

Physics Sudoku

A Way To Have Fun With Students

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Where Did Sudoku Come From?

- With a name like “Su Doku” it had to come from Japan.
- But we got it from the British in 2005.
- This whole Sudoku obsession business is just a couple of years old...
- ... even Su Doku for Dummies !
- Included in Nintendo DS game *Brain Age*.

What is a Sudoku?

- It's a 9×9 grid partially filled with the numbers 1-9.
- It's an obsession.
- It's a fun diversion.
- It can be more...

Here's What Most Call Sudoku:

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

I Have Avoided Getting Into Puzzles

- Mrs. Dr. Phil does crosswords
- Mrs. Dr. Phil does evil crosswords
- Her brother turns out to do Sudoku

- *Asimov's Science Fiction* Sudoku

Hmm...

- If it works for Science Fiction
- Why not Physics?

PHYSICS Sudoku 1

CFH INP SUY

Level 3 out of 4

		P		N	C	H		
Y			H					N
			U	P		I		
	Y	H		S			F	
				Y				
	U			H		C	S	
		N		I	S			
F					N			H
		Y	F	C		P		

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MIAAPT-06-3

There are nine symbols used in this Sudoku.

All nine symbols must appear once in any order: (1) in every row, (2) in every column and (3) in every 3×3 box.

Use the following letters to make a “fun” phrase: **CFHIINPSSUY**

Or...

Mechanics Sudoku

		μ_s			p	t		a
	m							
a			t					
			p		g		x	
	μ_s	t				a	p	
	x		v		t			
μ_s					m			
x							F	
F		a	x			m		

		q	R					V
		B		i	ϵ_0		μ_0	C
					E			
R		i			B		ϵ_0	
				R				
	B		μ_0			V		i
			E					
E	R		ϵ_0	C		q		
B					μ_0	ϵ_0		

E&M Sudoku

But Dr. Phil, How Do You Make Such Fabulous Physics Sudoku?

- I don't have the resources of a Dell Magazines Puzzle division...
- So I cheat ...
- ... and use known numeric Sudoku as a source.
- This is for fun, not publication/sale.

Conclusions

- I just finished getting these set up in time for MIAAPT, but...
- It may be more fun than a 6 equations in 6 unknowns Kirchhoff's Law resistor network
- Why can't you have fun with Physics?
- It really helps you with your Sudoku game!
- If you need EASY ones, use *USA Today*.

URL's

- The British Home Office
 - <http://www.sudoku.org.uk>
- Dr. Phil's Homepage
 - <http://homepages.wmich.edu/~kaldon/>
- Dr. Phil's Email
 - philip.kaldon@wmich.edu

