METAPUZZLE SOLUTION – AVOIDING STRESSFUL SITUATIONS LIKE THE PLAGUE

Each Florentine's puzzle answer is ten letters long. Determine by logic (laid out in detail below) who told what story on which day. Then, assign the first letter of Dioneo's answer to his first story, his second letter to his second story, etc. with all of the Florentines (think of each letter as one of their ten stories). When the 100 letters have been ordered, the letters for the 1st, 4th, 7th, and 10th days spell the answer message, as shown.

	STORY 1	STORY 2	STORY 3	STORY 4	STORY 5	STORY 6	STORY 7	STORY 8	STORY 9	STORY 10
DAY 1	Lauretta **A**	Filomena **V**	Filostrato **O**	Panfilo **I**	Fiammetta **D**	Emilia **I**	Neifile **N**	Pampinea **G**	Dioneo **S**	Elissa **T**
DAY 2	Neifile **I**	Dioneo **E**	Panfilo **N**	Emilia **N**	Elissa **R**	Fiammetta **I**	Pampinea **O**	Filomena **I**	Filostrato **D**	Lauretta **R**
DAY 3	Filostrato **D**	Lauretta **M**	Pampinea **L**	Filomena **C**	Neifile **H**	Dioneo **A**	Panfilo **T**	Elissa **A**	Fiammetta **S**	Emilia **T**
DAY 4	Emilia **R**	Panfilo **E**	Fiammetta **S**	Dioneo **S**	Pampinea **F**	Elissa **U**	Filostrato **L**	Lauretta **S**	Neifile **I**	Filomena **T**
DAY 5	Panfilo **R**	Pampinea **C**	Neifile **L**	Lauretta **L**	Filostrato **O**	Filomena **O**	Fiammetta **O**	Emilia **A**	Elissa **M**	Dioneo **C**
DAY 6	Dioneo **A**	Elissa **A**	Emilia **N**	Fiammetta **N**	Filomena **R**	Filostrato **O**	Lauretta **E**	Neifile **D**	Pampinea **O**	Panfilo **Z**
DAY 7	Pampinea **U**	Fiammetta **A**	Elissa **T**	Neifile **I**	Panfilo **O**	Lauretta **N**	Emilia **S**	Dioneo **L**	Filomena **I**	Filostrato **K**
DAY 8	Filomena **A**	Filostrato **I**	Dioneo **L**	Pampinea **R**	Emilia **I**	Neifile **C**	Elissa **I**	Panfilo **N**	Lauretta **G**	Fiammetta **N**
DAY 9	Elissa **Z**	Emilia **T**	Filomena **N**	Filostrato **N**	Lauretta **T**	Pampinea **S**	Dioneo **O**	Fiammetta **C**	Panfilo **A**	Neifile **I**
DAY 10	Fiammetta **E**	Neifile **T**	Lauretta **H**	Elissa **E**	Dioneo **P**	Panfilo **L**	Filomena **A**	Filostrato **G**	Emilia **U**	Pampinea **E**

Explanation of the logic:

For convenience of notation, we'll number the Florentines in alphabetical order as follows:

1. Dioneo

2. Elissa
3. Emilia
4. Fiammetta
5. Filomena
6. Filostrato
7. Lauretta
8. Neifile
9. Pampinea
0. Panfilo

And their associated logical rules as:

R1. The tenth story position was the only story position told by a young man on three consecutive days.

R2. No individual Florentine told a story in the same position (first story of the day, second story of the day, etc.) on more than one day.

R3. There were two story positions, at least three positions apart, that were told by Emilia one day, Elissa the following day, and Dioneo the day after that.

R4. Fiammetta preceded Emilia in storytelling on the same number of days that Emilia preceded Fiammetta (not necessarily immediately in either case). On only one occasion did they tell their stories in the same order as on the previous day.

R5. On the second day, the Florentines with the five shortest names told the first five stories, in some order.

R6. On three consecutive days, Filostrato told his story at some point prior to Filomena's. On all other days, he spoke immediately after her. The ten stories they together told over the last five days occupied every story position once.

R7. Lauretta spoke sometime between Emilia and Fiammetta on least four days; those days were all consecutive.

R8. The sixth story position was filled by alphabetically adjacent youths on the first two days. The rest of the youths then told the sixth story in alphabetical order.

R9. Pampinea told the tenth story on the day after Neifile told the tenth story. Exactly four other story positions, which were consecutive, were also filled by Neifile on one day and Pampinea the next. Each of these four positions was filled on the following day by either Filostrato or Panfilo, twice each in some order.

R0. One day the Florentines spoke in alphabetical order (the reverse of the order in which they'd spoken the day before).

Rows will be referred to as "days", and columns as (story) "slots". <u>R2 underlies much of the placement and will be assumed to be the reason for anything underlined being placed in a grid after the explained placements have been filled.</u>

By R0 we have two consecutive days in which stories were told in this order (we'll call it the block):

```
0  9  8  7  6  5  4  3  2  1
1  2  3  4  5  6  7  8  9  0
```

By R6, there are at least two days prior to the block, the other two days on which 6 precedes 5. So the block cannot begin on Day 1. Since the 5 and 6 occur in sequence in slot 6, by R8 they must then have at least 1,2,3, and 4 ahead of them in that slot, and so the block starts no earlier than Day 5.

Also by R6, the 5s and 6s of the last five days must occupy ten unique positions. Because the 5s and 6s in the block share positions, the block also can not begin *after* Day 5. The block must therefore fill Days 5 and 6.

By R8, the numbers in slot 6 after Day 5 and 6 will be 7, 8, 9, 0 in that order. The numbers 1, 2, 3, and 4 will occupy the slots prior to Day 5, with one pair out of sequence.

By R5, 1, 2, 3, 8, and 0 occupy the first five slots on Day 2, in some order. That leaves 4 as the only possibility to fill slot 6 on Day 2, and so our grid now looks like this:

```
-  -  -  -  -  3  -  -  -  -
-  -  -  -  -  4  -  -  -  -
-  -  -  -  -  1  -  -  -  -
-  -  -  -  -  2  -  -  -  -
0  9  8  7  6  5  4  3  2  1
1  2  3  4  5  6  7  8  9  0
-  -  -  -  -  7  -  -  -  -
-  -  -  -  -  8  -  -  -  -
-  -  -  -  -  9  -  -  -  -
-  -  -  -  -  0  -  -  -  -
```

By R6, Days 3 and 4 will have 6 followed by 5 in some configuration. This means that in all remaining days, 56 will occur consecutively. Since both 5 and 6 have long names, by R5 that pair will occur after slot 5, and slot 6 is taken. Two 56 pairs must also fill slots 78 and 90

somewhere during the last four days (R6). This leaves as the only possible Day 2 position for this pair slots 8-9. Also, 6 must occupy slot 10 on either Day 4 or Day 7 (R1) and but must be followed by the 5 on Day 4 (R6). Thus:

```
-   -   -   -   -   3   -   -   -   -
-   -   -   -   -   4   9   5   6   7
-   -   -   -   -   1   -   -   -   -
-   -   -   -   -   2   -   -   -   -
0   9   8   7   6   5   4   3   2   1
1   2   3   4   5   6   7   8   9   0
-   -   -   -   -   7   -   -   5   6
-   -   -   -   -   8   -   -   -   -
-   -   -   -   -   9   -   -   -   -
-   -   -   -   -   0   -   -   -   -
```

The 56 pair which must occur on Day 1 cannot begin in slot 1 or 3; 56 pairs must begin in those slots sometime after day 7. Nor can it begin in slot 4 or 5 because of grid conflicts. It must therefore begin in slot 2. The only days in which 6 can fit into slot 1 are Days 3 and 4, but Day 4 would violate R1. So:

```
-   5   6   -   -   3   -   -   -   -
-   -   -   -   -   4   9   5   6   7
6   -   -   -   -   1   -   -   -   -
-   -   -   -   -   2   -   -   -   -
0   9   8   7   6   5   4   3   2   1
1   2   3   4   5   6   7   8   9   0
-   -   -   -   -   7   -   -   5   6
-   -   -   -   -   8   -   -   -   -
-   -   -   -   -   9   -   -   -   -
-   -   -   -   -   0   -   -   -   -
```

This lets us place the remaining Day 3/4 5s and 6's, since for R6 to work the 56s in Days 8-10 must begin in odd-numbered slots to fit.

R9 stipulates that 8 and 9 fill slot 10 on two consecutive days; the only position that avoids conflict here is to begin on Day 9.

```
-   5   6   -   -   3   -   -   -   -
```

```
-  -  -  -  -  4  9  5  6  7
6  -  -  5  -  1  -  -  -  -
-  -  -  -  -  2  6  -  -  5
0  9  8  7  6  5  4  3  2  1
1  2  3  4  5  6  7  8  9  0
-  -  -  -  -  7  -  -  5  6
-  -  -  -  -  8  -  -  -  -
-  -  -  -  -  9  -  -  -  8
-  -  -  -  -  0  -  -  -  9
```

R9 also mandates four other consecutive story positions held by 8 one day, 9 the next, and 6 or 0 (twice each) the next. Slot 9 cannot be one of these, nor can slot 1, 2, or 3. The windows of possibility overlap in slots 5, 6, and 7, so we can place those: slot 6 is already placed. Slot 7 can be filled, using the second 0. The other two must be 896 columns, one of which can be placed in slot 5.

```
-  5  6  -  -  3  8  -  -  -
-  -  -  -  -  4  9  5  6  7
6  -  -  5  8  1  0  -  -  -
-  -  -  -  9  2  6  -  -  5
0  9  8  7  6  5  4  3  2  1
1  2  3  4  5  6  7  8  9  0
-  -  -  -  -  7  -  -  5  6
-  -  -  -  -  8  -  -  -  -
-  -  -  -  -  9  -  -  -  8
-  -  -  -  -  0  -  -  -  9
```

R3 mandates two slots, at least three positions apart, in which 321 fit on consecutive days. The only slots where this is now possible are 3, 4, 5 and 7. The separation required eliminates slot 5 from consideration and forces slot 7, which also allows placement of the 56 in Day 10. That rules out slot 8 as the placement for the last 896 column, so that must go in slot 4, in only one possible position. This finally allows the placement of the final 56s in Days 9 and 8. Doing so eliminates slot 4 as a candidate for the remaining 321 columnar placement, so that must go in slot 3.

```
-  5  6  -  -  3  8  -  -  -
-  -  0̲  -  -  4  9  5  6  7
6  -  -  5  8  1  0  -  -  -
-  -  -  -  9  2  6  -  -  5
0  9  8  7  6  5  4  3  2  1
1  2  3  4  5  6  7  8  9  0
-  -  2  8  -  7  3  -  5  6
5  6  1  9  -  8  2  -  -  -
-  -  5  6  -  9  1  -  -  8
-  -  -  -  -  0  5  6  -  9
```

R4 stipulates that 3 and 4 alternate direction day to day, with the exception of one repeat, in such a way that 3...4 and 4...3 both occur five times. We know from our grid that Day 2 = 3...4, and Days 5 and 6 are 4...3 and 3...4 respectively. This necessitates Days 3 and 4 also being 4...3 and 3...4 respectively, or we'd have too many repeats. Day 1 must be 4...3; if it were 3...4 the subsequent alterations would create six 4...3 days, which we can not have. Since the Day 1 4 must precede the 3, Day 10/slot 10 must hold a 2.

R7 calls for four consecutive days in which 7 falls between 3 and 4 in some order. Our grid shows this cannot occur before Day 6, so it must occur in Days 7, 8, 9, and 10. That makes Day 7 a 4...3 day. Repeating on Day 8 would create six 4...3s, so Day 8 must be a 3...4 day. We now have four of each type, which means the repeat can not happen on day 10; thus Days 9 and 10 are 3...4 and 4...3 respectively. We can now fill in the last slot of each day.

```
-  5  6  -  -  3  8  -  -  2
-  -  0̲  -  -  4  9  5  6  7
6  -  -  5  8  1  0  -  -  3
-  -  -  -  9  2  6  -  -  5
0  9  8  7  6  5  4  3  2  1
1  2  3  4  5  6  7  8  9  0
-  -  2  8  -  7  3  -  5  6
5  6  1  9  -  8  2  -  -  4
-  -  5  6  -  9  1  -  -  8
-  -  -  -  -  0  5  6  -  9
```

R9 and R2 let us place the 9 in Day 7, and from there the remaining 9s. R2 places the 2 in Day 3, and R7 dictates the positions of the remaining 4 and 7 in that day, as well as the position of the 3 in Day 8.

```
-  5  6  -  -  3  8  9̲  -  2
```

```
-   -   0   -   -   4   9   5   6   7
6   7   9   5   8   1   0   2   4   3
-   -   -   -   9   2   6   -   -   5
0   9   8   7   6   5   4   3   2   1
1   2   3   4   5   6   7   8   9   0
9   -   2   8   -   7   3   -   5   6
5   6   1   9   3   8   2   -   -   4
-   -   5   6   -   9   1   -   -   8
-   -   -   -   -   0   5   6   -   9
```

The combination of R7 with the ordering determined for 3 and 4 on the various days allows the placements of the 7 and 4 in Day 9; R2 finishes off that day and then the rest of Day 8, and then slot 8.

```
-   5   6   -   -   3   8   9   -   2
-   -   0   -   -   4   9   5   6   7
6   7   9   5   8   1   0   2   4   3
-   -   -   -   9   2   6   7   -   5
0   9   8   7   6   5   4   3   2   1
1   2   3   4   5   6   7   8   9   0
9   -   2   8   -   7   3   1   5   6
5   6   1   9   3   8   2   0   7   4
2   3   5   6   7   9   1   4   0   8
-   -   -   -   -   0   5   6   -   9
```

Day 1, slot 9 can now be only 1. Day 4, slot 9 cannot be 3 (R7), so all of slot 9 falls. R4/R2 forces the 3 to the earliest slot in day 4, and then R2 finishes off slot 3. At this point, the rest of the grid may be filled easily using R2/sudoku logic.

```
7   5   6   0   4   3   8   9   1   2
8   1   0   3   2   4   9   5   6   7
6   7   9   5   8   1   0   2   4   3
3   0   4   1   9   2   6   7   8   5
```

```
0  9  8  7  6  5  4  3  2  1
1  2  3  4  5  6  7  8  9  0
9  4  2  8  0  7  3  1  5  6
5  6  1  9  3  8  2  0  7  4
2  3  5  6  7  9  1  4  0  8
4  8  7  2  1  0  5  6  3  9
```