT: **GUESS 6: 50**  
INPUT: Enter H, L, or R: **L**  
OUTPUT: **GUESS 7: 49**  
INPUT: Enter H, L, or R: **R**  
OUTPUT: (program terminates)

## RUN PROGRAM:

OUTPUT: **GUESS 1: 64**  
INPUT: Enter H, L, or R: **H**  
OUTPUT: **GUESS 2: 96**  
INPUT: Enter H, L, or R: **H**  
OUTPUT: **GUESS 3: 112**  
INPUT: Enter H, L, or R: **L**  
OUTPUT: **GUESS 4: 104**  
INPUT: Enter H, L, or R: **R**  
OUTPUT: (program terminates)

2.6 INPUT: Enter text: EACH SUCCEEDING LINE CONTAINS THE LEAST AMOUNT OF WORDS THAT CAUSES IT TO EXCEED THE PREVIOUS LINE BY AT LEAST 2 CHARACTERS.

OUTPUT:                               EACH  
                                      SUCCEEDING  
                                      LINE CONTAINS  
                                      THE LEAST AMOUNT  
                                      OF WORDS THAT CAUSES  
                                      IT TO EXCEED THE PREVIOUS  
                                      LINE BY AT LEAST 2 CHARACTERS.

INPUT: Enter text:  
      EACH LINE IS TO BE CENTERED WITH RESPECT TO COLUMN 20.

OUTPUT:                               EACH  
                                      LINE IS  
                                      TO BE CENTERED  
                                      WITH RESPECT TO COLUMN  
                                      20.

2.7 INPUT: Enter length, width: 10, 5

OUTPUT: (the following appears in the center of the screen):

```
*****  
*           *  
*           *  
*           *  
*****
```

INPUT: Enter length, width: 15, 6

OUTPUT: (the following appears in the center of the screen):

```
*****  
*           *  
*           *  
*           *  
*           *  
*****
```



2.8 INPUT: Enter title: **PROBLEM DESC.**

Enter # for 1980: **3982**  
 Enter # for 1981: **3910**  
 Enter # for 1982: **7599**  
 Enter # for 1983: **7723**  
 Enter # for 1984: **14485**  
 Enter # for 1985: **20144**  
 Enter # for 1986: **19762**  
 Enter # for 1987: **21133**  
 Enter # for 1988: **26066**  
 Enter # for 1989: **26932**  
 Enter # for 1990: **32767**  
 Enter # for 1991: **29726**

OUTPUT:           **PROBLEM DESC.**           **ASTERISK = 1638.35**

```

20                                     *
19                                     *
18                                     * *
17                                     * *
16                                     * * *
15                                     * * * *
14                                     * * * *
13                                     * * * *
12                                     * * * *
11                                     * * * * *
10                                     * * * * *
9                                       * * * * *
8                                       * * * * *
7                                       * * * * *
6                                       * * * * *
5                                       * * * * *
4                                       * * * * *
3                                       * * * * *
2 * * * * * * * * * * * * * * * *
1 * * * * * * * * * * * * * * * *
-----
      80 81 82 83 84 85 86 87 88 89 90 91
  
```

2.9 INPUT: Enter # of entries in yesterday's file: 4  
Enter ID: AB12  
Enter item: D  
Enter ID: CH39  
Enter item: R  
Enter ID: CH40  
Enter item: D  
Enter ID: CR11  
Enter item: A

INPUT: Enter # of entries in today's file: 5  
Enter ID: AB12  
Enter item: C  
Enter ID: CH39  
Enter item: R  
Enter ID: CH41  
Enter item: D  
Enter ID: CR11  
Enter item: B  
Enter ID: DE12  
Enter item: F

OUTPUT: ADDED  
CR41 D  
DE12 F

CHANGED  
AB12 D C  
CR11 A B

DELETED  
CH40 D

TOTAL ADDED = 2  
TOTAL CHANGED = 2  
TOTAL DELETED = 1

2.10 INPUT: Enter year: 1980

OUTPUT: FHS80-1.PRB  
FHS80-2.PRB  
FHS80-3.PRB  
FHS80-1.JDG  
FHS80-2.JDG  
FHS80-3.JDG  
FHS80-1.PG1  
FHS80-2.PG1  
FHS80-3.PG1  
FHS80-1.PG2  
FHS80-2.PG2  
FHS80-3.PG2  
ONE1T80.BAS  
ONE2T80.BAS  
ONE3T80.BAS  
ONE4T80.BAS  
ONE5T80.BAS  
ONE6T80.BAS  
ONE7T80.BAS  
ONE8T80.BAS

INPUT: (press any key)

OUTPUT: ONE9T80.BAS  
ONE10T80.BAS  
TWO1T80.BAS  
TWO2T80.BAS  
TWO3T80.BAS  
TWO4T80.BAS  
TWO5T80.BAS  
TWO6T80.BAS  
TWO7T80.BAS  
TWO8T80.BAS  
TWO9T80.BAS  
TWO10T80.BAS  
THR1T80.BAS  
THR2T80.BAS  
THR3T80.BAS  
THR4T80.BAS  
THR5T80.BAS  
THR6T80.BAS  
THR7T80.BAS  
THR8T80.BAS

INPUT: (press any key)

OUTPUT: (continued on next page)

OUTPUT: THR9T80.BAS  
THR10T80.BAS  
THR11T80.BAS  
THR12T80.BAS  
ONE1T80.PAS  
ONE2T80.PAS  
ONE3T80.PAS  
ONE4T80.PAS  
ONE5T80.PAS  
ONE6T80.PAS  
ONE7T80.PAS  
ONE8T80.PAS  
ONE9T80.PAS  
ONE10T80.PAS  
TWO1T80.PAS  
TWO2T80.PAS  
TWO3T80.PAS  
TWO4T80.PAS  
TWO5T80.PAS  
TWO6T80.PAS  
INPUT: (press any key)  
OUTPUT: TWO7T80.PAS  
TWO8T80.PAS  
TWO9T80.PAS  
TWO10T80.PAS  
THR1T80.PAS  
THR2T80.PAS  
THR3T80.PAS  
THR4T80.PAS  
THR5T80.PAS  
THR6T80.PAS  
THR7T80.PAS  
THR8T80.PAS  
THR9T80.PAS  
THR10T80.PAS  
THR11T80.PAS  
THR12T80.PAS

3.1 RUN PROGRAM: (twice)

OUTPUT: (Each run is random, but should be SIMILAR to the following baseball game results.

Check that the score is correctly added.

99% of the time this program will have:

- each score in an inning less than 10,
- total # of strikes between 211 and 280,
- total # of balls between 290 and 470,
- total # of walks between 69 and 111.)

	1	2	3	4	5	6	7	8	9	SCORE		
TEAM A	!	2	3	0	0	0	1	0	0	3	!	9
TEAM B	!	2	0	1	2	3	0	0	0	2	!	10

TOTAL # OF STRIKES: 247  
 TOTAL # OF BALLS: 403  
 TOTAL # OF WALKS: 92  
 TOTAL # OF STRIKE OUTS: 54

	1	2	3	4	5	6	7	8	9	SCORE		
TEAM A	!	0	2	0	1	0	2	0	0	1	!	6
TEAM B	!	0	0	0	0	0	0	0	1	0	!	1

TOTAL # OF STRIKES: 239  
 TOTAL # OF BALLS: 337  
 TOTAL # OF WALKS: 76  
 TOTAL # OF STRIKE OUTS: 54

3.2 INPUT: Enter A, X: 2, 345  
 Enter B, Y: 9, 876  
 Enter C, Z: 11, 234

OUTPUT: 4

INPUT: Enter A, X: 6, 123  
 Enter B, Y: 8, 456  
 Enter C, Z: 14, 321

OUTPUT: 6

3.3 INPUT: Enter X, Y: 7, 89

OUTPUT: (resulting digits should appear on one line on screen)  
16357825134744349084771609590778780110077149747549  
96979744938053160034289607

INPUT: Enter X, Y: 37, 73

OUTPUT: (resulting digits will wrap around on the screen)  
30111047009373532386032375415313753434442016552707  
88531783697471044984243073342239158015955057079636  
461132367224197

3.4 INPUT: Enter name: DON A CHANG  
Enter name: FRED B COOK  
Enter name: DON RING  
Enter name: FRED B CORN  
Enter name: DAVID ALFRED CHANG  
Enter name: END

OUTPUT: DON A CHANG SDD2C1  
FRED B COOK SDF1C1  
DON RING SDDXR1  
FRED B CORN SDF2C1  
DAVID ALFRED CHANG SDD1C1

INPUT: Enter name: DOUG E WOOLLEY  
Enter name: DAVE E WEAVER  
Enter name: BOB R JONES  
Enter name: PAUL SIMON SMITH  
Enter name: DON ENGLAND WANG  
Enter name: END

OUTPUT: DOUG E WOOLLEY SDD3W1  
DAVE E WEAVER SDD2W1  
BOB R JONES SDBRJ1  
PAUL SIMON SMITH SDPSS1  
DON ENGLAND WANG SDD1W1



3.6 INPUT: Enter expression:  $((5-4)-9+3)-6+1)+2$   
 OUTPUT: -8

INPUT: Enter expression:  $7-(8+9)+(6+4)-((1-9)+(2-8))$   
 OUTPUT: 14

3.7 INPUT: Enter holiday MM, DD: 7, 4  
 Enter holiday MM, DD: 9, 2  
 Enter holiday MM, DD: 9, 30  
 Enter holiday MM, DD: 10, 14  
 Enter holiday MM, DD: 11, 28  
 Enter holiday MM, DD: 12, 25  
 Enter holiday MM, DD: 12, 31  
 Enter holiday MM, DD: 0, 0

INPUT: Enter month #: 9

OUTPUT: **FRIDAY SEPTEMBER 13**  
**FRIDAY SEPTEMBER 27**

INPUT: Enter month #: 12

OUTPUT: **FRIDAY DECEMBER 13**  
**MONDAY DECEMBER 30**

INPUT: Enter month #: 8

OUTPUT: **THURSDAY AUGUST 15**  
**FRIDAY AUGUST 30**

INPUT: Enter month #: 0

OUTPUT: (program terminates)

3.8 INPUT: Enter digit: 1  
 Enter row, col: 2, 3

OUTPUT: 4 3 8  
 9 5 1  
 2 7 6  
  
 2 7 6  
 9 5 1  
 4 3 8

(Note: The two magic squares may appear in either order.)

INPUT: Enter digit: 4  
 Enter row, col: 1, 3

OUTPUT: 2 9 4  
 7 5 3  
 6 1 8  
  
 8 3 4  
 1 5 9  
 6 7 2

INPUT: Enter digit: 1  
 Enter row, col: 3, 3

OUTPUT: **NO SOLUTION**





3.10 INPUT: Enter numeral: **3BCDEF0123456789ABCDEF0123456789**  
Enter base M: **16**  
Enter base N: **4**

OUTPUT:  
**323303132330001020310111213202122233031323300010203101112132021**

INPUT: Enter numeral: **32101230321012303210**  
Enter base M: **4**  
Enter base N: **8**

OUTPUT: **16215471066344**

INPUT: Enter numeral: **10110011100011110000111110000010**  
Enter base M: **2**  
Enter base N: **8**

OUTPUT: **26343607602**

INPUT: Enter numeral: **765**  
Enter base M: **8**  
Enter base N: **16**

OUTPUT: **1F5**