

FLORIDA HIGH SCHOOLS COMPUTING COMPETITION '84
JUDGING CRITERIA

1.1 RUN PROGRAM: OUTPUT:

CELCIUS	FAHRENHEIT
50	122
75	167
100	212
125	257
150	302
175	347
200	392

1.2 INPUT: bedtime: 10,45,32
wake up: 7,34,47

OUTPUT: 31755 SECONDS

1.3 RUN PROGRAM: OUTPUT:

T	H	V
0	0	0
.5	60	56
1	120	104
1.5	180	144
2	240	176
2.5	300	200
3	360	216
3.5	420	224
4	480	224
4.5	540	216
5	600	200
5.5	660	176
6	720	144
6.5	780	104
7	840	56
7.5	900	0

1.4 RUN PROGRAM: OUTPUT:

NUMBER OF YEARS	POPULATION	FOOD SUPPLY FOR
0	10	100
1	20	140
2	40	180
3	80	220
4	160	260
5	320	300

1.5 INPUT: \$500, 9% INPUT: \$1000, 7%
OUTPUT: 9 YEARS OUTPUT: 11 YEARS

1.6 INPUT: JANE
FRANK
ADAM
ARRON
SAMANTHA

OUTPUT: NAME CLOSEST TO BEGINNING: ADAM
NAME CLOSEST TO END: SAMANTHA

1.7 INPUT: Have program run 4 times with different values
of N entered (for example, 100, 50, 70, 20)

OUTPUT: For each run the longest run of heads could be
any number between 3 and 10

1.8 RUN PROGRAM:

A run of the program should contain the numbers from 1 to
100 with the following replacements:

7-ZAPZAP	71-ZAP	87-ZAP
17-ZAP	72-ZAP	97-ZAP
27-ZAP	73-ZAP	
37-ZAP	74-ZAP	
47-ZAP	75-ZAP	
57-ZAP	76-ZAP	
67-ZAP	77-ZAPZAP	
70-ZAPZAP	78-ZAP	
	79-ZAP	

1.9 INPUT: HOORAY FOR HOLLYWOOD

OUTPUT: 3

1.10 INPUT: Answer "7 times" questions allowing for all three
options: 1-answer correctly,
2-answer first try incorrectly, second try correctly,
3-answer both tries incorrectly

OUTPUT: If a question is answered correctly, the next
question should be asked; if not, the question should be
repeated. However, if the same question is answered
incorrectly twice, the correct answer should be printed
and then the next question should be asked.

2.1 INPUT: HOORAY FOR COMPUTERS

OUTPUT: Contains 7 vowels

2.2 INPUT: Have them place in the following fractions:

2,3, 65,68, 1,2, 3,4, 10,81 0,0

OUTPUT: The fractions should be listed in the following order:

10/81
1/2
2/3
3/4
65/68

2.3 RUN PROGRAM:

OUTPUT: 153, 370, 371, 407

2.4 INPUT: Have them input 14, for 14 rows

OUTPUT:

1
232
34543
4567654
567898765
67890109876
7890123210987
890123454321098
90123456765432109
0123456789876543210
123456789010987654321
23456789012321098765432
3456789012345432109876543
456789012345676543210987654

2.5 RUN PROGRAM:

OUTPUT: Have the program run twice. Each time the format should look like the below and the problem set should be different.

MULTIPLICATION DRILL

1. 53 X 4 ----	4. 12 X 3 ----
2. 36 X 1 ----	5. 94 X 8 ----
3. 72 X 6 ----	6. 39 X 5 ----

2.6 INPUT: The program should be run twice each for the following values of N; **1,5, and 90.**

OUTPUT: The output should be reasonable given the nature of the program. (SEE DESCRIPTION)
 When N=1, only 1 asterisk will appear.
 When N=5, either 5 or 4 asterisks show.
 When N=90, either 25 or 24 asterisks show.

2.7 INPUT: **GOLF; NO SIR, PREFER PRISON-FLOG**

OUTPUT: **A PALINDROME**

INPUT: **O WHAT A HAPPY LIFE**

OUTPUT: **NOT A PALINDROME**

2.8 INPUT: **HOW ARE YOU?**

OUTPUT: LETTER	FREQUENCY	PERCENT
A	1	11
E	1	11
H	1	11
O	2	22
R	1	11
U	1	11
W	1	11
Y	1	11
TOTAL	9	

2.9 INPUT: **THE VIOLETS WERE BLUE**

OUTPUT: **VIOLETS**

2.10 RUN PROGRAM:

Run the program for about 10 turns (choose R, S, or P). Look to see if the winner for each turn follows the rules of the game. Choose Q to quit. The summary of the results should be consistent with the results of the individual games. (SEE DESCRIPTION)

3.1 RUN PROGRAM:

Run the program several times. The trail of asterisks will normally be short. When a straight trail is produced, count the number of asterisks, this is the maximum distance. Don't forget that it is possible for the asterisk to move back toward the start before stopping. Under this condition the maximum distance is greater than the final distance.

3.2 INPUT: **LLLLLLFFFFFFGGGGJJJKB**

OUTPUT: **EEEEETTTTAAAAOOIIN**

3.3 INPUT: **54321**

OUTPUT: **54321**
120
2

3.4 INPUT: **80**

OUTPUT: **3 5**
5 7
11 13
17 19
29 31
41 43
59 61
71 73

3.5 INPUT: **7, 4**

OUTPUT: **ABCD ABCE ABCF ABCG ABDE ABDF ABDG ABEF ABEG ABFG ACDE**
ACDF ACDG ACEF ACEG ACFG ADEF ADEG ADFG ACFG BCDE BCDF
BCDG BCEF BCEG BCFG BCEF BDEG BDFG BEFG CDEF CDEG CDFG
CEFG DEFG

THERE ARE 35 SUBSETS

Different computers will produce different formats, but what counts are the correct combinations and number.

3.6 INPUT: Give the student the following data lines to append to their program:

```
DATA "THE QUICK BROWN FOX JUMPED OVER THE LAZY DOG."
DATA "THIS IS AN EXAMPLE OF HOW"
DATA "TO TEST YOUR HISTOGRAM PROGRAM. YOU"
DATA "CAN USE THIS EXAMPLE."
DATA "*END*"
```

OUTPUT:

```

                *
            *      *
        *          *      *
    *  *          *      *
*   *  *        *  *   ***
*   *  **      *  *  ****
*   *  **      *  *  ****
*   *  ***    *****  ****  **
*  *  *****  *****  ****  ***
*****
ABCDEF_GHIJKLMNOPQRSTUVWXYZ
```

3.7 INPUT: 45, 56

OUTPUT: 45/56 = .803(571428)

INPUT: 40, 60

OUTPUT: 40/60 = .(6)

3.8 INPUT: 100

OUTPUT: **THERE ARE 14 ROUND NUMBERS LESS THAN OR EQUAL TO 100**

3.9 INPUT: Give the student the following DATA lines:

```
DATA "WE ARE PROUD TO OFFER 4 NEW RECORDS"
DATA "AT A COST OF $1.95 EACH."
DATA "YOU MAY PURCHASE 3 FOR $5.00."
DATA "*END*"
```

INPUT: inflation rate of 6%

OUTPUT: **WE ARE PROUD TO OFFER 4 NEW RECORDS AT A COST OF \$2.07 EACH. YOU MAY PURCHASE 3 FOR \$5.30.**

3.10 INPUT: NUMBER OF SETS: 10
% CHANCE A WINS A POINT: 50

OUTPUT: A Should win about 5 sets

INPUT: NUMBER OF SETS: 10
% CHANCE A WINS A POINT: 60

OUTPUT: A Should win about 9 sets

Observe that the scoring rules have been followed and that the correct number of wins has been printed. Check to see that the winner of each set won at least 6 games and led by at least 2 games. (SEE DESCRIPTION)