



SUDOKU1 Challenge 2013

TWINS MADNESS

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Hints and Solutions

(Use Hints before going to solutions...)

HINTS

1 Twin MasterMind

- Hint 1 : You have to solve code2 with reference to code1. Just note that b should be on 3 digits.
- Hint 2 : For going from code1 starting with 8, to code 2 starting with 9, only $b=11x$ can be selected
- Hint 3 : OK, code2 missing digits are 68.
- Hint 4 : Try to solve first grid 1 with well placed numbers, then small values
- Hint 5: Note that Group of Cells Green can be easily solved

2 Twin Multiplication Table – Odd Pair

- Hint 1 : The Mult Table in centered lower block is easy to solve, then try lower right one and higher right one
- Hint 2 : Group of Cells Green helps to get solution of Pair of Even and then Mult tab
- Hint 3 : Group of Cells Purple is now useful to find a 2 in Pair of Even
- Hint 4 : Then again Group of Cells Green allow to find value 3 closed to centered cell of Grid2
- Hint 5 : You can know if X is Odd or Even by checking X horizontal pair in middle left block

3 Twin Numeral - Arrow

- Hint 1 : You can quickly find the Group of Cells Purple
- Hint 2 : In left top block Grid2, demonstrate that 4 have only one position thanks to Group of Cells Green

4 Twin Battle Ship - Tiled

- Hint 1 : Start with Tiled grid, you can mount easily corner tiled then others. Don't forget to check all possible mirrors and rotations
- Hint 2 : Group of Cells Green can be reported in Battleship grid, and Purple may be filtered. So only one position for biggest ship.

5a TWINS Zone Part 1

- Hint : Note the 3 in Green Zone. And then the 2 in the Purple Zone.

6b TWINS Relation Multiple – Wheels – Multiplication table

- Hint 1 : Turn wheels until all values are correct. It's easy. Just for fun...
- Hint 2 : Group of Cells Green helps to find one Mult Tab which includes the number 4
- Hint 3 : Solve first Mult Tab of Grid2 then the 2 tight one of Grid1
- Hint 4 : Group of Cells Green can now be solved and then Group of Cells Purple

6c TWINS Relation Multiple – Outside – Last Number

- Hint 1 : In Grid1, Number 1 can only be in cells line 1 or 2, colonne2. Try first line 2... Then continue with 1.
- Hint 2 : Grid1, center cell of left bottom block can not be 7, so it is 3...
- Hint 3 : You should find in Group Cells Green that one number is 9, and place it.
- Hint 4 : Note that 2 should be in Grid 2 right colon of bottom right block, and 8 in left colon of bottom centered block
- Hint 5 : With Grid2, you can demonstrate that Group of Cells Purple includes 2 times 8. And so is life...

9a TWINS Relay Multiple (Part 1)

- Hint 1 : Try to focus on Group Cells Purple

9b TWINS Relay Multiple (Part 2)

- Hint 1 : Try to focus on Group Cells Purple, then Red
- Hint 2 : Try to find the 2 cells with possible value 37 in line 2 of Grid "Touchy" and focus on 3.
- Hint 3 : If blocked on Frame Max Grid, try value 2 in first colon of block top left. This does not work...

10a TWINS Variants Masked

- Hint 1 : You should focus first on Grid4. It's easy to find which variant it is.
- Hint 2 : You should find in Group Cells Purple that one number is 4, and place it.
- Hint 3 : Now Diagonal, Don't Touch and finally Give me 5 can be set
- Hint 4 : When block in Grid3, try to solve 3 first.

10b TWINS Variants Masked

- Hint 1 : Try first to find Grid No Knight Step, then Grid Diagonal, then Grid Give me 5
- Hint 2 : If you are blocked on Grid1, you should check 1 in center left cell of right top block
- Hint 3 : You should find in Grid 2 that one cell of Group Cells Green is not compatible with one of the 2 remaining variants.

SOLUTIONS

1 Twin MasterMind

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

Master Mind Value : 8172

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

Master Mind Value : 916728

2 Twin Multiplication Table – Odd Pair

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

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

3 Twin Numeral – Arrow

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

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

4 Twin Battle Ship – Tiled

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

5a TWINS Zone Part 1

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

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

5b TWINS Zone Part 2

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

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

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

5c TWINS Zone Part 3

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

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

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

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

6a TWINS Relation Part 1

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

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

6b TWINS Relation Multiple – Wheels – Multiplication table

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

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

6c TWINS Relation Multiple – Outside – Last Number

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

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

7 Twins Different 2 by 2

2	3	5	4	1	6
4	6	1	2	3	5
3	5	2	1	6	4
1	4	6	5	2	3
5	1	3	6	4	2
6	2	4	3	5	1

1	5	2	6	3	4
3	4	6	5	2	1
6	1	3	4	5	2
5	2	4	3	1	6
4	3	1	2	6	5
2	6	5	1	4	3

6	1	4	2	5	3
2	5	3	4	1	6
5	6	1	3	2	4
4	3	2	1	6	5
3	2	5	6	4	1
1	4	6	5	3	2

6	1	4	2	5	3
5	2	3	1	6	4
1	4	5	6	3	2
3	6	2	4	1	5
4	5	6	3	2	1
2	3	1	5	4	6

5	3	1	4	6	2
6	4	2	3	1	5
3	5	6	1	2	4
1	2	4	6	5	3
2	1	3	5	4	6
4	6	5	2	3	1

3	6	2	5	1	4
4	1	5	6	2	3
1	3	4	2	5	6
2	5	6	4	3	1
5	4	1	3	6	2
6	2	3	1	4	5

8 TWINS Total

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

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

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

12	19	8	12	15	24	11	19	15
19	11	14	17	14	12	15	18	15
16	14	22	15	16	10	22	12	8
7	17	8	17	13	14	22	16	21
23	10	17	20	9	18	5	20	13
18	22	13	15	10	19	8	14	16
15	14	17	16	16	14	16	10	17
9	13	19	13	20	15	20	10	16
16	15	17	10	22	9	16	16	14

9a TWINS Relay Multiple (Part 1)

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

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

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

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

9b TWINS Relay Multiple (Part 2)

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

M1	M2	M3	M1	M1	M3	M3	M2	M2		
M1	7	1	4	5	9	6	3	2	8	M1
M2	5	8	3	1	7	2	4	6	9	M1
M3	6	2	9	4	3	8	5	1	7	M1
M2	3	7	5	9	1	4	6	8	2	M2
M2	1	4	2	8	6	7	9	3	5	M3
M1	9	6	8	2	5	3	1	7	4	M2
M2	2	9	1	3	8	5	7	4	6	M3
M3	4	5	7	6	2	1	8	9	3	M2
M1	8	3	6	7	4	9	2	5	1	M2
M1	M3	M2	M1	M3	M1	M2	M2	M3		

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

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

10a TWINS Variants Masked

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

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

Give Me 5

Diagonal

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

Don't Touch

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

No Average

10b TWINS Variants Masked

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

Give me 5

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

Non Consecutive

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

Diagonal

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

Touchy

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

Pirate

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

No Knight Step