

SNEIC



Series of **N**umbers by **E**xploration and **I**nhibition **C**onstructor

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SNEIC receives as input a combination set (of equal length), e.g. a reduced wheel or an archive of past draws of any lottery. And you can use it to search for combinations (blocks) which are DO NOT match a certain number of numbers (points), with any of the combinations of the input file.

Then, as an example, it can be used when a cover draft or a lotto draft (lotto disc) is given as an input file, whose cover we want to check, to search if we find in the draft one or more combinations that do not match the guarantee.

Or an archive of past draws of a game is given to search for all possible combinations (with a certain length set by the user, e.g. 15 numbers) that never reached 4 or more points.

1 Choose a file with your drawings (or a wheel) that you want to examine

2 Set the parameters for your search (how many numbers you want to search and how many points they mustn't match in your file)

3 Choose a folder and a file name for the output of the search results

4 Lastly, click "Start search."

The screenshot shows the SNEIC application window with the following details:

- Input file: past Draws archive.txt
- Sequence length: 9
- Matches (points): 3
- Higher number to try in sequences (max V): 90
- Enable search range: checked
- First number of sequences: From: 1 to: 1
- Output file (results): searchResults L=09, pts=03 [frm 01nn to 01nn].txt
- Buttons: START search, Stop, ENABLE SOUNDS, Test volume
- Table with columns: combinations in file, Blocks size, numbers qty, Min, Max
- Status: phase, Start time h.m.s, End time h.m.s, Elapsed
- Max lenght found: -- (#)
- Attempts made: --, Found: 0

The user interface displays all relevant information for the job at hand.

It is possible to **view** the **partial results** of the search process in **real time** (even if your search is not yet complete).



You can enable audio notifications:
the first is for when a solution is found.
Another is for the algorithm's end, when all possible combinations have been explored and the program will terminate.

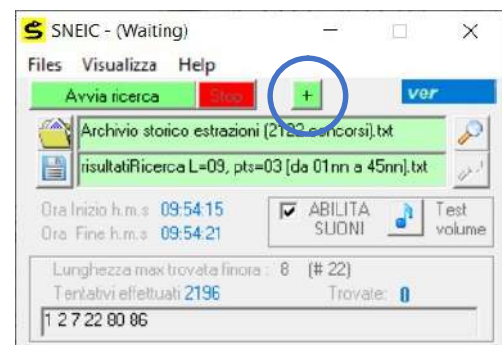
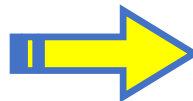


The application window can be resized.
You'll have more free space on your Desktop while the program runs this way, but keep an eye on the progress bar.



STANDARD window

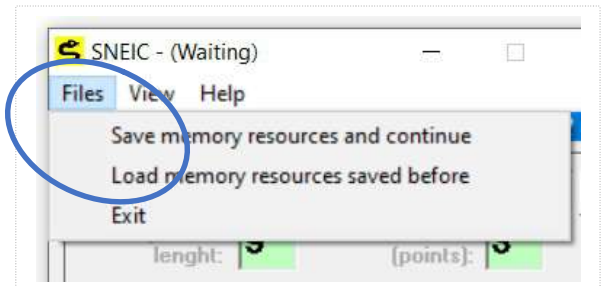
SMALL form window



You can pause and **save current searches** in a folder so that the same process can be resumed exactly where it left off later.

You can **even continue working on a different computer** using this function.

It's even possible to **set limits** for the **search range** specifying from where the search must begin and where it will end. To do this you need to input first number of the beginning combination and of the ending combination *(it's not possible to give the full combination at all, but **first number only** can be specified of **the beginning combination** to test from and first number only of **the last combination** to test as well).*



As an example:

START sequence **1** 2 3 4 5 6 7 8 9,

END sequence **1** 83 84 85 86 87 88 89 90



Or, example:

START sequence **2** 3 4 5 6 7 8 9 10,

END sequence **10** 83 84 85 86 87 88 89 90



This last option allows you to **divide any search into many separate processes** of the same program that will work on the same input file (basically, this can be thought of as parallel processing).

So, rather than conducting a lengthy search to analyze all possible combinations from first to last (e.g., for a search of nine elements, the first combination would be 1 2 3 4 5 6 7 8 9 and the last would be 82 83 84 85 86 87 88 89 90), you should divide this range into two, three, eight, or even more parts.

You can see some examples below where no specific criterion for problem decomposition was used (the subdivision was done at random):

E.g.) Four simultaneous instances working on the same file but on different search ranges of the combinations' universe, defined by the first digit of beginning and ending combinations:

- 1°) from 1 to 1 (that is to say: from comb. 1 2 3 4 5 6 7 8 9 to comb. 1 83 84 85 86 87 88 89 90)
- 2°) from 2 to 2 (that is to say: from comb 2 3 4 5 6 7 8 9 10 to comb. 2 83 84 85 86 87 88 89 90)
- 3°) from 3 to 3 (that is to say: from comb 3 4 5 6 7 8 9 10 11 to comb. 3 83 84 85 86 87 88 89 90)
- 4°) from 4 to 4 (that is to say: from comb 4 5 6 7 8 9 10 11 12 to comb. 4 83 84 85 86 87 88 89 90)



E.g.) To manage multiple windows on the screen, resize the dimensions of open instances so that you can track their progress:



The number of processes that can run concurrently increases with the speed of your computer and the number of processors (cores and threads of the CPU). However, because this algorithm uses very little ram memory, you can potentially start a large number of instances at the same time, even on older computers.