

## June 8: Sudok-what?

### Puzzle 1 - Ya basic (1 point)

Fill in the 9×9 grid in such a way that each row, each column, and each of the nine marked 3×3 blocks contain all of the integers from 1 through 9 exactly once.

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

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

### Puzzle 2 - Tiger tails (2 points)

Fill in the grid with the numbers 1, 2, 3, 4, 5, 6, 7, 8, and 9 so that each row, column, and block has no repeated entries. Additionally, each shaded “tail” contains numbers in strictly increasing or strictly decreasing order from one end to the other.

For example, consider the “tail” in the upper right corner of the puzzle. Clearly the entries in this tail must increase from the 3 (there aren’t enough positive integers less than 3 for it to decrease). This means that the cell directly beneath the 3 can only be one of 4, 5, or 6. We stop at 6 because that is the largest number that will allow us to fill in the rest of the “tail” in an increasing way.

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### Puzzle 3 - Hexadoku (2 points)

Because 16 is a perfect square, we can divide a 16×16 board into sixteen 4×4 blocks (with sixteen entries each). For 16×16 Sudoku, we will need sixteen different symbols; perhaps the geekiest choice of sixteen symbols is the set of hexadecimal digits: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, F.

Fill in the grid below so that each row, each column, and each of the sixteen 4×4 blocks contain all of the one-digit hexadecimal numbers exactly once.

			9	1											
		3	B					A	5	1	F				
	C	1					B	6	D	9	E	2			
7	E					F	8	0	B	4	3	A	9		
8	0					D	A				6	E	5	9	
9	3				5	4						B	0	2	F
E	2				F	6		5	9				4	D	1
5	1				9	7	2	4	0					8	3
2	A					3	0	B	C	D				5	8
C	5	7				B	D		A	0				4	6
4	9	8	E						6	7				3	0
	B	0	D	7				2	1					F	A
		A	C	3	0	E	7	D	F					B	9
			5	A	B	1	F	C					8	7	
				2	4	8	6						5	1	
											1	0			