# Example Sudoku Puzzles

#### Peter Wilson

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A Sudoku puzzle consists of a 9 by 9 array of squares, some of which have numbers in them, the numbers ranging from 1 through 9. The problem is to fill in all the squares such that each row, column, and 3 by 3 box includes the numbers 1 through 9 with no repetitions.

This is a collection of some 54 Sudoku puzzles which I have culled from various places. The sources include, among others: the *Sudoku Solver* [SSBL] website (labelled SE, SM, SH and SVH), *The Daily Telegraph* [Mep05] (labelled TG, TM, and TT), *The Seattle Times* (labelled ST), and some automatically generated by the createsudoku package [Wil06] (labelled CS).

You can try solving them yourself and/or get LaTeX to do it for you. The solvesudoku package [Wil06] is able to solve most, but not all of the puzzles. Other LaTeX packages may do better or worse.

The puzzles are presented in approximately increasing order of difficulty. Each source, though, has its own set of categories which don't necessarily agree with each other (and sometimes not within one source). I have included an indication of the difficulty as stated by the relevant source.

The parameters for the puzzles created via createsudoku are given in the table.

| Number | Seed       | initialelimination      |
|--------|------------|-------------------------|
| CS1    | 1505263462 | \elimcrossandexandnines |
| CS2    | 1495929734 | \elimcrossandex         |
| CS3    | 1487762722 | \elimcrossandexandnines |
| CS4    | 1508763610 | \elimcrossandex         |
| CS5    | 839068723  | \elimseventeen          |
| CS6    | 833235143  | \elimcrossandexandnines |

|   |   | SE5 ( | easy) |   |   |   |   |     |     | SF | 210 | (easy) |   |   |   |   |   |
|---|---|-------|-------|---|---|---|---|-----|-----|----|-----|--------|---|---|---|---|---|
|   | 2 |       |       |   | 5 | 8 | • | 6   | •   | 3  | 6   |        | 4 | 9 | 7 |   |   |
| 5 | 6 |       | 2     |   | 3 |   |   | 9   | 8   |    | 2   |        | 1 |   | 6 |   |   |
|   | 3 |       |       |   | 7 | 2 | , | 7 5 | 9 : | 1  |     |        | 8 |   | 1 | 4 | 5 |
|   |   | 9     | 7     | 5 |   |   | ( | 5   | 4   |    | 9   |        | 5 |   | 2 | 7 |   |
|   |   | 6     |       |   | 4 | 7 | , |     | (   | )  | 7   |        | 6 |   |   | 5 |   |
|   | 7 |       |       | 2 | 8 | 6 | , |     | 3   |    |     |        | 7 | 2 |   | 9 | 6 |
| 6 |   | 5     | 8     |   |   |   |   | 7   | 2   |    |     |        |   |   | 8 | 1 |   |
| 8 |   |       |       |   | 1 |   |   |     | 7 ( | 3  |     |        | 2 | 8 |   |   |   |
| 3 |   | 7     |       | 6 |   |   |   | 4   |     |    |     |        |   |   | 5 |   | 7 |

|   | SE15 (easy) |   |   |   |   |   |   |   |  |  |  |  |
|---|-------------|---|---|---|---|---|---|---|--|--|--|--|
| 4 |             | 6 | 7 |   | 3 | 9 |   | 2 |  |  |  |  |
|   |             | 1 | 6 |   | 8 | 4 |   |   |  |  |  |  |
|   | 7           |   |   |   | 4 |   |   | 1 |  |  |  |  |
| 5 |             |   |   | 4 |   | 2 | 1 |   |  |  |  |  |
|   | 2           |   |   |   |   |   | 6 |   |  |  |  |  |
|   | 6           | 8 |   | 7 |   |   |   | 9 |  |  |  |  |
| 6 |             |   | 5 |   |   |   | 9 |   |  |  |  |  |
|   |             | 2 | 4 |   | 9 | 3 |   |   |  |  |  |  |
| 9 |             | 5 | 3 |   | 1 | 7 |   | 4 |  |  |  |  |

|   |   |   | SE | 20 (ea | sy) |   |   |   |
|---|---|---|----|--------|-----|---|---|---|
| 3 | 6 |   | 9  |        |     | 5 |   |   |
|   |   | 5 | 4  |        | 8   |   | 2 |   |
|   |   |   |    |        | 7   | 8 |   | 9 |
| 2 |   |   |    |        | 3   |   | 6 | 8 |
|   | 8 | 3 |    | 9      |     |   |   |   |
|   | 4 |   | 7  |        |     | 2 |   | 3 |
| 6 |   | 7 | 1  |        |     | 3 |   |   |
| 1 | 3 |   | 8  |        | 5   | 9 |   | 2 |
|   |   | 9 |    | 7      |     |   | 5 | 6 |

| SE25 (easy) |   |   |   |   |   |   |   |   |  |  |  |
|-------------|---|---|---|---|---|---|---|---|--|--|--|
|             |   |   |   | 6 | 3 |   | 5 |   |  |  |  |
| 6           |   | 5 |   | 1 |   | 8 | 3 | 9 |  |  |  |
|             |   | 1 |   |   |   | 2 |   |   |  |  |  |
| 8           | 2 | 3 |   |   |   | 7 |   |   |  |  |  |
|             | 5 |   |   |   | 7 |   |   |   |  |  |  |
|             | 6 | 4 |   | 9 |   |   |   | 1 |  |  |  |
| 4           |   | 2 | 5 | 7 | 9 | 6 |   | 3 |  |  |  |
|             | 9 |   | 1 |   | 6 | 5 |   | 8 |  |  |  |
|             | 1 |   |   |   | 8 | 9 |   | 7 |  |  |  |

|   |   |   |   | 30 (ea | sy) |   |   |   |
|---|---|---|---|--------|-----|---|---|---|
|   | 3 |   | 1 | 2      |     |   |   |   |
| 1 |   | 8 | 7 |        |     | 4 |   | 6 |
|   |   | 9 | 8 |        |     |   |   | 1 |
| 5 |   |   |   |        | 7   |   | 3 |   |
|   | 7 | 3 |   | 9      |     | 2 |   | 4 |
|   | 9 | 2 |   |        | 6   | 5 |   |   |
|   | 4 |   |   |        | 8   |   | 5 |   |
| 3 |   |   |   | 7      |     |   |   | 8 |
| 2 |   |   | 4 |        | 5   | 9 | 6 |   |

|   |   |   | TG | 5 (gen | tle) |   |   |   |
|---|---|---|----|--------|------|---|---|---|
|   | 6 |   | 1  |        | 9    |   | 8 |   |
|   | 1 | 9 |    |        |      | 7 | 4 |   |
| 2 |   |   |    |        |      |   |   | 1 |
|   |   | 7 | 9  |        | 2    | 6 |   |   |
|   | 3 |   |    |        |      |   | 2 |   |
|   |   | 1 | 4  |        | 3    | 5 |   |   |
| 1 |   |   |    |        |      |   |   | 5 |
|   | 7 | 5 |    |        |      | 2 | 3 |   |
|   | 9 |   | 5  |        | 6    |   | 7 |   |

| TG10 (gentle) |   |   |   |   |   |   |   |   |  |  |
|---------------|---|---|---|---|---|---|---|---|--|--|
|               |   |   |   | 9 | 6 |   |   | 4 |  |  |
|               |   | 1 |   |   |   |   |   | 2 |  |  |
| 5             | 6 |   |   |   | 8 |   |   |   |  |  |
| 2             |   | 8 |   |   |   |   | 9 |   |  |  |
| 9             |   | 6 | 3 |   | 5 | 2 |   | 7 |  |  |
|               | 3 |   |   |   |   | 4 |   | 6 |  |  |
|               |   |   | 9 |   |   |   | 5 | 8 |  |  |
| 7             |   |   |   |   |   | 9 |   |   |  |  |
| 8             |   |   | 4 | 5 |   |   |   |   |  |  |

|   | TG15 (gentle) |   |   |   |   |   |   |   |  |  |  |  |
|---|---------------|---|---|---|---|---|---|---|--|--|--|--|
|   |               |   | 1 |   | 8 |   |   |   |  |  |  |  |
|   | 5             | 7 |   |   |   | 1 | 8 |   |  |  |  |  |
| 9 | 8             |   |   |   |   |   | 2 | 6 |  |  |  |  |
|   |               | 6 | 7 | 4 | 1 | 9 |   |   |  |  |  |  |
|   |               |   |   |   |   |   |   |   |  |  |  |  |
|   |               | 4 | 2 | 5 | 3 | 6 |   |   |  |  |  |  |
| 7 | 2             |   |   |   |   |   | 9 | 4 |  |  |  |  |
|   | 1             | 9 |   |   |   | 7 | 3 |   |  |  |  |  |
|   |               |   | 3 |   | 9 |   |   |   |  |  |  |  |

|   |   |   | TG | 20 (ger | ntle) |   |   |   |
|---|---|---|----|---------|-------|---|---|---|
|   |   |   | 7  |         | 9     |   |   |   |
|   | 8 |   | 3  |         | 6     |   | 5 |   |
| 7 |   | 9 |    |         |       | 6 |   | 8 |
|   |   | 4 | 2  |         | 1     | 8 |   |   |
|   | 6 |   |    |         |       |   | 4 |   |
|   |   | 3 | 5  |         | 4     | 1 |   |   |
| 9 |   | 2 |    |         |       | 5 |   | 7 |
|   | 4 |   | 8  |         | 7     |   | 1 |   |
|   |   |   | 1  |         | 2     |   |   |   |

|   |   |   | TG | 25 (ger | ntle) |   |   |   |
|---|---|---|----|---------|-------|---|---|---|
| 7 |   |   | 4  |         |       | 5 |   |   |
|   | 6 | 1 |    |         | 5     |   | 7 |   |
|   | 9 |   | 7  |         | 1     |   |   | 6 |
| 8 |   |   |    | 2       | 7     |   |   |   |
|   |   |   |    |         |       |   |   |   |
|   |   |   | 3  | 4       |       |   |   | 1 |
| 1 |   |   | 8  |         | 2     |   | 3 |   |
|   | 7 |   | 1  |         |       | 6 | 2 |   |
|   |   | 3 |    |         | 9     |   |   | 7 |

|   |   |   | TG: | 30 (gei | ntle) |   |   |   |
|---|---|---|-----|---------|-------|---|---|---|
| 3 | 7 |   | 4   |         |       |   |   |   |
| 9 |   |   |     |         | 6     | 1 |   | 4 |
|   |   |   |     | 2       | 3     |   |   |   |
|   | 4 |   | 1   |         |       | 9 |   |   |
|   | 1 | 2 |     |         |       | 7 | 9 |   |
|   |   | 5 |     |         | 7     |   | 4 |   |
|   |   |   | 3   | 6       |       |   |   |   |
| 4 |   | 3 | 2   |         |       |   |   | 6 |
|   |   |   |     |         | 9     |   | 5 | 7 |

|   | ST1226 (1 star) |   |   |   |   |   |   |   |  |  |  |  |
|---|-----------------|---|---|---|---|---|---|---|--|--|--|--|
| 9 |                 |   |   |   | 4 |   | 3 | 1 |  |  |  |  |
| 7 | 4               | 5 | 2 |   |   |   |   |   |  |  |  |  |
|   | 8               |   |   | 6 | 7 | 4 |   |   |  |  |  |  |
|   | 2               | 6 |   | 4 |   |   |   | 5 |  |  |  |  |
| 5 |                 |   | 6 |   | 9 |   |   | 8 |  |  |  |  |
| 4 |                 |   |   | 2 |   | 3 | 7 |   |  |  |  |  |
|   |                 | 7 | 5 | 9 |   |   | 6 |   |  |  |  |  |
|   |                 |   |   |   | 1 | 8 | 2 | 3 |  |  |  |  |
| 2 | 1               |   | 3 |   |   |   |   | 7 |  |  |  |  |

|   |   | ST0206 (1 star) |   |   |   |   |   |   |  |  |  |  |  |  |
|---|---|-----------------|---|---|---|---|---|---|--|--|--|--|--|--|
| 1 | 7 |                 | 4 | 2 |   |   |   | 5 |  |  |  |  |  |  |
|   |   | 2               |   | 1 |   |   | 9 | 6 |  |  |  |  |  |  |
| 8 | 4 | 9               |   |   | 3 |   |   |   |  |  |  |  |  |  |
|   |   |                 |   | 7 | 1 | 8 |   |   |  |  |  |  |  |  |
|   | 2 | 5               |   |   |   | 6 | 7 |   |  |  |  |  |  |  |
|   |   | 8               | 2 | 6 |   |   |   |   |  |  |  |  |  |  |
|   |   |                 | 5 |   |   | 7 | 4 | 9 |  |  |  |  |  |  |
| 5 | 3 |                 |   | 9 |   | 1 |   |   |  |  |  |  |  |  |
| 6 |   |                 |   | 4 | 8 |   | 2 | 3 |  |  |  |  |  |  |

| ST0213 (1 star) |   |   |   |   |   |   |   |   |  |  |  |
|-----------------|---|---|---|---|---|---|---|---|--|--|--|
|                 | 9 | 4 |   | 2 |   |   |   | 7 |  |  |  |
|                 | 3 | 6 |   |   |   | 1 |   | 5 |  |  |  |
| 2               | 8 |   | 3 | 5 |   |   |   |   |  |  |  |
|                 |   | 9 | 2 |   |   |   | 5 |   |  |  |  |
| 6               |   | 2 | 1 |   | 4 | 9 |   | 8 |  |  |  |
|                 | 7 |   |   |   | 6 | 3 |   |   |  |  |  |
|                 |   |   |   | 1 | 3 |   | 4 | 6 |  |  |  |
| 1               |   | 5 |   |   |   | 7 | 8 |   |  |  |  |
| 8               |   |   |   | 4 |   | 2 | 9 |   |  |  |  |

| CS1 (level 2) |   |   |   |  |   |   |   |   |  |  |  |
|---------------|---|---|---|--|---|---|---|---|--|--|--|
|               | 4 | 6 |   |  | 7 | 3 | 1 |   |  |  |  |
| 2             |   | 3 | 6 |  | 4 |   |   |   |  |  |  |
| 8             | 7 |   | 3 |  | 1 |   | 4 | 5 |  |  |  |
| 6             | 5 | 7 |   |  |   | 4 | 2 | 3 |  |  |  |
|               |   |   |   |  |   |   |   |   |  |  |  |
|               | 8 | 1 |   |  |   | 7 | 5 | 6 |  |  |  |
| 4             | 3 |   | 8 |  | 6 |   |   | 1 |  |  |  |
| 7             |   |   | 2 |  |   | 5 |   | 4 |  |  |  |
|               |   | 2 | 5 |  | 3 | 8 | 6 |   |  |  |  |

|   | CS2 (level 2) |   |   |  |   |   |   |   |  |  |  |  |
|---|---------------|---|---|--|---|---|---|---|--|--|--|--|
|   | 7             |   | 3 |  | 2 | 6 | 5 |   |  |  |  |  |
|   |               |   | 6 |  |   | 9 |   | 7 |  |  |  |  |
| 6 | 4             |   | 9 |  | 8 |   | 2 |   |  |  |  |  |
|   |               | 9 |   |  |   | 7 | 6 | 5 |  |  |  |  |
|   |               |   |   |  |   |   |   |   |  |  |  |  |
| 7 | 5             | 6 |   |  |   | 4 |   | 2 |  |  |  |  |
| 2 | 9             |   | 5 |  |   |   | 7 | 6 |  |  |  |  |
|   |               |   | 2 |  | 1 | 5 |   | 3 |  |  |  |  |
|   |               | 4 |   |  | 7 |   | 1 |   |  |  |  |  |

|   | CS3 (level 2) |   |   |  |   |   |   |   |  |  |  |  |
|---|---------------|---|---|--|---|---|---|---|--|--|--|--|
|   | 5             |   | 8 |  | 7 | 1 |   |   |  |  |  |  |
|   |               | 3 | 5 |  |   |   |   |   |  |  |  |  |
| 7 | 8             |   | 2 |  | 1 |   | 5 | 6 |  |  |  |  |
|   | 3             | 4 |   |  |   | 8 |   | 1 |  |  |  |  |
|   |               |   |   |  |   |   |   |   |  |  |  |  |
| 8 |               | 1 |   |  |   | 5 | 6 |   |  |  |  |  |
|   | 4             |   | 7 |  | 6 |   | 1 | 2 |  |  |  |  |
|   |               |   | 4 |  | 3 | 6 |   | 8 |  |  |  |  |
|   | 7             | 8 | 1 |  |   | 3 | 4 |   |  |  |  |  |

SM5 (medium) 

|   |   |   | SM10 | ) (med | lium) |   |   |   |
|---|---|---|------|--------|-------|---|---|---|
|   |   | 5 | 7    |        | 8     | 2 |   |   |
| 4 |   |   |      |        |       |   |   | 6 |
|   | 7 |   |      | 6      |       |   | 8 |   |
| 5 | 2 |   | 9    |        | 4     |   | 3 | 1 |
|   |   |   |      |        |       |   |   |   |
| 8 | 6 |   | 1    |        | 7     |   | 5 | 4 |
|   | 9 |   |      | 3      |       |   | 6 |   |
| 7 |   |   |      |        |       |   |   | 5 |
|   |   | 2 | 4    |        | 6     | 1 |   |   |

|   |   |   | SM1 | 5 (med | lium) |   |   |   |
|---|---|---|-----|--------|-------|---|---|---|
| 8 | 5 |   |     |        | 4     |   |   | 2 |
| 4 |   |   |     | 2      |       | 9 |   |   |
|   |   |   | 8   |        |       |   | 7 |   |
|   |   | 6 |     |        |       |   |   | 1 |
|   | 4 |   |     | 8      |       |   | 3 |   |
| 2 |   |   |     |        |       | 5 |   |   |
|   | 3 | 4 |     |        | 7     |   |   |   |
|   | 8 | 7 |     | 9      |       |   |   | 6 |
| 6 |   |   | 1   |        |       |   | 4 | 7 |

|   |   |   | SM20 | ) (med | lium) |   |   |   |
|---|---|---|------|--------|-------|---|---|---|
|   |   | 3 | 4    |        | 2     |   | 9 | 7 |
|   |   | 4 |      |        |       |   | 2 |   |
|   | 7 |   | 6    |        |       |   |   | 8 |
|   |   |   |      | 9      |       |   |   |   |
|   | 3 | 8 |      |        |       | 4 | 7 |   |
|   |   |   |      | 1      |       |   |   |   |
| 4 |   |   |      |        | 5     |   | 1 |   |
|   | 5 |   |      |        |       | 6 |   |   |
| 7 | 2 |   | 3    |        | 1     | 9 |   |   |

SM25 (medium) 

| SM30 (medium) |   |   |   |   |   |   |   |   |  |  |  |
|---------------|---|---|---|---|---|---|---|---|--|--|--|
|               |   | 5 | 8 |   |   |   |   |   |  |  |  |
|               |   |   |   | 7 | 9 |   |   |   |  |  |  |
|               |   | 4 | 6 | 1 |   |   | 7 |   |  |  |  |
|               | 5 |   | 3 |   |   |   |   | 4 |  |  |  |
|               | 2 | 3 |   |   |   | 6 | 5 |   |  |  |  |
| 9             |   |   |   |   | 8 |   | 3 |   |  |  |  |
|               | 3 |   |   | 5 | 7 | 2 |   |   |  |  |  |
|               |   |   | 4 | 2 |   |   |   |   |  |  |  |
|               |   |   |   |   | 6 | 1 |   |   |  |  |  |

|   |   | TM35 | (mod | erate) |   |   |
|---|---|------|------|--------|---|---|
| 5 |   | 3    |      | 8      |   | 6 |
|   | 4 |      | 5    |        | 8 |   |
| 2 | 8 |      |      |        | 1 | 5 |
|   | 6 | 2    |      | 7      | 4 |   |
|   |   |      |      |        |   |   |
|   | 9 | 4    |      | 3      | 2 |   |
| 9 | 5 |      |      |        | 6 | 4 |
|   | 2 |      | 1    |        | 9 |   |
| 1 |   | 8    |      | 9      |   | 2 |

|   |   |   | TM40 | (mod | erate) |   |   |   |
|---|---|---|------|------|--------|---|---|---|
|   |   |   | 1    |      |        |   | 9 | 2 |
| 9 |   |   |      | 7    |        |   | 3 | 6 |
| 3 |   |   |      |      | 2      |   |   |   |
|   | 3 |   |      |      |        | 7 |   | 9 |
|   | 8 |   | 9    |      | 5      |   | 6 |   |
| 4 |   | 5 |      |      |        |   | 8 |   |
|   |   |   | 8    |      |        |   |   | 5 |
| 5 | 4 |   |      | 2    |        |   |   | 7 |
| 1 | 2 |   |      |      | 3      |   |   |   |

TM45 (moderate) 

|   |   | TM50 | $\pmod{m}$ | erate) |   |   |
|---|---|------|------------|--------|---|---|
|   |   | 9    |            | 2      |   | 4 |
| 4 |   | 3    |            | 5      |   |   |
| 3 |   |      |            |        | 7 | 6 |
| 6 |   | 8    |            |        | 3 |   |
| 1 | 3 |      |            |        | 9 | 7 |
|   | 9 |      |            | 7      |   | 2 |
| 9 | 5 |      |            |        |   | 8 |
|   |   | 2    |            | 9      |   | 1 |
| 2 |   | 7    |            | 4      |   |   |

|   |   |   | TM55 | (mod | erate) |   |   |   |
|---|---|---|------|------|--------|---|---|---|
| 7 |   |   |      |      |        |   |   |   |
| 2 | 4 |   | 1    |      | 8      |   |   |   |
|   | 6 |   |      | 7    | 2      |   |   | 3 |
|   |   | 4 |      | 2    | 9      |   | 8 |   |
|   | 7 |   |      |      |        |   | 6 |   |
|   | 9 |   | 4    | 6    |        | 7 |   |   |
| 1 |   |   | 6    | 8    |        |   | 3 |   |
|   |   |   | 3    |      | 7      |   | 9 | 1 |
|   |   |   |      |      |        |   |   | 6 |

|   |   |   | TM60 | (mod | erate) |   |   |   |
|---|---|---|------|------|--------|---|---|---|
| 7 | 2 | 4 |      | 9    |        | 5 |   |   |
|   | 5 |   |      | 2    |        |   |   | 8 |
|   | 8 |   | 5    |      | 7      |   |   |   |
|   |   |   | 7    |      |        | 6 | 4 |   |
|   |   |   |      | 8    |        |   |   |   |
|   | 7 | 9 |      |      | 6      |   |   |   |
|   |   |   | 8    |      | 5      |   | 2 |   |
| 6 |   |   |      | 4    |        |   | 8 |   |
|   |   | 8 |      | 3    |        | 1 | 7 | 4 |

ST0914 (2 stars) 

|   | ST0207 (2 stars) |   |   |   |   |   |   |   |  |  |  |
|---|------------------|---|---|---|---|---|---|---|--|--|--|
|   |                  |   |   |   |   |   | 4 | 6 |  |  |  |
| 5 |                  |   | 8 |   | 9 |   | 7 | 3 |  |  |  |
|   |                  |   | 6 |   |   | 5 |   | 1 |  |  |  |
|   | 5                | 9 | 2 |   |   | 1 |   |   |  |  |  |
| 6 |                  |   |   | 1 |   |   |   | 7 |  |  |  |
|   |                  | 3 |   |   | 7 | 8 | 5 |   |  |  |  |
| 2 |                  | 5 |   |   | 6 |   |   |   |  |  |  |
| 1 | 9                |   | 7 |   | 5 |   |   | 8 |  |  |  |
| 3 | 4                |   |   |   |   |   |   |   |  |  |  |

|   | CS4 (level 4) |   |   |  |   |   |   |   |  |  |  |  |
|---|---------------|---|---|--|---|---|---|---|--|--|--|--|
|   |               |   | 4 |  | 5 | 9 | 7 |   |  |  |  |  |
|   |               | 6 | 7 |  | 8 | 3 |   | 2 |  |  |  |  |
| 7 | 8             |   | 1 |  | 2 |   | 4 | 5 |  |  |  |  |
| 8 | 9             | 1 |   |  |   | 7 | 5 |   |  |  |  |  |
|   |               |   |   |  |   |   |   |   |  |  |  |  |
| 5 | 6             | 7 |   |  |   | 4 | 2 | 3 |  |  |  |  |
|   | 1             |   |   |  | 4 |   | 6 | 7 |  |  |  |  |
|   |               | 8 | 9 |  | 1 | 5 |   |   |  |  |  |  |
|   | 4             |   |   |  |   | 2 | 9 |   |  |  |  |  |

|   |   |   | CS | 5 (leve | 1 4) |   |   |   |
|---|---|---|----|---------|------|---|---|---|
|   |   |   | 6  |         |      | 9 | 7 | 8 |
|   |   | 4 | 9  | 8       |      |   |   | 2 |
|   | 9 | 7 |    | 2       | 1    |   |   |   |
|   |   | 8 | 4  |         | 2    | 7 |   |   |
|   | 7 |   |    |         |      |   | 2 | 3 |
| 3 |   |   |    | 6       |      |   |   | 9 |
| 7 |   | 6 |    |         | 9    | 5 |   |   |
|   |   |   | 8  | 7       |      |   |   | 1 |
|   | 2 |   |    | 4       |      | 8 | 6 | 7 |

|   | CS6 (level 4) |   |   |  |   |   |   |   |  |  |  |  |
|---|---------------|---|---|--|---|---|---|---|--|--|--|--|
|   | 1             | 2 | 6 |  | 4 |   | 7 |   |  |  |  |  |
| 6 |               | 5 |   |  | 7 | 3 |   | 2 |  |  |  |  |
|   | 7             |   | 3 |  | 1 |   | 4 |   |  |  |  |  |
| 7 | 5             | 6 |   |  |   | 4 | 2 | 3 |  |  |  |  |
|   |               |   |   |  |   |   |   |   |  |  |  |  |
| 1 | 8             |   |   |  |   |   |   | 6 |  |  |  |  |
|   | 3             |   | 8 |  | 6 |   |   | 1 |  |  |  |  |
| 2 |               | 1 |   |  |   |   |   | 7 |  |  |  |  |
|   |               | 7 | 2 |  |   |   | 3 |   |  |  |  |  |

|   | SH5 (hard)  9 |   |   |  |   |   |   |   |  |  |
|---|---------------|---|---|--|---|---|---|---|--|--|
|   |               | 9 |   |  | 5 |   |   |   |  |  |
| 4 | 7             |   |   |  | 2 |   |   |   |  |  |
|   | 8             | 3 | 6 |  | 4 |   | 1 |   |  |  |
|   | 1             | 5 |   |  |   |   | 8 |   |  |  |
|   |               |   | 3 |  | 7 |   |   |   |  |  |
|   | 2             |   |   |  |   | 7 | 4 |   |  |  |
|   | 4             |   | 5 |  | 1 | 8 | 7 |   |  |  |
|   |               |   | 7 |  |   |   | 5 | 2 |  |  |
|   |               |   | 2 |  |   | 1 |   |   |  |  |

|   |   | SH | 10 (ha | rd) |   |   |
|---|---|----|--------|-----|---|---|
|   | 3 | 9  | 2      | 1   |   | 5 |
| 1 | 5 | 8  | 3      |     |   |   |
|   |   |    |        |     |   |   |
| 5 | 9 |    |        |     |   | 4 |
| 3 | 7 |    |        |     | 8 | 1 |
| 6 |   |    |        |     | 5 | 3 |
|   |   |    |        |     |   |   |
|   |   |    | 1      | 9   | 2 | 6 |
| 9 |   | 5  | 7      | 4   | 1 |   |

|   |   |   | SH | 15 (ha | rd) |   |   |   |
|---|---|---|----|--------|-----|---|---|---|
| 2 |   |   | 9  |        |     |   |   |   |
|   | 7 |   |    | 6      |     |   | 5 | 9 |
|   |   |   | 4  |        |     |   | 6 | 1 |
| 7 |   | 1 |    |        | 2   |   |   | 4 |
|   |   |   |    | 4      |     |   |   |   |
| 8 |   |   | 1  |        |     | 9 |   | 6 |
| 1 | 2 |   |    |        | 3   |   |   |   |
| 5 | 3 |   |    | 2      |     |   | 7 |   |
|   |   |   |    |        | 9   |   |   | 2 |

|   |   |   | SH | 20 (ha | rd) |   |   |   |
|---|---|---|----|--------|-----|---|---|---|
|   | 6 |   | 2  |        |     |   | 3 |   |
| 9 |   |   |    | 3      |     |   |   | 1 |
|   |   |   |    | 9      |     | 2 |   |   |
| 1 |   |   | 7  |        |     |   |   |   |
|   | 3 | 2 |    |        |     | 4 | 6 |   |
|   |   |   |    |        | 4   |   |   | 2 |
|   |   | 7 |    | 4      |     |   |   |   |
| 2 |   |   |    | 5      |     |   |   | 8 |
|   | 4 |   |    |        | 6   |   | 5 |   |

|   |   |   | SH | 25 (ha | rd) |   |   |   |
|---|---|---|----|--------|-----|---|---|---|
| 4 |   |   |    |        | 1   |   |   | 8 |
|   |   | 7 |    | 3      | 8   | 4 | 5 |   |
|   |   | 2 | 4  |        |     |   | 1 |   |
| 2 | 8 |   | 9  |        |     |   |   |   |
|   |   | 4 |    |        |     | 5 |   |   |
|   |   |   |    |        | 4   |   | 8 | 6 |
|   | 4 |   |    |        | 9   | 2 |   |   |
|   | 2 | 1 | 3  | 4      |     | 8 |   |   |
| 9 |   |   | 6  |        |     |   |   | 1 |

SH30 (hard) 

TT100 (tough) 

|   |   |   | TT1 | 05 (to | ugh) |   |   |   |
|---|---|---|-----|--------|------|---|---|---|
|   |   | 5 |     | 7      |      |   | 4 | 6 |
| 6 |   |   | 2   | 5      |      |   |   |   |
|   | 3 |   |     |        | 6    |   |   |   |
| 2 |   |   | 7   |        |      |   |   |   |
|   | 7 | 8 |     |        |      | 3 | 5 |   |
|   |   |   |     |        | 1    |   |   | 7 |
|   |   |   | 8   |        |      |   | 2 |   |
|   |   |   |     | 9      | 7    |   |   | 5 |
| 8 | 1 |   |     | 2      |      | 9 |   |   |

| TT110 (tough) |   |   |   |   |   |   |   |   |
|---------------|---|---|---|---|---|---|---|---|
|               | 7 | 9 |   | 1 |   |   |   |   |
|               | 4 |   | 5 |   |   |   |   | 7 |
| 1             |   |   | 6 |   |   |   |   |   |
| 9             | 3 | 6 | 8 |   |   | 1 |   |   |
|               |   | 4 |   |   |   | 9 |   |   |
|               |   | 7 |   |   | 4 | 6 | 3 | 2 |
|               |   |   |   |   | 8 |   |   | 1 |
| 5             |   |   |   |   | 6 |   | 9 |   |
|               |   |   |   | 4 |   | 8 | 2 |   |

TT115 (tough) 

TT120 (tough) 

| ST1130 (3 stars) |   |   |   |   |   |   |   |   |
|------------------|---|---|---|---|---|---|---|---|
| 8                |   |   | 3 | 5 | 6 |   |   |   |
| 5                |   |   |   |   | 4 |   | 1 |   |
| 3                | 4 |   |   |   |   |   |   |   |
| 7                |   | 1 | 5 | 6 |   |   | 2 |   |
|                  | 6 |   |   |   |   |   | 7 |   |
|                  | 2 |   |   | 7 | 9 | 6 |   | 5 |
|                  |   |   |   |   |   |   | 3 | 2 |
|                  | 9 |   | 4 |   |   |   |   | 8 |
|                  |   |   | 6 | 8 | 2 |   |   | 9 |

|   |   |   | ST12 | 07 (3 s | stars) |   |   |   |
|---|---|---|------|---------|--------|---|---|---|
|   |   |   | 4    | 8       | 3      |   |   | 6 |
|   |   |   |      |         | 5      | 7 |   | 2 |
|   |   |   |      |         |        | 3 | 8 |   |
|   |   | 8 |      |         | 1      | 6 |   |   |
|   | 2 | 6 |      | 5       |        | 1 | 7 |   |
|   |   | 5 | 7    |         |        | 2 |   |   |
|   | 8 | 2 |      |         |        |   |   |   |
| 9 |   | 1 | 8    |         |        |   |   |   |
| 4 |   |   | 5    | 2       | 7      |   |   |   |

ST1209 (5 stars) 

| ST1221 (3 stars) |   |   |   |  |   |   |   |   |
|------------------|---|---|---|--|---|---|---|---|
|                  |   |   |   |  | 3 | 9 | 2 |   |
| 4                |   |   |   |  | 5 |   | 7 |   |
| 2                | 9 |   | 4 |  |   |   | 6 | 3 |
|                  |   | 4 |   |  |   |   | 5 |   |
|                  |   |   | 2 |  | 1 |   |   |   |
|                  | 5 |   |   |  |   | 3 |   |   |
| 7                | 4 |   |   |  | 2 |   | 9 | 6 |
|                  | 6 |   | 5 |  |   |   |   | 7 |
|                  | 2 | 1 | 7 |  |   |   |   |   |

|   |   |   | ST12 | 28 (3 : | stars) |   |   |   |
|---|---|---|------|---------|--------|---|---|---|
| 6 |   |   | 1    |         |        | 5 |   |   |
|   |   |   |      |         |        | 3 | 7 | 9 |
|   | 9 | 4 | 2    |         |        |   |   |   |
|   |   | 5 |      |         |        | 8 |   | 3 |
|   | 4 |   |      |         |        |   | 9 |   |
| 9 |   | 7 |      |         |        | 6 |   |   |
|   |   |   |      |         | 6      | 2 | 3 |   |
| 1 | 3 | 8 |      |         |        |   |   |   |
|   |   | 6 |      |         | 8      |   |   | 7 |

|   |   |   | ST01 | 26 (4) | stars) |   |   |   |
|---|---|---|------|--------|--------|---|---|---|
|   |   | 3 | 6    |        |        |   | 7 |   |
| 1 |   |   |      | 3      | 5      | 2 |   |   |
|   |   | 4 |      |        |        |   |   |   |
|   |   | 6 |      |        |        |   | 2 | 9 |
| 7 |   |   |      |        |        |   |   | 4 |
| 3 | 2 |   |      |        |        | 5 |   |   |
|   |   |   |      |        |        | 1 |   |   |
|   |   | 8 | 2    | 4      |        |   |   | 5 |
|   | 4 |   |      |        | 9      | 3 |   |   |

ST0127 (5 stars) 

|   | ST0204 (6 stars) |   |   |   |   |   |   |   |
|---|------------------|---|---|---|---|---|---|---|
|   | 5                |   |   | 2 |   | 8 |   | 6 |
|   |                  |   |   |   | 6 |   |   | 3 |
|   | 6                |   |   | 1 | 3 | 2 |   |   |
|   | 7                |   |   |   |   | 9 | 6 |   |
| 4 |                  |   |   |   |   |   |   | 1 |
|   | 1                | 6 |   |   |   |   | 3 |   |
|   |                  | 7 | 2 | 3 |   |   | 8 |   |
| 6 |                  |   | 7 |   |   |   |   |   |
| 2 |                  | 4 |   | 9 |   |   | 7 |   |

| ST0208 (3 stars) |   |   |   |   |   |   |   |   |
|------------------|---|---|---|---|---|---|---|---|
| 2                | 1 |   | 9 |   |   |   |   | 7 |
| 5                |   | 9 |   |   | 4 | 2 | 1 |   |
|                  |   | 7 |   |   |   |   |   |   |
|                  |   | 8 | 7 | 5 |   |   |   |   |
| 3                |   | 1 | 4 |   | 9 | 5 |   | 8 |
|                  |   |   |   | 3 | 6 | 1 |   |   |
|                  |   |   |   |   |   | 4 |   |   |
|                  | 3 | 2 | 5 |   |   | 9 |   | 1 |
| 1                |   |   |   |   | 8 |   | 2 | 5 |

|   |   |   | ST02 | 09 (4 s | stars) |   |   |   |
|---|---|---|------|---------|--------|---|---|---|
|   |   | 9 |      |         |        |   |   |   |
|   | 5 | 2 | 3    |         | 1      |   |   |   |
| 8 |   | 1 | 2    |         | 6      |   |   |   |
|   |   | 4 |      |         |        |   | 1 |   |
| 9 | 7 |   |      | 2       |        |   | 8 | 4 |
|   | 2 |   |      |         |        | 9 |   |   |
|   |   |   | 8    |         | 4      | 1 |   | 5 |
|   |   |   | 6    |         | 5      | 2 | 4 |   |
|   |   |   |      |         |        | 8 |   |   |

| SE5 | easv | so | lution    |
|-----|------|----|-----------|
|     | CCC. |    | LCLUICII, |

| 7 | 2 | 4 | 1 | 9 | 5 | 8 | 6 | 3 |
|---|---|---|---|---|---|---|---|---|
| 5 | 6 | 1 | 2 | 8 | 3 | 4 | 9 | 7 |
| 9 | 3 | 8 | 6 | 4 | 7 | 2 | 5 | 1 |
| 1 | 8 | 9 | 7 | 5 | 6 | 3 | 2 | 4 |
| 2 | 5 | 6 | 3 | 1 | 4 | 7 | 8 | 9 |
| 4 | 7 | 3 | 9 | 2 | 8 | 6 | 1 | 5 |
| 6 | 4 | 5 | 8 | 3 | 9 | 1 | 7 | 2 |
| 8 | 9 | 2 | 4 | 7 | 1 | 5 | 3 | 6 |
| 3 | 1 | 7 | 5 | 6 | 2 | 9 | 4 | 8 |

SE10 (easy solution)

| 1 | 5 | 6 | 3 | 4 | 9 | 7 | 8 | 2 |
|---|---|---|---|---|---|---|---|---|
| 4 | 8 | 2 | 7 | 1 | 5 | 6 | 3 | 9 |
| 7 | 9 | 3 | 2 | 8 | 6 | 1 | 4 | 5 |
| 6 | 4 | 9 | 8 | 5 | 3 | 2 | 7 | 1 |
| 2 | 1 | 7 | 9 | 6 | 4 | 3 | 5 | 8 |
| 8 | 3 | 5 | 1 | 7 | 2 | 4 | 9 | 6 |
| 5 | 2 | 4 | 6 | 9 | 7 | 8 | 1 | 3 |
| 3 | 7 | 1 | 5 | 2 | 8 | 9 | 6 | 4 |
| 9 | 6 | 8 | 4 | 3 | 1 | 5 | 2 | 7 |

SE15 (easy solution)

| 4 | 5 | 6 | 7 | 1 | 3 | 9 | 8 | 2 |
|---|---|---|---|---|---|---|---|---|
| 2 | 3 | 1 | 6 | 9 | 8 | 4 | 7 | 5 |
| 8 | 7 | 9 | 2 | 5 | 4 | 6 | 3 | 1 |
| 5 | 9 | 7 | 8 | 4 | 6 | 2 | 1 | 3 |
| 1 | 2 | 4 | 9 | 3 | 5 | 8 | 6 | 7 |
| 3 | 6 | 8 | 1 | 7 | 2 | 5 | 4 | 9 |
| 6 | 4 | 3 | 5 | 2 | 7 | 1 | 9 | 8 |
| 7 | 1 | 2 | 4 | 8 | 9 | 3 | 5 | 6 |
| 9 | 8 | 5 | 3 | 6 | 1 | 7 | 2 | 4 |

| SE20   | /     | 1     | L: \ | ١ |
|--------|-------|-------|------|---|
| 3 E ZU | Leasv | SOIII | EION | 1 |

|   |   |   | 0 (0 | asy i | orac | 1011) |   |   |
|---|---|---|------|-------|------|-------|---|---|
| 3 | 6 | 8 | 9    | 1     | 2    | 5     | 4 | 7 |
| 9 | 7 | 5 | 4    | 3     | 8    | 6     | 2 | 1 |
| 4 | 1 | 2 | 6    | 5     | 7    | 8     | 3 | 9 |
| 2 | 9 | 1 | 5    | 4     | 3    | 7     | 6 | 8 |
| 7 | 8 | 3 | 2    | 9     | 6    | 4     | 1 | 4 |
| 5 | 4 | 6 | 7    | 8     | 1    | 2     | 9 | 3 |
| 6 | 5 | 7 | 1    | 2     | 9    | 3     | 8 | 4 |
| 1 | 3 | 4 | 8    | 6     | 5    | 9     | 7 | 2 |
| 8 | 2 | 9 | 3    | 7     | 4    | 1     | 5 | 6 |

### SE25 (easy solution)

|   |   |   | - ( - |   |   | - / |   |   |
|---|---|---|-------|---|---|-----|---|---|
| 2 | 7 | 8 | 9     | 6 | 3 | 1   | 5 | 4 |
| 6 | 4 | 5 | 7     | 1 | 2 | 8   | 3 | 9 |
| 9 | 3 | 1 | 8     | 5 | 4 | 2   | 7 | 6 |
| 8 | 2 | 3 | 6     | 4 | 1 | 7   | 9 | 5 |
| 1 | 5 | 9 | 3     | 8 | 7 | 4   | 6 | 2 |
| 7 | 6 | 4 | 2     | 9 | 5 | 3   | 8 | 1 |
| 4 | 8 | 2 | 5     | 7 | 9 | 6   | 1 | 3 |
| 3 | 9 | 7 | 1     | 2 | 6 | 5   | 4 | 8 |
| 5 | 1 | 6 | 4     | 3 | 8 | 9   | 2 | 7 |

### SE30 (easy solution)

| 4 | 3 | 6 | 1 | 2 | 9 | 8 | 7 | 5 |
|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 8 | 7 | 5 | 3 | 4 | 9 | 6 |
| 7 | 5 | 9 | 8 | 6 | 4 | 3 | 2 | 1 |
| 5 | 1 | 4 | 2 | 8 | 7 | 6 | 3 | 9 |
| 6 | 7 | 3 | 5 | 9 | 1 | 2 | 8 | 4 |
| 8 | 9 | 2 | 3 | 4 | 6 | 5 | 1 | 7 |
| 9 | 4 | 1 | 6 | 3 | 8 | 7 | 5 | 2 |
| 3 | 6 | 5 | 9 | 7 | 2 | 1 | 4 | 8 |
| 2 | 8 | 7 | 4 | 1 | 5 | 9 | 6 | 3 |

34 SOLUTIONS

|   | r  | $\Gamma$ G5 | (ge   | ntle | solu | tion | ) |   |
|---|----|-------------|-------|------|------|------|---|---|
| 7 | 6  | 4           | 1     | 5    | 9    | 3    | 8 | 2 |
| 5 | 1  | 9           | 2     | 3    | 8    | 7    | 4 | 6 |
| 8 | 2  | 3           | 6     | 7    | 4    | 9    | 5 | 1 |
| 4 | 5  | 7           | 9     | 8    | 2    | 6    | 1 | 3 |
| 9 | 3  | 6           | 7     | 1    | 5    | 4    | 2 | 8 |
| 2 | 8  | 1           | 4     | 6    | 3    | 5    | 9 | 7 |
| 1 | 4  | 2           | 3     | 9    | 7    | 8    | 6 | 5 |
| 6 | 7  | 5           | 8     | 4    | 1    | 2    | 3 | 9 |
| 3 | 9  | 8           | 5     | 2    | 6    | 1    | 7 | 4 |
|   | 71 | 7015        | . (ma | tla  | aslı |      | ) |   |
|   |    |             |       | ntle |      |      |   |   |
| 4 | 6  | 2           | 1     | 9    | 8    | 5    | 7 | 3 |
| 3 | 5  | 7           | 4     | 6    | 2    | 1    | 8 | 9 |
| 9 | 8  | 1           | 5     | 3    | 7    | 4    | 2 | 6 |

|   | Γ | G1( | ) (ge | ntle | solu | ıtion | 1) |   |
|---|---|-----|-------|------|------|-------|----|---|
| 3 | 8 | 2   | 1     | 9    | 6    | 5     | 7  | 4 |
| 4 | 9 | 1   | 5     | 7    | 3    | 8     | 6  | 2 |
| 5 | 6 | 7   | 2     | 4    | 8    | 1     | 3  | 9 |
| 2 | 7 | 8   | 6     | 1    | 4    | 3     | 9  | 5 |
| 9 | 4 | 6   | 3     | 8    | 5    | 2     | 1  | 7 |
| 1 | 3 | 5   | 7     | 2    | 9    | 4     | 8  | 6 |
| 6 | 2 | 4   | 9     | 3    | 1    | 7     | 5  | 8 |
| 7 | 5 | 3   | 8     | 6    | 2    | 9     | 4  | 1 |
| 8 | 1 | 9   | 4     | 5    | 7    | 6     | 2  | 3 |

|   | Γ | G1 | δ (ge | $_{ m ntle}$ | solu | ıtion | ι) |   |
|---|---|----|-------|--------------|------|-------|----|---|
| 4 | 6 | 2  | 1     | 9            | 8    | 5     | 7  | 3 |
| 3 | 5 | 7  | 4     | 6            | 2    | 1     | 8  | 9 |
| 9 | 8 | 1  | 5     | 3            | 7    | 4     | 2  | 6 |
| 2 | 3 | 6  | 7     | 4            | 1    | 9     | 5  | 8 |
| 1 | 7 | 5  | 9     | 8            | 6    | 3     | 4  | 2 |
| 8 | 9 | 4  | 2     | 5            | 3    | 6     | 1  | 7 |
| 7 | 2 | 3  | 6     | 1            | 5    | 8     | 9  | 4 |
| 6 | 1 | 9  | 8     | 2            | 4    | 7     | 3  | 5 |
| 5 | 4 | 8  | 3     | 7            | 9    | 2     | 6  | 1 |

| TG20 (gentle solution) |   |   |   |   |   |   |   |   |  |  |
|------------------------|---|---|---|---|---|---|---|---|--|--|
| 2                      | 5 | 6 | 7 | 8 | 9 | 4 | 3 | 1 |  |  |
| 4                      | 8 | 1 | 3 | 2 | 6 | 7 | 5 | 9 |  |  |
| 7                      | 3 | 9 | 4 | 1 | 5 | 6 | 2 | 8 |  |  |
| 5                      | 9 | 4 | 2 | 6 | 1 | 8 | 7 | 3 |  |  |
| 1                      | 6 | 7 | 9 | 3 | 8 | 2 | 4 | 5 |  |  |
| 8                      | 2 | 3 | 5 | 7 | 4 | 1 | 9 | 6 |  |  |
| 9                      | 1 | 2 | 6 | 4 | 3 | 5 | 8 | 7 |  |  |
| 6                      | 4 | 5 | 8 | 9 | 7 | 3 | 1 | 2 |  |  |
| 3                      | 7 | 8 | 1 | 5 | 2 | 9 | 6 | 4 |  |  |

|   | Γ | G2 | δ (ge | ntle | solu | ition | 1) |   |
|---|---|----|-------|------|------|-------|----|---|
| 7 | 8 | 2  | 4     | 6    | 3    | 5     | 1  | 9 |
| 4 | 6 | 1  | 2     | 9    | 5    | 3     | 7  | 8 |
| 3 | 9 | 5  | 7     | 8    | 1    | 2     | 4  | 6 |
| 8 | 1 | 9  | 5     | 2    | 7    | 4     | 6  | 3 |
| 6 | 3 | 4  | 9     | 1    | 8    | 7     | 5  | 2 |
| 5 | 2 | 7  | 3     | 4    | 6    | 8     | 9  | 1 |
| 2 | 5 | 6  | 8     | 7    | 2    | 9     | 3  | 4 |
| 9 | 7 | 8  | 1     | 3    | 4    | 6     | 2  | 5 |
| 2 | 4 | 3  | 6     | 5    | 9    | 1     | 8  | 7 |

|   | TG30 (gentle solution) |   |   |   |   |   |   |   |  |  |  |  |
|---|------------------------|---|---|---|---|---|---|---|--|--|--|--|
| 3 | 7                      | 6 | 4 | 1 | 8 | 5 | 2 | 9 |  |  |  |  |
| 9 | 2                      | 8 | 7 | 5 | 6 | 1 | 3 | 4 |  |  |  |  |
| 1 | 5                      | 4 | 9 | 2 | 3 | 6 | 7 | 8 |  |  |  |  |
| 7 | 4                      | 9 | 1 | 3 | 2 | 8 | 6 | 5 |  |  |  |  |
| 6 | 1                      | 2 | 5 | 8 | 4 | 7 | 9 | 3 |  |  |  |  |
| 8 | 3                      | 5 | 6 | 9 | 7 | 2 | 4 | 1 |  |  |  |  |
| 5 | 9                      | 7 | 3 | 6 | 1 | 4 | 8 | 2 |  |  |  |  |
| 4 | 8                      | 3 | 2 | 7 | 5 | 9 | 1 | 6 |  |  |  |  |
| 2 | 6                      | 1 | 8 | 4 | 9 | 3 | 5 | 7 |  |  |  |  |

| ST1226 | (1 | star | SO | lution | ١ |
|--------|----|------|----|--------|---|
|        |    |      |    |        |   |

| 9 | 6 | 2 | 8 | 5 | 4 | 7 | 3 | 1 |
|---|---|---|---|---|---|---|---|---|
| 7 | 4 | 5 | 2 | 1 | 3 | 6 | 8 | 9 |
| 1 | 8 | 3 | 9 | 6 | 7 | 4 | 5 | 2 |
| 3 | 2 | 6 | 7 | 4 | 8 | 9 | 1 | 5 |
| 5 | 7 | 1 | 6 | 3 | 9 | 2 | 4 | 8 |
| 4 | 9 | 8 | 1 | 2 | 5 | 3 | 7 | 6 |
| 8 | 3 | 7 | 5 | 9 | 2 | 1 | 6 | 4 |
| 6 | 5 | 9 | 4 | 7 | 1 | 8 | 2 | 3 |
| 2 | 1 | 4 | 3 | 8 | 6 | 5 | 9 | 7 |

### ST0206 (1 star solution)

| 1 | 7 | 6 | 4 | 2 | 9 | 3 | 8 | 5 |
|---|---|---|---|---|---|---|---|---|
| 3 | 5 | 2 | 8 | 1 | 7 | 4 | 9 | 6 |
| 8 | 4 | 9 | 6 | 5 | 3 | 2 | 1 | 7 |
| 4 | 6 | 3 | 9 | 7 | 1 | 8 | 5 | 2 |
| 9 | 2 | 5 | 3 | 8 | 4 | 6 | 7 | 1 |
| 7 | 1 | 8 | 2 | 6 | 5 | 9 | 3 | 4 |
| 2 | 8 | 1 | 5 | 3 | 6 | 7 | 4 | 9 |
| 5 | 3 | 4 | 7 | 9 | 2 | 1 | 6 | 8 |
| 6 | 9 | 7 | 1 | 4 | 8 | 5 | 2 | 3 |

ST0123 (1 star solution)

| 5 | 9 | 4 | 6 | 2 | 1 | 8 | 3 | 7 |
|---|---|---|---|---|---|---|---|---|
| 7 | 3 | 6 | 4 | 8 | 9 | 1 | 2 | 5 |
| 2 | 8 | 1 | 3 | 5 | 7 | 4 | 6 | 9 |
| 3 | 1 | 9 | 2 | 7 | 8 | 6 | 5 | 4 |
| 6 | 5 | 2 | 1 | 3 | 4 | 9 | 7 | 8 |
| 4 | 7 | 8 | 5 | 9 | 6 | 3 | 1 | 2 |
| 9 | 2 | 7 | 8 | 1 | 3 | 5 | 4 | 6 |
| 1 | 4 | 5 | 9 | 6 | 2 | 7 | 8 | 3 |
| 8 | 6 | 3 | 7 | 4 | 5 | 2 | 9 | 1 |

### CS1 (level 2 solution)

|   |   |   | (-0. |   |   |   | , |   |
|---|---|---|------|---|---|---|---|---|
| 5 | 4 | 6 | 9    | 8 | 7 | 3 | 1 | 2 |
| 2 | 1 | 3 | 6    | 5 | 4 | 9 | 7 | 8 |
| 8 | 7 | 9 | 3    | 2 | 1 | 6 | 4 | 5 |
| 6 | 5 | 7 | 1    | 9 | 8 | 4 | 2 | 3 |
| 3 | 2 | 4 | 7    | 6 | 5 | 1 | 8 | 9 |
| 9 | 8 | 1 | 4    | 3 | 2 | 7 | 5 | 6 |
| 4 | 3 | 5 | 8    | 7 | 6 | 2 | 9 | 1 |
| 7 | 6 | 8 | 2    | 1 | 9 | 5 | 3 | 4 |
| 1 | 9 | 2 | 5    | 4 | 3 | 8 | 6 | 7 |

### CS2 (level 2 solution)

|   |   |   | ( |   |   |   | / |   |
|---|---|---|---|---|---|---|---|---|
| 9 | 7 | 8 | 3 | 1 | 2 | 6 | 5 | 4 |
| 3 | 1 | 2 | 6 | 4 | 5 | 9 | 8 | 7 |
| 6 | 4 | 5 | 9 | 7 | 8 | 3 | 2 | 1 |
| 1 | 8 | 9 | 4 | 2 | 3 | 7 | 6 | 5 |
| 4 | 2 | 3 | 7 | 5 | 6 | 1 | 9 | 8 |
| 7 | 5 | 6 | 1 | 8 | 9 | 4 | 3 | 2 |
| 2 | 9 | 1 | 5 | 3 | 4 | 8 | 7 | 6 |
| 8 | 6 | 7 | 2 | 9 | 1 | 5 | 4 | 3 |
| 5 | 3 | 4 | 8 | 6 | 7 | 2 | 1 | 9 |

### CS3 (level 2 solution)

| 4 | 5 | 6 | 8 | 9 | 7 | 1 | 2 | 3 |
|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 5 | 6 | 4 | 7 | 8 | 9 |
| 7 | 8 | 9 | 2 | 3 | 1 | 4 | 5 | 6 |
| 2 | 3 | 4 | 6 | 7 | 5 | 8 | 9 | 1 |
| 5 | 6 | 7 | 9 | 1 | 8 | 2 | 3 | 4 |
| 8 | 9 | 1 | 3 | 4 | 2 | 5 | 6 | 7 |
| 3 | 4 | 5 | 7 | 8 | 6 | 9 | 1 | 2 |
| 9 | 1 | 2 | 4 | 5 | 3 | 6 | 7 | 8 |
| 6 | 7 | 8 | 1 | 2 | 9 | 3 | 4 | 5 |

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|   | $\mathbf{S}$ | M5 | (med | lium | sol | ution | n) |   |
|---|--------------|----|------|------|-----|-------|----|---|
| 3 | 8            | 7  | 6    | 9    | 1   | 2     | 4  | 5 |
| 5 | 4            | 6  | 2    | 7    | 3   | 1     | 9  | 8 |
| 9 | 2            | 1  | 4    | 8    | 5   | 6     | 3  | 7 |
| 8 | 6            | 5  | 3    | 4    | 2   | 9     | 7  | 1 |
| 1 | 9            | 3  | 5    | 6    | 7   | 4     | 8  | 2 |
| 2 | 7            | 4  | 9    | 1    | 8   | 3     | 5  | 6 |
| 6 | 1            | 8  | 7    | 3    | 9   | 5     | 2  | 4 |
| 7 | 5            | 9  | 1    | 2    | 4   | 8     | 6  | 3 |
| 4 | 3            | 2  | 8    | 5    | 6   | 7     | 1  | 9 |

|   | SM10 (medium solution) |   |   |   |   |   |   |   |  |  |  |  |
|---|------------------------|---|---|---|---|---|---|---|--|--|--|--|
| 6 | 3                      | 5 | 7 | 4 | 8 | 2 | 1 | 9 |  |  |  |  |
| 4 | 1                      | 8 | 3 | 9 | 2 | 5 | 7 | 6 |  |  |  |  |
| 2 | 7                      | 9 | 5 | 6 | 1 | 4 | 8 | 3 |  |  |  |  |
| 5 | 2                      | 7 | 9 | 8 | 4 | 6 | 3 | 1 |  |  |  |  |
| 9 | 4                      | 1 | 6 | 5 | 3 | 8 | 2 | 7 |  |  |  |  |
| 8 | 6                      | 3 | 1 | 2 | 7 | 9 | 5 | 4 |  |  |  |  |
| 1 | 9                      | 4 | 8 | 3 | 5 | 7 | 6 | 2 |  |  |  |  |
| 7 | 8                      | 6 | 2 | 1 | 9 | 3 | 4 | 5 |  |  |  |  |
| 3 | 5                      | 2 | 4 | 7 | 6 | 1 | 9 | 8 |  |  |  |  |

| SM15 (medium solution)       8     5     3     9     7     4     6     1     2       4     7     1     3     2     6     9     5     8       9     6     2     8     1     5     4     7     3       3     9     6     5     4     2     7     8     1       7     4     5     6     8     1     2     3     9       2     1     8     7     3     9     5     6     4 |   |   |   |   |   |   |   |   |
|--|---|---|---|---|---|---|---|---|
| 8  | 5 | 3 | 9 | 7 | 4 | 6 | 1 | 2 |
| 4  | 7 | 1 | 3 | 2 | 6 | 9 | 5 | 8 |
| 9  | 6 | 2 | 8 | 1 | 5 | 4 | 7 | 3 |
| 3  | 9 | 6 | 5 | 4 | 2 | 7 | 8 | 1 |
| 7  | 4 | 5 | 6 | 8 | 1 | 2 | 3 | 9 |
| 2  | 1 | 8 | 7 | 3 | 9 | 5 | 6 | 4 |
| 1  | 3 | 4 | 2 | 6 | 7 | 8 | 9 | 5 |
| 5  | 8 | 7 | 4 | 9 | 3 | 1 | 2 | 6 |
| 6  | 2 | 9 | 1 | 5 | 8 | 3 | 4 | 7 |

|   | SN | <b>Л</b> 20 | (me | diun | n sol | utio | n) |   |
|---|----|-------------|-----|------|-------|------|----|---|
| 8 | 6  | 3           | 4   | 5    | 2     | 1    | 9  | 7 |
| 5 | 9  | 4           | 1   | 7    | 8     | 3    | 2  | 6 |
| 1 | 7  | 2           | 6   | 3    | 9     | 5    | 4  | 8 |
| 6 | 1  | 7           | 8   | 9    | 4     | 2    | 3  | 5 |
| 9 | 3  | 8           | 5   | 2    | 6     | 4    | 7  | 1 |
| 2 | 3  | 4           | 7   | 1    | 3     | 8    | 6  | 9 |
| 4 | 8  | 9           | 2   | 6    | 5     | 7    | 1  | 3 |
| 3 | 5  | 1           | 9   | 4    | 7     | 6    | 8  | 2 |
| 7 | 2  | 6           | 3   | 8    | 1     | 9    | 5  | 4 |

|   | SM25 (medium solution) |   |   |   |   |   |   |   |  |  |  |  |
|---|------------------------|---|---|---|---|---|---|---|--|--|--|--|
| 3 | 8                      | 2 | 4 | 6 | 7 | 9 | 5 | 1 |  |  |  |  |
| 7 | 1                      | 6 | 9 | 3 | 5 | 2 | 8 | 4 |  |  |  |  |
| 4 | 9                      | 5 | 2 | 1 | 8 | 3 | 7 | 6 |  |  |  |  |
| 5 | 6                      | 4 | 3 | 2 | 9 | 8 | 1 | 7 |  |  |  |  |
| 2 | 7                      | 8 | 6 | 5 | 1 | 4 | 9 | 3 |  |  |  |  |
| 1 | 3                      | 9 | 7 | 8 | 4 | 6 | 2 | 5 |  |  |  |  |
| 9 | 2                      | 7 | 1 | 4 | 6 | 5 | 3 | 8 |  |  |  |  |
| 6 | 5                      | 1 | 8 | 9 | 3 | 7 | 4 | 2 |  |  |  |  |
| 8 | 4                      | 3 | 5 | 7 | 2 | 1 | 6 | 9 |  |  |  |  |

|   | SM30 (medium solution) |   |   |   |   |   |   |   |  |  |  |  |  |
|---|------------------------|---|---|---|---|---|---|---|--|--|--|--|--|
| 7 | 6                      | 5 | 8 | 3 | 4 | 9 | 2 | 1 |  |  |  |  |  |
| 3 | 1                      | 8 | 2 | 7 | 9 | 4 | 6 | 5 |  |  |  |  |  |
| 2 | 9                      | 4 | 6 | 1 | 5 | 3 | 7 | 8 |  |  |  |  |  |
| 6 | 5                      | 7 | 3 | 9 | 2 | 8 | 1 | 4 |  |  |  |  |  |
| 8 | 2                      | 3 | 7 | 4 | 1 | 6 | 5 | 9 |  |  |  |  |  |
| 9 | 4                      | 1 | 5 | 6 | 8 | 7 | 3 | 2 |  |  |  |  |  |
| 4 | 3                      | 9 | 1 | 5 | 7 | 2 | 8 | 6 |  |  |  |  |  |
| 1 | 8                      | 6 | 4 | 2 | 3 | 5 | 9 | 7 |  |  |  |  |  |
| 5 | 7                      | 2 | 9 | 8 | 6 | 1 | 4 | 3 |  |  |  |  |  |

| TM35 | (moderate | solution | ١ |
|------|-----------|----------|---|
|      |           |          |   |

|   |   |   | \ |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
| 5 | 9 | 1 | 3 | 2 | 8 | 7 | 4 | 6 |
| 6 | 7 | 4 | 9 | 5 | 1 | 8 | 2 | 3 |
| 2 | 3 | 8 | 6 | 7 | 4 | 1 | 9 | 5 |
| 3 | 5 | 6 | 2 | 9 | 7 | 4 | 8 | 1 |
| 4 | 2 | 7 | 1 | 8 | 5 | 3 | 6 | 9 |
| 8 | 1 | 9 | 4 | 6 | 3 | 2 | 5 | 7 |
| 9 | 8 | 5 | 7 | 3 | 2 | 6 | 1 | 4 |
| 7 | 4 | 2 | 5 | 1 | 6 | 9 | 3 | 8 |
| 1 | 6 | 3 | 8 | 4 | 9 | 5 | 7 | 2 |

TM40 (moderate solution)

| 8 | 7 | 4 | 1 | 3 | 6 | 5 | 9 | 2 |
|---|---|---|---|---|---|---|---|---|
| 9 | 5 | 2 | 4 | 7 | 8 | 1 | 3 | 6 |
| 3 | 1 | 6 | 5 | 9 | 2 | 8 | 7 | 4 |
| 6 | 3 | 1 | 2 | 8 | 4 | 7 | 5 | 9 |
| 2 | 8 | 7 | 9 | 1 | 5 | 4 | 6 | 3 |
| 4 | 9 | 5 | 3 | 6 | 7 | 2 | 8 | 1 |
| 7 | 6 | 3 | 8 | 4 | 1 | 9 | 2 | 5 |
| 5 | 4 | 8 | 6 | 2 | 9 | 3 | 1 | 7 |
| 1 | 2 | 9 | 7 | 5 | 3 | 6 | 4 | 8 |

TM45 (moderate solution)

| 7 | 1 | 6 | 2 | 4 | 8 | 9 | 3 | 5 |
|---|---|---|---|---|---|---|---|---|
| 5 | 3 | 8 | 7 | 6 | 9 | 4 | 2 | 1 |
| 9 | 2 | 4 | 5 | 3 | 1 | 7 | 8 | 6 |
| 1 | 7 | 9 | 6 | 8 | 3 | 5 | 4 | 2 |
| 6 | 5 | 2 | 9 | 7 | 4 | 8 | 1 | 3 |
| 4 | 8 | 3 | 1 | 5 | 2 | 6 | 7 | 9 |
| 2 | 4 | 1 | 8 | 9 | 6 | 3 | 5 | 7 |
| 8 | 9 | 7 | 3 | 2 | 5 | 1 | 6 | 4 |
| 3 | 6 | 5 | 4 | 1 | 7 | 2 | 9 | 8 |

TM50 (moderate solution)

|   | 111100 |   | (inicacrate se |   |   | /I (I (I ) | - / |   |
|---|--------|---|----------------|---|---|------------|-----|---|
| 7 | 5      | 1 | 9              | 6 | 2 | 8          | 3   | 4 |
| 4 | 6      | 8 | 3              | 7 | 5 | 2          | 1   | 9 |
| 3 | 9      | 2 | 1              | 4 | 8 | 7          | 5   | 6 |
| 6 | 2      | 7 | 8              | 9 | 1 | 3          | 4   | 5 |
| 1 | 4      | 3 | 5              | 2 | 6 | 9          | 8   | 7 |
| 5 | 8      | 9 | 4              | 3 | 7 | 1          | 6   | 2 |
| 9 | 7      | 5 | 6              | 1 | 3 | 4          | 2   | 8 |
| 8 | 3      | 4 | 2              | 5 | 9 | 6          | 7   | 1 |
| 2 | 1      | 6 | 7              | 8 | 4 | 5          | 9   | 3 |

TM55 (moderate solution)

|   |   |   | ( - |   |   |   | - / |   |
|---|---|---|-----|---|---|---|-----|---|
| 7 | 3 | 1 | 9   | 4 | 6 | 5 | 2   | 8 |
| 2 | 4 | 5 | 1   | 3 | 8 | 6 | 7   | 9 |
| 9 | 6 | 8 | 5   | 7 | 2 | 1 | 4   | 3 |
| 6 | 1 | 4 | 7   | 2 | 9 | 3 | 8   | 5 |
| 5 | 7 | 2 | 8   | 1 | 3 | 9 | 6   | 4 |
| 8 | 9 | 3 | 4   | 6 | 5 | 7 | 1   | 2 |
| 1 | 5 | 9 | 6   | 8 | 4 | 2 | 3   | 7 |
| 4 | 2 | 6 | 3   | 5 | 7 | 8 | 9   | 1 |
| 3 | 8 | 7 | 2   | 9 | 1 | 4 | 5   | 6 |

TM60 (moderate solution)

| 7 | 3 | 4 | 1 | 9 | 8 | 5 | 6 | 2 |
|---|---|---|---|---|---|---|---|---|
| 1 | 5 | 6 | 3 | 2 | 4 | 7 | 9 | 8 |
| 9 | 8 | 2 | 5 | 6 | 7 | 4 | 3 | 1 |
| 8 | 1 | 3 | 7 | 5 | 2 | 6 | 4 | 9 |
| 4 | 6 | 5 | 9 | 8 | 3 | 2 | 1 | 7 |
| 2 | 7 | 9 | 4 | 1 | 6 | 8 | 5 | 3 |
| 3 | 4 | 1 | 8 | 7 | 5 | 9 | 2 | 6 |
| 6 | 9 | 7 | 2 | 4 | 1 | 3 | 8 | 5 |
| 5 | 2 | 8 | 6 | 3 | 9 | 1 | 7 | 4 |

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|   | ST0914 (2 star solution) |   |   |   |   |   |   |   |  |  |  |  |
|---|--------------------------|---|---|---|---|---|---|---|--|--|--|--|
| 5 | 6                        | 7 | 2 | 9 | 3 | 1 | 8 | 4 |  |  |  |  |
| 2 | 9                        | 8 | 4 | 6 | 1 | 5 | 3 | 7 |  |  |  |  |
| 4 | 1                        | 3 | 5 | 7 | 8 | 6 | 9 | 2 |  |  |  |  |
| 3 | 2                        | 1 | 7 | 5 | 9 | 4 | 6 | 8 |  |  |  |  |
| 6 | 4                        | 9 | 8 | 1 | 2 | 7 | 5 | 3 |  |  |  |  |
| 7 | 8                        | 5 | 6 | 3 | 4 | 9 | 2 | 1 |  |  |  |  |
| 9 | 3                        | 6 | 1 | 2 | 7 | 8 | 4 | 5 |  |  |  |  |
| 8 | 7                        | 2 | 9 | 4 | 5 | 3 | 1 | 6 |  |  |  |  |
| 1 | 5                        | 4 | 3 | 8 | 6 | 2 | 7 | 9 |  |  |  |  |
|   |                          |   |   |   |   |   |   |   |  |  |  |  |

|   | ST0207 (2 star solution) |   |   |   |   |   |   |   |  |  |  |  |  |
|---|--------------------------|---|---|---|---|---|---|---|--|--|--|--|--|
| 8 | 7                        | 2 | 3 | 5 | 1 | 9 | 4 | 6 |  |  |  |  |  |
| 5 | 6                        | 1 | 8 | 4 | 9 | 2 | 7 | 3 |  |  |  |  |  |
| 9 | 3                        | 4 | 6 | 7 | 2 | 5 | 8 | 1 |  |  |  |  |  |
| 7 | 5                        | 9 | 2 | 8 | 3 | 1 | 6 | 4 |  |  |  |  |  |
| 6 | 2                        | 8 | 5 | 1 | 4 | 3 | 9 | 7 |  |  |  |  |  |
| 4 | 1                        | 3 | 9 | 6 | 7 | 8 | 5 | 2 |  |  |  |  |  |
| 2 | 8                        | 5 | 4 | 3 | 6 | 7 | 1 | 9 |  |  |  |  |  |
| 1 | 9                        | 6 | 7 | 2 | 5 | 4 | 3 | 8 |  |  |  |  |  |
| 3 | 4                        | 7 | 1 | 9 | 8 | 6 | 2 | 5 |  |  |  |  |  |

|   | CS4 (level 8 solution) |   |   |   |   |   |   |   |  |  |  |  |  |
|---|------------------------|---|---|---|---|---|---|---|--|--|--|--|--|
| 1 | 2                      | 3 | 4 | 6 | 5 | 9 | 7 | 8 |  |  |  |  |  |
| 4 | 5                      | 6 | 7 | 9 | 8 | 3 | 1 | 2 |  |  |  |  |  |
| 7 | 8                      | 9 | 1 | 3 | 2 | 6 | 4 | 5 |  |  |  |  |  |
| 8 | 9                      | 1 | 2 | 4 | 3 | 7 | 5 | 6 |  |  |  |  |  |
| 2 | 3                      | 4 | 5 | 7 | 6 | 1 | 8 | 9 |  |  |  |  |  |
| 5 | 6                      | 7 | 8 | 1 | 9 | 4 | 2 | 3 |  |  |  |  |  |
| 9 | 1                      | 2 | 3 | 5 | 4 | 8 | 6 | 7 |  |  |  |  |  |
| 6 | 7                      | 8 | 9 | 2 | 1 | 5 | 3 | 4 |  |  |  |  |  |
| 3 | 4                      | 5 | 6 | 8 | 7 | 2 | 9 | 1 |  |  |  |  |  |

|   | ( | CS5 | (lev | el 8 | solu | tion | ) |   |
|---|---|-----|------|------|------|------|---|---|
| 2 | 3 | 1   | 6    | 5    | 4    | 9    | 7 | 8 |
| 5 | 6 | 4   | 9    | 8    | 7    | 3    | 1 | 2 |
| 8 | 9 | 7   | 3    | 2    | 1    | 6    | 4 | 5 |
| 9 | 1 | 8   | 4    | 3    | 2    | 7    | 5 | 6 |
| 6 | 7 | 5   | 1    | 9    | 8    | 4    | 2 | 3 |
| 3 | 4 | 2   | 7    | 6    | 5    | 1    | 8 | 9 |
| 7 | 8 | 6   | 2    | 1    | 9    | 5    | 3 | 4 |
| 4 | 5 | 3   | 8    | 7    | 6    | 2    | 9 | 1 |
| 1 | 2 | 9   | 5    | 4    | 3    | 8    | 6 | 7 |

| CS6 (level 4 solution) |   |   |   |   |   |   |   |   |  |  |  |
|------------------------|---|---|---|---|---|---|---|---|--|--|--|
| 3                      | 1 | 2 | 6 | 5 | 4 | 9 | 7 | 8 |  |  |  |
| 6                      | 4 | 5 | 9 | 8 | 7 | 3 | 1 | 2 |  |  |  |
| 9                      | 7 | 8 | 3 | 2 | 1 | 6 | 4 | 5 |  |  |  |
| 7                      | 5 | 6 | 1 | 9 | 8 | 4 | 2 | 3 |  |  |  |
| 4                      | 2 | 3 | 7 | 6 | 5 | 1 | 8 | 9 |  |  |  |
| 1                      | 8 | 9 | 4 | 3 | 2 | 7 | 5 | 6 |  |  |  |
| 5                      | 3 | 4 | 8 | 7 | 6 | 2 | 9 | 1 |  |  |  |
| 2                      | 9 | 1 | 5 | 4 | 3 | 8 | 6 | 7 |  |  |  |
| 8                      | 6 | 7 | 2 | 1 | 9 | 5 | 3 | 4 |  |  |  |

|   |   | SH | í (ha | rd s | olut | ion) |   |   |
|---|---|----|-------|------|------|------|---|---|
| 2 | 6 | 9  | 1     | 7    | 5    | 4    | 3 | 8 |
| 4 | 7 | 1  | 8     | 3    | 2    | 9    | 6 | 5 |
| 5 | 8 | 3  | 6     | 9    | 4    | 2    | 1 | 7 |
| 7 | 1 | 5  | 4     | 2    | 6    | 3    | 8 | 9 |
| 8 | 9 | 4  | 3     | 1    | 7    | 5    | 2 | 6 |
| 3 | 2 | 6  | 9     | 5    | 8    | 7    | 4 | 1 |
| 9 | 4 | 2  | 5     | 6    | 1    | 8    | 7 | 3 |
| 1 | 3 | 8  | 7     | 4    | 9    | 6    | 5 | 2 |
| 6 | 5 | 7  | 2     | 8    | 3    | 1    | 9 | 4 |

| SH10 | (hard | solution) |  |
|------|-------|-----------|--|
|      |       |           |  |

| 4 | 3 | 7 | 9 | 2 | 1 | 8 | 6 | 5 |
|---|---|---|---|---|---|---|---|---|
| 1 | 5 | 6 | 8 | 3 | 7 | 4 | 9 | 2 |
| 2 | 8 | 9 | 4 | 5 | 6 | 1 | 3 | 7 |
| 5 | 9 | 8 | 1 | 6 | 3 | 2 | 7 | 4 |
| 3 | 7 | 4 | 2 | 9 | 5 | 6 | 8 | 1 |
| 6 | 2 | 1 | 7 | 4 | 8 | 9 | 5 | 3 |
| 7 | 1 | 3 | 6 | 8 | 2 | 5 | 4 | 9 |
| 8 | 4 | 5 | 3 | 1 | 9 | 7 | 2 | 6 |
| 9 | 6 | 2 | 5 | 7 | 4 | 3 | 1 | 8 |

# SH15 (hard solution)

| 2 | 1 | 6 | 9 | 3 | 5 | 8 | 4 | 7 |
|---|---|---|---|---|---|---|---|---|
| 4 | 7 | 8 | 2 | 6 | 1 | 3 | 5 | 9 |
| 3 | 9 | 5 | 4 | 7 | 8 | 2 | 6 | 1 |
| 7 | 6 | 1 | 3 | 9 | 2 | 5 | 8 | 4 |
| 9 | 5 | 2 | 8 | 4 | 6 | 7 | 1 | 3 |
| 8 | 4 | 3 | 1 | 5 | 7 | 9 | 2 | 6 |
| 1 | 2 | 4 | 7 | 8 | 3 | 6 | 9 | 5 |
| 5 | 3 | 9 | 6 | 2 | 4 | 1 | 7 | 8 |
| 6 | 8 | 7 | 5 | 1 | 9 | 4 | 3 | 2 |

### SH20 (hard solution)

| 4 | 6 | 8 | 2 | 7 | 1 | 9 | 3 | 5 |
|---|---|---|---|---|---|---|---|---|
| 9 | 2 | 5 | 4 | 3 | 8 | 6 | 7 | 1 |
| 7 | 1 | 3 | 6 | 9 | 5 | 2 | 8 | 4 |
| 1 | 5 | 4 | 7 | 6 | 2 | 8 | 9 | 3 |
| 8 | 3 | 2 | 5 | 1 | 9 | 4 | 6 | 7 |
| 6 | 7 | 9 | 3 | 8 | 4 | 5 | 1 | 2 |
| 5 | 8 | 7 | 9 | 4 | 3 | 1 | 2 | 6 |
| 2 | 9 | 6 | 1 | 5 | 7 | 3 | 4 | 8 |
| 3 | 4 | 1 | 8 | 2 | 6 | 7 | 5 | 9 |

#### SH25 (hard solution)

|   |   | 3112 | 0 (11 | ara | JOIU | 1011) |   |   |
|---|---|------|-------|-----|------|-------|---|---|
| 4 | 3 | 9    | 5     | 6   | 1    | 7     | 2 | 8 |
| 1 | 6 | 7    | 2     | 3   | 8    | 4     | 5 | 9 |
| 8 | 5 | 2    | 4     | 9   | 7    | 6     | 1 | 3 |
| 2 | 8 | 6    | 9     | 5   | 3    | 1     | 7 | 4 |
| 7 | 9 | 4    | 8     | 1   | 6    | 5     | 3 | 2 |
| 5 | 1 | 3    | 7     | 2   | 4    | 9     | 8 | 6 |
| 3 | 4 | 8    | 1     | 7   | 9    | 2     | 6 | 5 |
| 6 | 2 | 1    | 3     | 4   | 5    | 8     | 9 | 7 |
| 9 | 7 | 5    | 6     | 8   | 2    | 3     | 4 | 1 |

## SH30 (hard solution)

| 4 | 6 | 1 | 2 | 5 | 8 | 7 | 9 | 3 |
|---|---|---|---|---|---|---|---|---|
| 2 | 5 | 3 | 9 | 1 | 7 | 8 | 4 | 6 |
| 7 | 8 | 9 | 4 | 6 | 3 | 1 | 5 | 2 |
| 3 | 4 | 6 | 7 | 8 | 9 | 5 | 2 | 1 |
| 5 | 7 | 2 | 1 | 4 | 6 | 3 | 8 | 9 |
| 9 | 1 | 8 | 3 | 2 | 5 | 6 | 7 | 4 |
| 8 | 9 | 4 | 6 | 7 | 1 | 2 | 3 | 5 |
| 6 | 3 | 5 | 8 | 9 | 2 | 4 | 1 | 7 |
| 1 | 2 | 7 | 5 | 3 | 4 | 9 | 6 | 8 |

### TT100 (tough solution)

| 5 | 1 | 3 | 8 | 9 | 6 | 4 | 2 | 7 |
|---|---|---|---|---|---|---|---|---|
| 7 | 4 | 2 | 3 | 1 | 5 | 6 | 9 | 8 |
| 9 | 6 | 8 | 7 | 4 | 2 | 5 | 3 | 1 |
| 1 | 5 | 4 | 2 | 8 | 9 | 3 | 7 | 6 |
| 3 | 7 | 6 | 1 | 5 | 4 | 2 | 8 | 9 |
| 2 | 8 | 9 | 6 | 3 | 7 | 1 | 5 | 4 |
| 8 | 9 | 1 | 5 | 6 | 3 | 7 | 4 | 2 |
| 4 | 2 | 5 | 9 | 7 | 1 | 8 | 6 | 3 |
| 6 | 3 | 7 | 4 | 2 | 8 | 9 | 1 | 5 |

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| TT105 (tough solution) |   |   |   |   |   |   |   |   |  |  |  |
|------------------------|---|---|---|---|---|---|---|---|--|--|--|
| 9                      | 2 | 5 | 3 | 7 | 8 | 1 | 4 | 6 |  |  |  |
| 6                      | 8 | 1 | 2 | 5 | 4 | 7 | 9 | 3 |  |  |  |
| 7                      | 3 | 4 | 9 | 1 | 6 | 5 | 8 | 2 |  |  |  |
| 2                      | 5 | 6 | 7 | 3 | 9 | 4 | 1 | 8 |  |  |  |
| 1                      | 7 | 8 | 4 | 6 | 2 | 3 | 5 | 9 |  |  |  |
| 3                      | 4 | 9 | 5 | 8 | 1 | 2 | 6 | 7 |  |  |  |
| 5                      | 9 | 7 | 8 | 4 | 3 | 6 | 2 | 1 |  |  |  |
| 4                      | 6 | 2 | 1 | 9 | 7 | 8 | 3 | 5 |  |  |  |
| 8 1 3 6 2 5 9 7 4      |   |   |   |   |   |   |   |   |  |  |  |
| TT115 (tough solution) |   |   |   |   |   |   |   |   |  |  |  |

| TT110 (tough solution) |   |   |   |   |   |   |   |   |  |  |  |
|------------------------|---|---|---|---|---|---|---|---|--|--|--|
| 3                      | 7 | 9 | 4 | 1 | 2 | 5 | 8 | 6 |  |  |  |
| 6                      | 4 | 8 | 5 | 3 | 9 | 2 | 1 | 7 |  |  |  |
| 1                      | 2 | 5 | 6 | 8 | 7 | 3 | 4 | 9 |  |  |  |
| 9                      | 3 | 6 | 8 | 2 | 5 | 1 | 7 | 4 |  |  |  |
| 2                      | 1 | 4 | 7 | 6 | 3 | 9 | 5 | 8 |  |  |  |
| 8                      | 5 | 7 | 1 | 9 | 4 | 6 | 3 | 2 |  |  |  |
| 4                      | 9 | 2 | 3 | 5 | 8 | 7 | 6 | 1 |  |  |  |
| 5                      | 8 | 1 | 2 | 7 | 6 | 4 | 9 | 3 |  |  |  |
| 7                      | 6 | 3 | 9 | 4 | 1 | 8 | 2 | 5 |  |  |  |

|   | Τ | T11 | 5 (to | ough | sol | utior | 1) |   |
|---|---|-----|-------|------|-----|-------|----|---|
| 4 | 3 | 2   | 7     | 5    | 8   | 1     | 9  | 6 |
| 1 | 9 | 6   | 2     | 4    | 3   | 5     | 8  | 7 |
| 7 | 5 | 8   | 1     | 6    | 9   | 4     | 2  | 3 |
| 9 | 4 | 5   | 6     | 8    | 2   | 3     | 7  | 1 |
| 2 | 6 | 3   | 5     | 7    | 1   | 8     | 4  | 9 |
| 8 | 7 | 1   | 9     | 3    | 4   | 2     | 6  | 5 |
| 3 | 2 | 9   | 4     | 1    | 6   | 7     | 5  | 8 |
| 5 | 8 | 4   | 3     | 9    | 7   | 6     | 1  | 2 |
| 6 | 1 | 7   | 8     | 2    | 5   | 9     | 3  | 4 |

|   | Т | T12 | 0 (to | ough | sol | utio | n) |   |
|---|---|-----|-------|------|-----|------|----|---|
| 9 | 6 | 8   | 2     | 1    | 5   | 7    | 3  | 4 |
| 1 | 4 | 3   | 6     | 7    | 9   | 8    | 5  | 2 |
| 7 | 5 | 2   | 3     | 8    | 4   | 6    | 1  | 9 |
| 4 | 9 | 6   | 5     | 2    | 3   | 1    | 7  | 8 |
| 5 | 3 | 7   | 1     | 9    | 8   | 2    | 4  | 6 |
| 2 | 8 | 1   | 7     | 4    | 6   | 3    | 9  | 5 |
| 8 | 7 | 5   | 9     | 6    | 1   | 4    | 2  | 3 |
| 3 | 1 | 4   | 8     | 5    | 2   | 9    | 6  | 7 |
| 6 | 2 | 9   | 4     | 3    | 7   | 5    | 8  | 1 |

| ST1130 (3 star solution) |   |   |   |   |   |   |   |   |  |
|--------------------------|---|---|---|---|---|---|---|---|--|
| 8                        | 1 | 9 | 3 | 5 | 6 | 2 | 4 | 7 |  |
| 5                        | 7 | 6 | 9 | 2 | 4 | 8 | 1 | 3 |  |
| 3                        | 4 | 2 | 8 | 1 | 7 | 5 | 9 | 6 |  |
| 7                        | 8 | 1 | 5 | 6 | 3 | 9 | 2 | 4 |  |
| 9                        | 6 | 5 | 2 | 4 | 8 | 3 | 7 | 1 |  |
| 4                        | 2 | 3 | 1 | 7 | 9 | 6 | 8 | 5 |  |
| 6                        | 5 | 8 | 7 | 9 | 1 | 4 | 3 | 2 |  |
| 2                        | 9 | 7 | 4 | 3 | 5 | 1 | 6 | 8 |  |
| 1                        | 3 | 4 | 6 | 8 | 2 | 7 | 5 | 9 |  |

|   | S | Γ120 | 7 (3 | sta | r sol | utio | n) |   |
|---|---|------|------|-----|-------|------|----|---|
| 2 | 1 | 7    | 4    | 8   | 3     | 9    | 5  | 6 |
| 8 | 3 | 4    | 6    | 9   | 5     | 7    | 1  | 2 |
| 6 | 5 | 9    | 1    | 7   | 2     | 3    | 8  | 4 |
| 7 | 9 | 8    | 2    | 3   | 1     | 6    | 4  | 5 |
| 3 | 2 | 6    | 9    | 5   | 4     | 1    | 7  | 8 |
| 1 | 4 | 5    | 7    | 6   | 8     | 2    | 3  | 9 |
| 5 | 8 | 2    | 3    | 1   | 9     | 4    | 6  | 7 |
| 9 | 7 | 1    | 8    | 4   | 6     | 5    | 2  | 3 |
| 4 | 6 | 3    | 5    | 2   | 7     | 8    | 9  | 1 |

| 0001000 | / ► |      |    |        | 1 |
|---------|-----|------|----|--------|---|
| ST1209  | (5  | star | SO | lutuor | ı |

| 8 | 3 | 9 | 6 | 5 | 2 | 1 | 4 | 7 |
|---|---|---|---|---|---|---|---|---|
| 2 | 4 | 6 | 7 | 8 | 1 | 3 | 5 | 9 |
| 7 | 5 | 1 | 9 | 4 | 3 | 2 | 6 | 8 |
| 1 | 6 | 7 | 2 | 9 | 5 | 4 | 8 | 3 |
| 5 | 9 | 2 | 4 | 3 | 8 | 7 | 1 | 6 |
| 4 | 8 | 3 | 1 | 6 | 7 | 9 | 2 | 5 |
| 6 | 2 | 8 | 3 | 1 | 9 | 5 | 7 | 4 |
| 3 | 7 | 4 | 5 | 2 | 6 | 8 | 9 | 1 |
| 9 | 1 | 5 | 8 | 7 | 4 | 6 | 3 | 2 |

# ST1221 (3 star solution)

| 5 | 1 | 7 | 8 | 6 | 3 | 9 | 2 | 4 |
|---|---|---|---|---|---|---|---|---|
| 4 | 3 | 6 | 9 | 2 | 5 | 1 | 7 | 8 |
| 2 | 9 | 8 | 4 | 1 | 7 | 5 | 6 | 3 |
| 1 | 7 | 4 | 3 | 8 | 9 | 6 | 5 | 2 |
| 6 | 8 | 3 | 2 | 5 | 1 | 7 | 4 | 9 |
| 9 | 5 | 2 | 6 | 7 | 4 | 3 | 8 | 1 |
| 7 | 4 | 5 | 1 | 3 | 2 | 8 | 9 | 6 |
| 3 | 6 | 9 | 5 | 4 | 8 | 2 | 1 | 7 |
| 8 | 2 | 1 | 7 | 9 | 6 | 4 | 3 | 5 |

# ST1228 (3 star solution)

|   |   |   |   |   |   |   | _/ |   |
|---|---|---|---|---|---|---|----|---|
| 6 | 7 | 3 | 1 | 8 | 9 | 5 | 2  | 4 |
| 8 | 1 | 2 | 6 | 5 | 4 | 3 | 7  | 9 |
| 5 | 9 | 4 | 2 | 7 | 3 | 1 | 8  | 6 |
| 2 | 6 | 5 | 7 | 9 | 1 | 8 | 4  | 3 |
| 3 | 4 | 1 | 8 | 6 | 5 | 7 | 9  | 2 |
| 9 | 8 | 7 | 3 | 4 | 2 | 6 | 5  | 1 |
| 7 | 9 | 5 | 4 | 1 | 6 | 2 | 3  | 8 |
| 1 | 3 | 8 | 9 | 2 | 7 | 4 | 6  | 5 |
| 4 | 2 | 6 | 5 | 3 | 8 | 9 | 1  | 7 |

#### ST0126 (4 star solution)

|   |   |   | ( - |   |   |   | / |   |
|---|---|---|-----|---|---|---|---|---|
| 2 | 5 | 3 | 6   | 9 | 8 | 4 | 7 | 1 |
| 1 | 9 | 7 | 4   | 3 | 5 | 2 | 8 | 6 |
| 8 | 6 | 4 | 1   | 2 | 7 | 9 | 5 | 3 |
| 4 | 1 | 6 | 5   | 7 | 3 | 8 | 2 | 9 |
| 7 | 8 | 5 | 9   | 1 | 2 | 6 | 3 | 4 |
| 3 | 2 | 9 | 8   | 6 | 4 | 5 | 1 | 7 |
| 9 | 7 | 2 | 3   | 5 | 6 | 1 | 4 | 8 |
| 6 | 3 | 8 | 2   | 4 | 1 | 7 | 9 | 5 |
| 5 | 4 | 1 | 7   | 8 | 9 | 3 | 6 | 2 |

## ST0127 (5 star solution)

| 2 | 5 | 3 | 8 | 1 | 6 | 4 | 7 | 9 |
|---|---|---|---|---|---|---|---|---|
| 4 | 6 | 7 | 3 | 9 | 5 | 8 | 1 | 2 |
| 9 | 1 | 8 | 4 | 2 | 7 | 5 | 3 | 6 |
| 6 | 4 | 1 | 7 | 5 | 2 | 3 | 9 | 8 |
| 8 | 9 | 2 | 1 | 6 | 3 | 7 | 4 | 5 |
| 3 | 7 | 5 | 9 | 4 | 8 | 6 | 2 | 1 |
| 1 | 8 | 9 | 5 | 3 | 4 | 2 | 6 | 7 |
| 7 | 3 | 6 | 2 | 8 | 9 | 1 | 5 | 4 |
| 5 | 2 | 4 | 6 | 7 | 1 | 9 | 8 | 3 |

### ST0204 (6 star solution)

| 1 | 5 | 3 | 4 | 2 | 7 | 8 | 9 | 6 |
|---|---|---|---|---|---|---|---|---|
| 7 | 4 | 2 | 9 | 8 | 6 | 5 | 1 | 3 |
| 8 | 6 | 9 | 5 | 1 | 3 | 2 | 4 | 7 |
| 3 | 7 | 5 | 1 | 4 | 2 | 9 | 6 | 8 |
| 4 | 2 | 8 | 3 | 6 | 9 | 7 | 5 | 1 |
| 9 | 1 | 6 | 8 | 7 | 5 | 4 | 3 | 2 |
| 5 | 9 | 7 | 3 | 2 | 1 | 6 | 8 | 4 |
| 6 | 8 | 1 | 7 | 5 | 4 | 3 | 2 | 9 |
| 2 | 3 | 4 | 6 | 9 | 8 | 1 | 7 | 5 |

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ST0208 (3 star solution)

| 2 | 1 | 3 | 9 | 8 | 5 | 6 | 4 | 7 |
|---|---|---|---|---|---|---|---|---|
| 5 | 8 | 9 | 6 | 7 | 4 | 2 | 1 | 3 |
| 6 | 4 | 7 | 2 | 1 | 3 | 8 | 5 | 9 |
| 9 | 2 | 8 | 7 | 5 | 1 | 3 | 6 | 4 |
| 3 | 6 | 1 | 4 | 2 | 9 | 5 | 7 | 8 |
| 7 | 5 | 4 | 8 | 3 | 6 | 1 | 9 | 2 |
| 8 | 7 | 5 | 1 | 9 | 2 | 4 | 3 | 6 |
| 4 | 3 | 2 | 5 | 6 | 7 | 9 | 8 | 1 |
| 1 | 9 | 6 | 3 | 4 | 8 | 7 | 2 | 5 |

ST0209 (4 star solution)

| 2 |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
| 6                                       | 3 | 9 | 5 | 8 | 7 | 4 | 2 | 1 |
| 7                                       | 5 | 2 | 3 | 4 | 1 | 6 | 9 | 8 |
| 8                                       | 4 | 1 | 2 | 9 | 6 | 7 | 5 | 3 |
| 5                                       | 8 | 4 | 7 | 6 | 9 | 3 | 1 | 2 |
| 9                                       | 7 | 6 | 1 | 2 | 3 | 5 | 8 | 4 |
| 1                                       | 2 | 3 | 4 | 5 | 8 | 9 | 7 | 6 |
| 2                                       | 9 | 7 | 8 | 3 | 4 | 1 | 6 | 5 |
| 3                                       | 1 | 8 | 6 | 7 | 5 | 2 | 4 | 9 |
| 4                                       | 6 | 5 | 9 | 1 | 2 | 8 | 3 | 7 |

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# References

| [Mep05] | Michael Mepham. <i>The Daily Telegraph Sudoku 2</i> . Pan Books, 2005. ISBN 0-330-44203-3.  |
|---------|---|
| [Wil06] | Peter Wilson. The sudoku bundle for displaying, solving and generating Sudoku puzzles. February 2006. (Available from CTAN in macros/latex/contrib/sudokubundle). |
| [SOL]   | Sudoku Online: Home of the Sudokulist. http://www.sudoku.org.uk   |
| [SSBL]  | Sudoku Solver bu logic. http://www.sudokusolver.co.uk   |