ESP – ESP Tester

Abstract

ESP is a fun program written in 1980 for the HP-41C programmable calculator to test your "ESP" (Extra-Sensorial Powers) by conducting a series of 10 tests, after which it reports the % of success and an evaluation of your alleged extrasensorial abilities.

Keywords: *ESP, Extra Sensorial Powers, test, fun program, programmable calculator, RPN, HP-41C, HP-41CV, HP-41CX, HP42S*

1. Introduction

ESP is a fun program I wrote in 1980 for the *HP-41C* programmable calculator (will also run *as-is* in the *HP-41CV/CX* and the *HP42S)*, to test your *"ESP" (Extra Sensorial Powers)* by conducting a series of 10 tests. Once finished, it reports the % of success and some comment regarding your alleged extrasensorial abilities. The procedure goes like this:

To evaluate your alleged *ESP*, you must pass through a batch of 10 tests. For every test the program generates internally a pseudo-random integer from 1 to 5 (both included) which isn't revealed to you. You're then asked to *think* about this unrevealed integer for a while, to try and predict its value by using your *ESP,* and then you're prompted to enter your guess, and once you do the program duly outputs either *"CORRECT"* or *"INCORRECT"*, whatever the case may be (so that you have some feedback about how well you just did, to help reinforce your *ESP* on the go), and proceeds to the next test. After a batch of 10 such tests have been conducted, the program will report the % of correct guesses (except if you scored *nothing*) and a comment evaluating your *ESP* abilities as measured by your performance in the tests. You can run another batch by executing the program again.

The evaluation is based upon the exact probabilities of guessing right 0, 1, 2, ..., 10 times by pure chance alone. The possible evaluations and their associated probabilities are summarized in the following table:

# Correct guesses	Probability	Evaluation	Description	Σ Prob.
None	11%	NOTHING	It's quite difficult not to hit one!	11%
1 or 2	27%, 30%	LUCK	The most probable outcome	57%
3	20%	TRACES	You have traces of ESP	20%
4 or 5	9%, 3%	CONFIRMED	You certainly have ESP	12%
6 or more	< 1%	AMAZING	High Guru level	<1%

In order to generate the pseudo-random integers for the tests, and as the *HP-41C* lacks a built-in *RNG (Random Number Generator)*, the program implements a simple one but you must first of all store a *seed* (some nonnegative number of your choice, see **Note 1**) in register R_{00} before running the tests. This needs to be done just one time per session, no matter how many test batches you run afterwards.

Every new test is preceded by an aural `TONE` 5, and to further help reinforcement, *"CORRECT"* is rewarded with a `TONE` 9 while *"INCORRECT"* is *"punished"* with `TONE` 8, `TONE` 9. After all 10 tests have been conducted, a full `BEEP` sequence takes place and additionally if your evaluation was *"CONFIRMED",* then you'll be rewarded with an extra `TONE` 9 while a flashing evaluation of *"AMAZING"* will get you a full `BEEP` as well.

2. Program Listing

```
01 ♦LBL 05      18  0          35  *          52  ISG 02      69  AVIEW
02 "AMAZING"    19  STO 02     36  1          53  TONE 8      70  PSE           - 85 steps, fits in just 1 card
03 AVIEW        20 ♦LBL 01     37  +          54  TONE 9      71  X>Y?          - requires at least SIZE 003
04 BEEP         21 "**TEST "   38  INT        55  DSE 01      72  GTO 05 ►      - clears flags 21 and 29
05 PROMPT       22  11         39  SIGN       56  GTO 01 ►    73  3             - sets display mode FIX 0
06 ♦LBL "ESP"   23  RCL 01     40  "THINK"    57  "DONE"      74  X=Y?
07 "ENTER NUM"  24  -          41  AVIEW      58  AVIEW       75  "TRACES"      - to get  *  press [x]
08 +" BETWEEN"  25  ARCL X     42  PSE        59  BEEP        76  X=Y?          - to get  /  press [÷]
09 AVIEW        26  AVIEW      43  "NUMBER?"  60  CLA         77  PROMPT        - to get +"text" use Append
10 " 1 AND 5"   27  TONE 5     44  PROMPT     61  5           78  X>Y?
11 AVIEW        28  RCL 00     45  LASTX      62  RCL 02      79  "LUCK"        - the symbols ♦ and ► are
12 PSE          29  X<=0?      46  CLA        63  X=0?        80  X>Y?            purely cosmetic, to visually
13 FIX 0        30  1          47  X#Y?       64  "NOTHING"   81  PROMPT          indicate branching, don't
14 CF 29        31  R-D        48  "IN"       65  X=0?        82  "CONFIRMED"   try to key them in
15 CF 21        32  FRC        49 +"CORRECT"  66  PROMPT      83  AVIEW
16  10          33  STO 00     50  AVIEW      67  ARCL 02     84  TONE 9
17 STO 01       34  5          51  X=Y?       68 +"0% RIGHT"  85  END
```

3. Usage Instructions

See the following example to understand how to use the program.

4. Example

The following example can be useful to check that the program is correctly entered and to understand its usage:

Using *0.1234567897* as a seed, evaluate your alleged *ESP* by conducting the following series of 10 tests:

```
.1234567897 STO 00     (store the seed for the RNG, do it just once per session)
XEQ "ESP"              ENTER NUM BETWEEN 1 AND 5
                       **TEST 1      THINK    NUMBER?
1 [R/S]   CORRECT      **TEST 2      THINK    NUMBER?
2 [R/S]   CORRECT      **TEST 3      THINK    NUMBER?
3 [R/S]   INCORRECT    **TEST 4      THINK    NUMBER?
4 [R/S]   INCORRECT    **TEST 5      THINK    NUMBER?
5 [R/S]   INCORRECT    **TEST 6      THINK    NUMBER?
4 [R/S]   INCORRECT    **TEST 7      THINK    NUMBER?
3 [R/S]   INCORRECT    **TEST 8      THINK    NUMBER?
2 [R/S]   INCORRECT    **TEST 9      THINK    NUMBER?
1 [R/S]   INCORRECT    **TEST 10     THINK    NUMBER?
2 [R/S]   INCORRECT    DONE       20% RIGHT     LUCK
```

Of course it was luck ! But maybe you've got some genuine extrasensorial powers. Why don't you give it a try ?

Notes

1. Don't use negative seeds and also avoid **PI** and its multiples or fractions, as well as very large numbers.

2. Once the evaluation message has appeared the run is *ended*, *don't* press [R/S] to run another batch of tests but XEQ "ESP" again instead.

3. If you'd rather have "*THINK*" stay for longer, insert as many PSE steps as needed after *42* PSE. Each one adds ~1 extra second.

4. Practice makes perfect: try some sessions each day, concentrate *hard*, and you might find your *ESP* evaluations increasing over time.

Copyrights