

The Main Event

Everett Yip, Neil Padgett

Difficulty: Meta

Gather your findings,
(your first step is there),
an order behind you,
to sort the headgear.

All headgear together,
(the two different kinds),
Sort in the order,
Place them in line.

Helmets lined up,
Count right 1-2-3,
The msg you find there:
Next step there will be.

You are presented a postcard with a bizarre poem on it. These are the instructions for combining the data from all the other puzzles and extracting the final message. While the context is not entirely clear, the ordering and structure is true to the process required.

Line 1, *Gather your findings*, indicates that the answers to the normal puzzles are the first step and needed to be collected.

Line 3, *an order behind you*, refers to the puzzle on the back of the t-shirt that was given to each of the participants, and mentions that an ordering is found there. The solution to the t-shirt puzzle is LINKING THE CARDS LEADS DOWN THE RIGHT PATH, which suggests creating a path of sorts with the postcards. This physical concept alludes to locations provided on the postcards – specifically the stamps and destination addresses. These countries have the noteworthy property that, except for the endpoints, each appears exactly once on a stamp as well as exactly once in a destination address – but never on the same card (the stamp with the silhouette of a queen instead of a country name belongs to Great Britain, as is standard for stamps from that nation). Considering this source (stamp) and destination pair as a directed edge, this means that a continuous and directed path can be formed with postcards as nodes, thereby providing an ordering for them (and the answers).

The path is as follows:

Puzzle Title	Source (Stamp) Country	Destination Country
Used Car Sale	Canada	Greece
Green Thumb	Greece	France
Intruder Detection	France	Mexico
10 Step Crossword	Mexico	China
Windows Pains	China	U.S.A.
Granera Parsley Charity All Star Game	U.S.A.	Chile
Louis' Letters	Chile	Egypt
CRIMSON HAT	Egypt	Japan
Liquid Crystal Method	Japan	Morocco
Alphabetic Math	Morocco	Netherlands
Measure Up	Netherlands	Russia
Don't Drink and Derive	Russia	Republic of Palau
"Elementary My Dear Watson"	Republic of Palau	Panama
2005 Rings of Power	Panama	Great Britain
Big Ben	Great Britain	Italy
Opponents	Italy	Malaysia
Mangled Works	Malaysia	India
A Sudoku-like Puzzle	India	Spain
The Butler Did It	Spain	Australia
Avoid the Sharks	Australia	Sweden

Lines 5 and 6, *All headgear together/(the two different kinds)*, point out some interesting properties in the puzzle answers mentioned in the previous verse. The headgear being referred to are the substrings HAT and CAP that appear in every puzzle answer, in some

cases spanning two words. These lines also indicate that they should be considered together and not separated based on the “kind”.

Line 7, *Sort in the order*, explicitly states that the answers need to be sorted in the order presented previous; Line 8, *Place them in line*, indicates that the answers should be listed together, i.e. in a vertical line.

Line 8, *Helmets lined up*, instructs the solver to align the “CAP” and “HAT” substrings. Since both are three letters long, this is just a matter of ensuring each of the three letters are stacked vertically in the sorted answer lists, which can easily be done on a computer using a monospace font as follows (substrings shown in red):

```
LECHATEAUFRONTENAC
LANDSCAPERS
CROSSHATCHED
MANHATTAN
BIANCAPRATT
    CAPECHARLES
PUTTHATDOWN
    CHATROOMS
WILLIAMSHATNER
    WHATTODO
    ESCAPEPOD
    HATSOFF!
SILICAPOWDER
    HATCHERIES
HIGHATMOSPHERE
    CAPPUCCINO
ALPHATESTING
    IHATEEXERCISE
ATTICAPARTMENT
ORCAPODS
```

Line 9, *Count right 1-2-3*, then tells the solver to look at the character three letters to the right of the substring. Reading down this column produces a message, as suggested by Line 10, *The msg you find there*. The abbreviation of the word “message” sets the tone that abbreviations may be encountered; this is particularly helpful when not all answers are available.

The answer list with the new instructions highlighted in blue is shown below:

LECHATEAUFRONTENAC
LANDSCAPERS
CROSSHATCHED
MANHATTAN
BIANCAPRATT
CAPECHARLES
PUTTHATDOWN
CHATROOMS
WILLIAMSHATNER
WHATTODO
ESCAPEPOD
HATSOFF!
SILICAPOWDER
HATCHERIES
HIGHATMOSPHERE
CAPPUCCINO
ALPHATESTING
IHATEEXERCISE
ATTICAPARTMENT
ORCAPODS

The instructions, with spaces inserted, are the following:

USE NTH WORD FROM DESC TXTS

This indicates that for each puzzle in the list, the n^{th} word should be taken from the flavor text, where n is the position of the puzzle in the list. That is, the first word should be taken from the first puzzle, the second word from the second puzzle, the third from the third, etc.

The first three puzzles in the list with these words highlighted in red are shown below.

From Used Car Sale (Stamp Country: Canada)

Set along the Niagara River lies one of the world's greatest natural wonders, waterfalls of spectacular size and great beauty renowned worldwide. Niagara Falls is both a tourist attraction, especially with honeymooners, and a major source of power generated by hydroelectric means for both Canada and the United States.

From Green Thumb (Stamp Country: Greece)

Literary **stamps** and wild runs in imagination are all that allow us to picture this artificial mountain towering high above, covered in foliage from top to bottom. The gardens were supported in the dry desert by irrigating water from the city below, carrying it up from below, likely by using an Archimedes screw or other similar mechanism. What exactly the Gardens looked like and how they worked will, however, likely never be known.

From Intruder Detection (Stamp Country: France)

Perched on **four** legs, the Eiffel Tower is the trademark symbol of the Paris skyline. Towering at a height of 300 m, top to bottom, the tower is both a communications tower and a tourist attraction with a grand view of the breathtaking city. Chosen from eight different entries, the design was not popular with the public at first, but eventually became a quintessential part of the French capital.

This process yields the following message:

SET STAMPS FOUR ACROSS FIVE DOWN USING RULES TWENTY AND FORTY WORDS AHEAD ADD RESULTING PICTURE TO EVERY SECOND VALUE.

These instructions indicate that the stamps need to be arranged in a 4×5 grid based on a set of rules that are also present in the flavor text, specifically at twenty and forty words further along. Thus, these layout constraints can be obtained by collecting one word from each puzzle paragraph by counting ahead twenty and forty words respectively, similar to how the previous instruction was arrived at. (Equivalently, the rules could be said to be comprised of the $n+20^{\text{th}}$ and $n+40^{\text{th}}$ words in the description texts).

The first three paragraphs with the rules highlighted in **blue** (20 words ahead) and **green** (40 words ahead) are shown below:

From Used Car Sale (Stamp Country: Canada)

Set along the Niagara River lies one of the world's greatest natural wonders, waterfalls of spectacular size and great beauty **renowned** worldwide. Niagara Falls is both a tourist attraction, especially with honeymooners, and a major source of power generated by **hydroelectric** means for both Canada and the United States.

From Green Thumb (Stamp Country: Greece)

Literary **stamps** and wild runs in imagination are all that allow us to picture this artificial mountain towering high above, covered **in** foliage from top to bottom. The gardens were supported in the dry desert by irrigating water from the city **below**, carrying it up from below, likely by using an Archimedes screw or other similar mechanism. What exactly the Gardens looked like and how they worked will, however, likely never be known.

From Intruder Detection (Stamp Country: France)

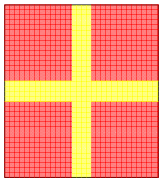
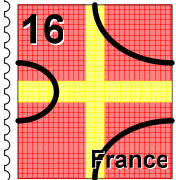
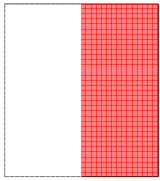
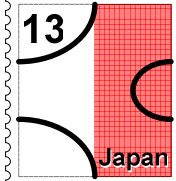
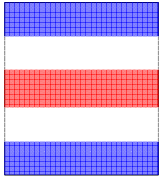
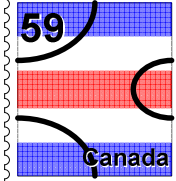
Perched on **four** legs, the Eiffel Tower is the trademark symbol of the Paris skyline. Towering at a height of 300 m, **top** to bottom, the tower is both a communications tower and a tourist attraction with a grand view of the **breathtaking** city. Chosen from eight different entries, the design was not popular with the public at first, but eventually became a quintessential part of the French capital.

Reading out these rules produces the following:

+20: renowned in top left spot Missouri in bottom right undertaking to the east of diameter spectators on the left edge
 +40: hydroelectric below breathtaking geological to west of archeologists vistas above freestanding concentrated at the top evacuation to right of inscribed

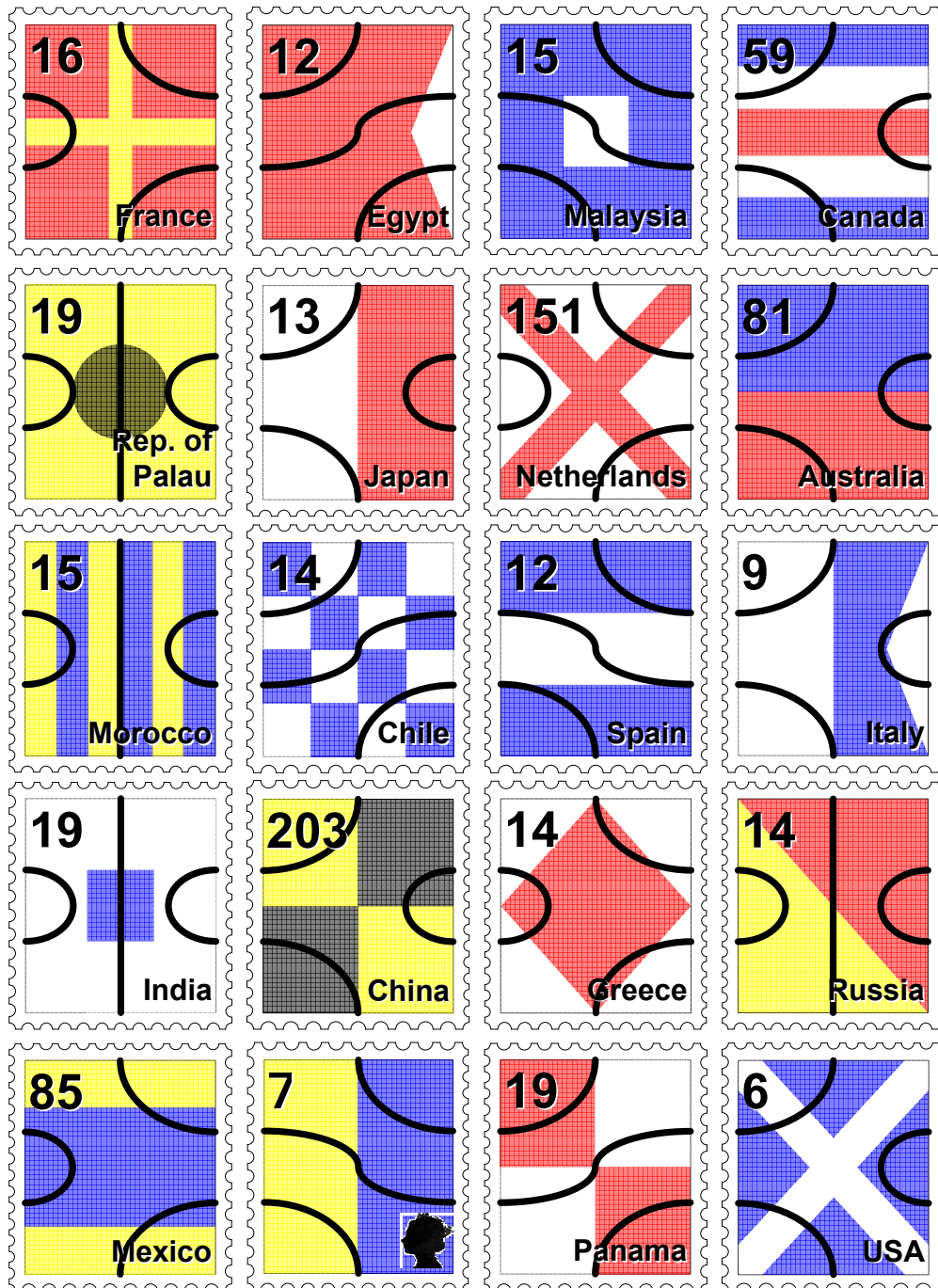
Both “columns” of rules (at +20 and +40 words) contain complete rules, meaning none are broken between the two and that there is no importance to order in which they are considered.

They provide a total of nine basic arrangement rules for items in a grid, in forms such as x above y or x to the left of y. In this case, however, the elements are expressed as long words such as *renowned*, *hydroelectric*, and *concentrated*. Since it is clear that the items that are being arranged are the stamps themselves, these words are simple a placeholder or unique identifier. Each refers to the stamp which contains, in its background, the maritime signaling flag for its first letter. The three examples above are listed below with their corresponding letter, stamp, and flag.

Word	First Letter	Flag	Stamp
renowned	R		
hydroelectric	H		
concentrated	C		

In addition to the rules provided in the flavor text, one addition constraint exists in the perforations around the stamps – along both the horizontal and vertical edges, the number of perforations are varied among all the stamps. Horizontal edges may have 9, 10, or 11 perforations, while vertical edges may have 12, 13, 14, or 15. In arranging the stamps, adjacent cells must have the same number of perforations along their common border.

Using the rules from the flavor text and the restrictions from the stamp edges, the grid arrangement solution shown below can be arrived at through deduction.



Referring back to the original instructions from the flavor text, “add resulting picture to every second value” instructs the solver to extract an image from the assembled grid. The overlaying black curved line elements form a large digit six, which is the number that needs to be added to the stamp values for stamps in the second and fourth columns. The Egypt stamp, for example, receives a new value 18 while the Canada one becomes 65.

This process clues that the next step involves working with the stamp values. By considering the adjusted numbers in the grid order, reading left to right and top to bottom, the following series of digits can be obtained:

161815651919161871520121519209142085131912

By repartitioning them into numbers that fit within the alphabet range 1-26 and converting to letters, the final message is extracted.

16	18	15	6	5	19	19	15	18	7	15	20	12	15	19	20	9	14	20	8	5	13	1	9	12
↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
P	R	O	F	E	S	S	O	R	G	O	T	L	O	S	T	I	N	T	H	E	M	A	I	L

The answer is Professor Got Lost in the Mail.