# GAS Leak

Genuinely Approachable Sudoku from the CtC Discord

Volume 39: April 1 – April 30, 2024 Welcome to April!

We got a full month of GAS puzzles for you, one better than the other. Please remember that April Fools Day is April 1st...

Have fun solving!

#### April 1, 2024: Slow Thermo / Entropic Lines

by clover!

Walkthrough for 'Cage Comparison' by clover: https://youtu.be/g5oZdSwKino

Good morning, friends! As you know, we at GAS headquarters are champions of the practice of presenting sudoku constraints using only officially sanctioned color codes. Alas, it was recently brought to my attention by the Board of Sudoku Standards that *slow thermo* and *regular ol' thermo* are conventionally presented in the **same color**, thus requiring solvers encountering these constraints to read the rules! Such an affront, once identified, cannot be allowed to stand.

Sadly, with the influx of new line constraints, we are rapidly reaching the end of our library of available color codes. In a desperate attempt to rectify the tragic slow-thermo situation using these dwindling resources, I propose that this constraint be presented in a color that some, perhaps, may argue is slightly too similar to the conventional #FFCCAA claimed by *entropic lines*. Would you, dear solvers, be so kind as to solve this **slow thermo / entropic lines sudoku** and provide feedback as to whether you find #EFA470 to be sufficiently distinctive? Of particular interest is the experience of any solvers suffering from peach-lightbrown colorblindness.

Normal sudoku rules apply. Along #FFCCAA (peach) lines, every set of three adjacent digits contains one low, one medium, and one high digit (note that this always results in a repeating pattern, such as LMHLMH or LHMLHM). #EFA470 (brown) lines are slow thermos: digits must either increase or stay the same, starting from the round bulb.

B WARNING: NSFW (really). Do not click this link at work. You have been warned.

[Note from typesetter: this is why it's not included as image here. Please click the link instead.]

SudokuPad: https://sudokupad.app/s26oh5ccwa

# April 1, 2024: 0-8 Killer Sudoku/1-9 Killer Sudoku/2-10 Killer Sudoku by Bill Murphy

Sorry about that erec- I mean construction from Clover. I'll have a word with her later.

I realised I never told y'all what I've been doing for a job now! I've been working for CSIRO in their experimental puzzle division and early results have been promising!

Working under Drs Keaton, MacDowell and Levy, I've been feeding puzzles into an experimental splitter and creating different copies, all which have their own individual personalities!

As an early finding, I'm happy to show you today's GAS a <u>0-8 killer sudoku</u>

a an early  $\Box$  inding, i'm happy to  $\Box$  how you today'  $\Box$  ga  $\Box$  a <u>1-9 killer  $\Box$  udoku</u>

#### As an early finding, I'm happy to show you today's GAS a 2-10 killer sudoku

Sorry, the settings are a little strong still.

Put the numbers 0-8, 1-9 or 2-10 in each box, row or column once each. Numbers in cages must sum to the given total and must not repeat.

For two party hats, complete the set in [see times page] or less. For one party hat, complete the set in [see times page] or less. All other solvers will receive an Experimental Eosinopteryx.

 $\downarrow\downarrow\downarrow\downarrow\downarrow$  (The first puzzle is on the next page)  $\downarrow\downarrow\downarrow\downarrow\downarrow$ 

3	
	0
	li l
1 1 6	13
	1 11 1
	1 11 1
	1 10 1
	1 10 1
	1 10 1
teener i i i ieee	kdli i
4	
	- n! !!! !
9	1 I
	D U
	р п
	11 II
	h il
	li il
	lingganil
4	
4 1	1
	1 1
	1 11
	i il
	1 1
	1 21
5 7 13'-	
	<u> </u>
	9 I
	<u> </u>
	140
3 16 17 16 16	12
	19 i i
	10 1 3
n ar it l li ili	- D
	in   !
li ilianaanilianaanakanaanil li ilian	! !+!
10	13'
	13
	1 1 1
	1 1 1
	1 11 1
	î i
7	
7	
7 <sup></sup>	
7	
7	
7	
7	

0-8 (sudokupad): https://sudokupad.app/7h962zb6e7

 $\Downarrow \Downarrow$  (The second puzzle is on the next page)  $\Downarrow \Downarrow$ 

5			11				11	
							i	
						8		15
6		5	1	_	11		13	1
							<del>; ;</del>	1
				11				
	6					14		
	7		9			15		
5		9			19'		14	
	12							15
9								

1-9 (sudokupad): <u>https://sudokupad.app/0fz3le87g7</u>

 $\Downarrow \Downarrow$  (The third puzzle is on the next page)  $\Downarrow \Downarrow$ 

			14				i13	
   						10		i17
			· · ·		i13 !		i15 	
				i13 !				
	[8 					16 		
	19		i11 !			17 17		
7		i11			22		i16	
	i14							i17

2-10 killer (penpa, use the number function): <u>https://tinyurl.com/43jp8fpv</u>

(you may also choose to complete one of them and multiply your time by 3, if you so choose)

#### April 1, 2024: No Wrong Answers

by Philip Newman

It has come to my attention that my fellow GAS setters are being silly today.

Look, as a Real Computer Engineer, I can appreciate clover's use of the strongest shape to construct her puzzle today. And everyone knows I love Killer Sudoku, so I appreciate Bill providing a multiplicity of my favorite additive variant.

But this is a serious channel, and we have established a certain standard of puzzle. Like they say, it's all fun and games until someone loses an eyelash. I can see that it once again falls on me to provide a *completely normal* Genuinely Approachable Sudoku for you to solve.

#### Today's GAS is a Fog of War Sudoku!

Normal sudoku rules apply — Place a digit in each cell such that each row, column, and outlined region contains each digit from 1-9 exactly once.

Fog of War: Placing a digit will clear fog from all orthogonally and diagonally adjacent cells. I have a truly marvelous additional rule which this intro is too narrow to contain.

Play on SudokuPad: https://sudokupad.app/philip-newman/20240401-no-wrong-answers

[Note from typesetter: since Philip says that this is a Fog of War puzzle you might want to solve it online  $\bigcirc$ ]

#### April 1, 2024: GAS Who? (Three puzzles)

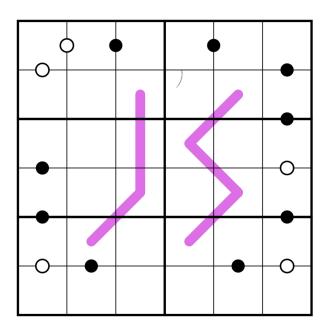
by clover! / GAS Who?

Hello, friends! To celebrate our favorite day of the year - Monday - we're back with another edition of GAS's homegrown game show: that's right, it's **GAS Who**?

Here's how it works! I'll post three different puzzles here. Your job is to solve the puzzles - then, when you post your time, also post (in a ||spoiler tagged message||) your guess as to who set which puzzle. Because I'm feeling strangely generous this morning, let's have a special offer: if you complete all three puzzles in any amount of time, you'll get **one party hat**. On top of that, you'll get **a bonus hat** for every setter you guess correctly, for a total of up to four hats!

Ready? Here are the puzzles:

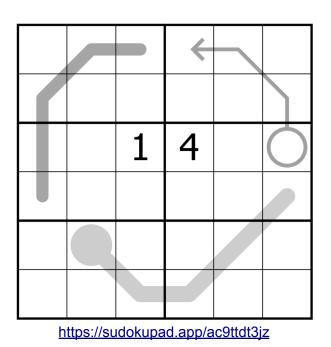
**GAS Who? 1**: Normal 6x6 sudoku rules apply. Purple lines contain a non-repeating set of consecutive digits in any order. Digits in cells separated by a white dot are consecutive. Digits in cells separated by a black dot have a 1:2 ratio. Not all possible dots are necessarily given.



https://sudokupad.app/pgs0wne1nj

 $\downarrow\downarrow\downarrow\downarrow\downarrow$  (The next puzzle is on the next page)  $\downarrow\downarrow\downarrow\downarrow\downarrow$ 

**GAS Who? 2**: Normal 6x6 sudoku rules apply. Digits along the thermometer must increase, starting from the round bulb. Digits along the arrow sum to the value in the attached circle. The plain gray line is a kropki line: adjacent digits along the line are never consecutive and are never in a 1:2 ratio.



GAS Who? 3: Normal 6x6 sudoku rules apply... and that's it!

			1	3 5
		4		5
		5	2	
	6			
		1		
4	3			

https://sudokupad.app/6xsvqsvh0e

#### April 1, 2024: Legendary Tippers

by Bill Murphy

Look, hey, sorry about my earlier post, that was clearly an April Fools Joke, I just couldn't talk about what I'm actually doing, but I went and got OK from the boss. What I'm actually doing these days was all my work creating Genuinely Approachable Sudoku got me noticed!

I'm now working for Scientific Excellence in Research and Investigation Of Understanding Sudoku, or **SERIOUS** for short. In fact, thanks to our company's progressive politics, diverse hiring policies and dedication to promoting Australian Aboriginal cultures, you could even say we're *deadly* **SERIOUS**.

Now, some of our preliminary findings were published earlier today here for free: <u>https://www.patreon.com/posts/happy-first-of-101471518</u> Which aren't significantly harder that GAS, but closer to your average GAS Leak difficulty

But in the interest of scientific excellence and discovery, we're here to present something nobody has ever done before for GAS: **Anti-Rook Sudoku!** 

Fill each box with the digits 1-9 such that no digit is a chess rook's move apart.

We hope this bold and exciting discovery will continue to sustain the puzzle community for a long time to come.

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

https://sudokupad.app/b7s75c7lbf

#### April 1, 2024: Nearly There

by Philip Newman

I have received a number of angry comments about the puzzle I posted earlier, ranging from "not a valid sudoku" to "what am I gonna do with all these dinosaurs". I wasn't aware we had decaying protons among our solvers, but I hear you. As much as I wanted to provide an approachable sudoku which can be solved in many different ways, I appreciate that some of you need a bit more guidance. Some people prefer open world games, some people prefer a more linear experience.

In the interest of catering to everyone's needs, here is an additional **Classic Sudoku**. Be warned that it is a touch trickier than normal GAS. I think you'll do fine though. Just try your best.

Normal sudoku rules apply. And that's it!

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

Play on SudokuPad: https://sudokupad.app/philip-newman/20240401-nearly-there

Philip Newman: I am so sorry. I was not expecting so many people to struggle so much with my classic. I have thrown together a little video to demonstrate the intended solve path, involving coloring. Everyone likes coloring, right? At the very least I hope you will find it educational. We have been doing this for years now, so it's easy to forget that some of our solvers do not have a grasp on the most basic sudoku solving techniques. Do be warned that once you watch this video you can't unlearn these techniques. You will never struggle with sudoku again; if you are the type who likes to figure these things out for yourself... I mean, still watch it, every view helps grow the channel, but maybe multitask a bit so you aren't giving it your full attention.

https://youtu.be/Ra-AoKnhY1c

Philip Newman: Sorry again, this time for the double ping. It looks like the video is taking some time to process. I'll ping everyone again when it's ready. Thanks for your patience!

Clover!: Don't worry Philip, I got you! I'll let you know when it's ready and you can ping everyone!

Philip Newman: Thanks @clover!! You're the best

# April 2, 2024: I Feel Better

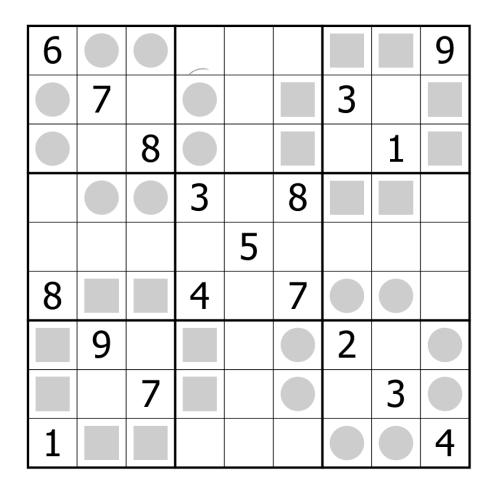
by Bill Murphy

After recording a 46 minute solve of yesterday's puzzles, it turns out the real April Fool was me. (REAL FOOLS STAY FOOLING 24/7 365 GET OUTTA HERE WITH THAT LAMENESS) Walkthrough for Yesterday's Onslaught: <u>https://youtu.be/91KSNsjQ6P0</u>

Let's keep it very very simple today: Odd/Even Sudoku!

Normal sudoku rules apply.

Cells with grey squares must contain even digits. Cells with grey circles must contain odd digits.



https://sudokupad.app/modvoaw8ae

#### April 3, 2024: Look Ma No GSP

by Philip Newman

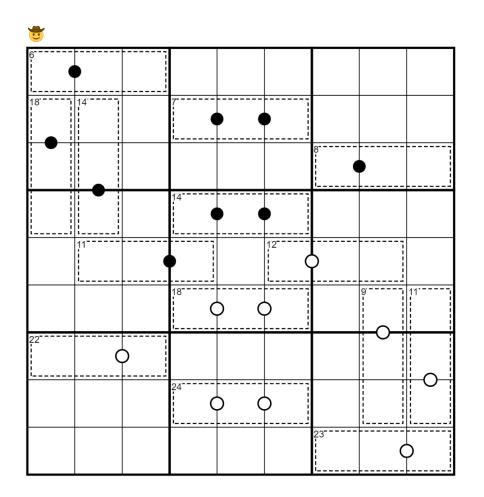
Walkthrough of "I Feel Better" by Bill: <u>https://youtu.be/B1kHP9oaWfo</u>

In the spirit of continuing foolishness, I have already made Bill test a German Whispers today.

Today's GAS is a Killer Kropki Pairs Sudoku!

Normal sudoku rules apply.

Killer: Digits in cages cannot repeat and must sum to the total given. Kropki Pairs: Digits in cells separated by a white dot must be consecutive (have a difference of 1); digits in cells separated by a black dot must have a ratio of 2:1. (No negative constraint - other pairs of adjacent digits may have a difference of 1 or ratio of 2:1.)



Play on f-puzzles: <u>https://f-puzzles.com/?id=2ccralnv</u> Play on SudokuPad: <u>https://sudokupad.app/philip-newman/20240403-look-ma-no-gsp</u>

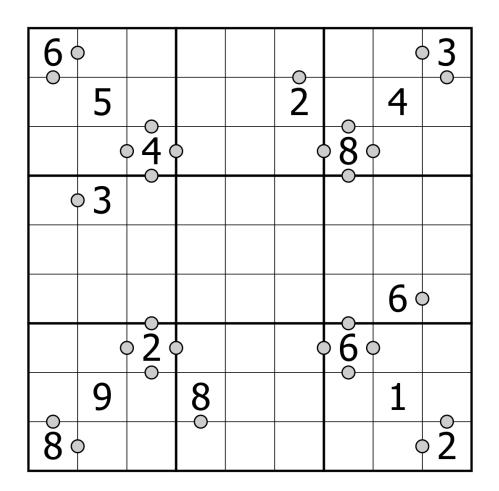
# April 4, 2024: Faded Kropki Pairs

by clover!

Walkthrough for Philip's 'Look Ma, No GSP': https://youtu.be/sjQu7akRI6k

Important announcement!!! On Sunday April 7, 2024 19:00 GMT at <u>https://twitch.tv/sudokucon</u>, we'll be enjoying a birthday sudoku setting stream with @Tallcat and @Malrog [Double Date Dealer] as the kickoff event for our upcoming SudokuCon off-season stream series! Be there or be square :

Today's GAS is a **faded kropki pairs sudoku**, which is to say, I set it last week, left it in the pocket of my work pants, and then it came out of the laundry a little funny. Here's the deal: normal sudoku rules apply. Also, digits separated by a dot are either consecutive, in a 1:2 ratio, or both. Not all possible dots are necessarily given.



SudokuPad: <a href="https://sudokupad.app/eewx2p8dz7">https://sudokupad.app/eewx2p8dz7</a>

#### April 5, 2024: Snowflake Sudoku

Bill Murphy

Walkthrough for Faded Kropki Pairs: https://youtu.be/rD1CaJRz4dA

GET READY FOR A GENUINELY APPROACHABLE SUDOKU PLEASE WELCOME TODAY'S CONTESTANTS:

Putting the "ai you" into Daily Sudoku Solver, it's @Daily Sudoku Solver!

AND YOUR HOST...ME! I'VE BEEN HERE THE WHOLE TIME!

This. Is. Genuinely Approachable Sudoku, the only sudoku show where the sudoku changes every time!

Now you all understand how the sudoku is solved, right? (*No!*)

That's right, our solvers have no idea what they're about to solve, the only way to learn is my solving and the only way to solve is by beginning and the way to begin is by beginning, so let's begin!

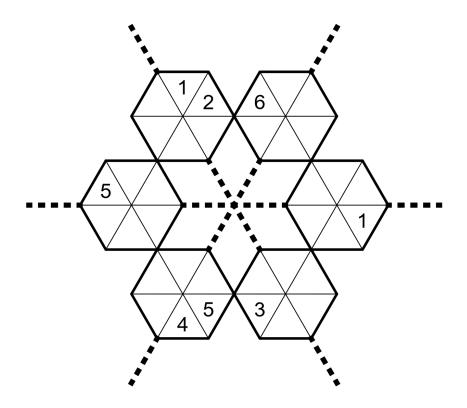
Today's GAS is a Snowflake Sudoku!

That's right, for the second time, Bill has set a classic that cannot be imported into SudokuPad! Aren't I a stinker!

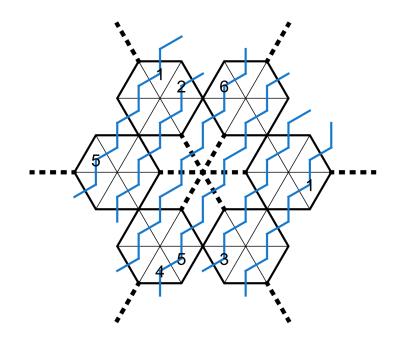
 $\downarrow\downarrow\downarrow\downarrow\downarrow\downarrow$  (The puzzle is on the next page)  $\downarrow\downarrow\downarrow\downarrow\downarrow$ 

Place the digits 1-6 in each "row" and hexagon.

"What's a "row" here?" I hear you ask? Please refer to the attached diagram for your convenience. (But do remember that it goes in three different directions)



Penpa: <u>https://tinyurl.com/2xoprbhw</u>



#### April 6, 2024: Coping Strategies

by Philip Newman

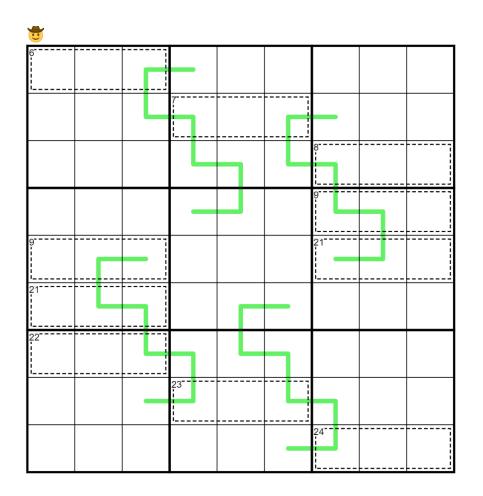
Walkthrough of "Snowflake Sudoku" by Bill: <u>https://youtu.be/2KYz\_QzLd94</u>

As most of you will know, *sometimes* I have a tendency to make puzzles which are not quite Genuinely Approachable. You might remember our testing motto (2022-09-30 GAS): Tweak, Leak, or Give 'em a Week? I actually don't tweak puzzles all that often, but instead I'll set something radically different with the same ideas and/or aesthetics. Today's puzzle is a rare case of actually just tweaking it a bit to make it smoother. See if you can figure out what the tweak was, and why Bill suggested it!

Today's GAS is a Killer German Whispers Sudoku!

Normal sudoku rules apply.

Killer: Digits in cages cannot repeat and must sum to the total given. German Whispers: Digits in cells directly connected by a line must differ by at least 5.



Play on f-puzzles: <u>https://f-puzzles.com/?id=23cy9wjs</u> Play on SudokuPad: <u>https://sudokupad.app/philip-newman/20240406-coping-strategies</u>

# April 7, 2024: Different Neighbors

by clover!

Walkthrough for Philip's 'Coping Strategies': <u>https://youtu.be/phwTWAxktBk</u> (Still uploading at time of posting, hold tight!)

Today's different neighbors GAS goes out to my neighbors across the street here in rural Kansas, who have not one but two pride flags hanging from their porch. I see you.

Normal sudoku rules apply. Digits in circles tell you the total number of distinct digits in the (up to) 8 surrounding cells. For instance, there may only be three different digits, in total, in the eight cells surrounding r3c3.

	9	8				2	3	
	7	3				2 ④	6	
4				5				
			6		З			
				2				1
	1	4				3	9	
	5	<b>4</b> <b>6</b>				7	8	

SudokuPad: https://sudokupad.app/m7ky62muv1

# April 8, 2024: The Deal / You Have Bought Yourself A Boat [Double Sudoku] by Bill Murphy

Walkthrough for Different Neighbours: https://youtu.be/I4h3ra-PV\_U

Hello one and all and welcome back to another thrilling episode of Genuinely Approachable Sudoku!

I am your humble sudoku setter William Wolfgang Murphy and joining us as always are our Daily Sudoku Solvers!

Say hi @Daily Sudoku Solver !

#### (Hi, Daily Sudoku Solver!)

Last we left off our intrepid heroes had just finished doing battle with a roping beast from Newmonstrosity and fighting off the neighbours under the full Moon, exhausted, our Sudoku Solvers trudge home for a long rest and relaxation. But with not one, but **two classic sudoku** heading their way, will they be able be to recover? Or will the evil GURTH symmetrically displace them? Let's find out!

Put the digits 1-9 in each bow, row and column.

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

The Deal: <u>https://sudokupad.app/qzvx03ot5p</u>

 $\Downarrow \Downarrow \Downarrow$  (The second puzzle is on the next page)  $\Downarrow \Downarrow$ 

Put the digits 1-9 in each bow, row and column.

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

You Have Bought Yourself A Boat: <u>https://sudokupad.app/9xuki513lu</u>

[Note from typesetter: The times in the table at the end are for both puzzles combined]

#### April 9, 2024: Murdrum

by Philip Newman

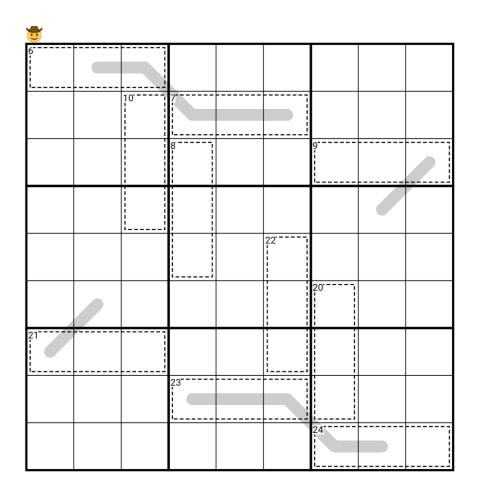
Walkthrough of "You Have Bought Yourself A Boat" and "The Deal" by Bill: <u>https://youtu.be/6iD0mgroEZc</u>

Some of you might've wondered why yesterday's puzzle/intro didn't reference the eclipse. Unfortunately, while I was in the path of totality, I was not in the path of posting yesterday. Hopefully we can arrange the schedule so that I am posting next time I'm on the path of totality, in approximately 300 years.

Today's GAS is a Killer Palindrome Sudoku!

Normal sudoku rules apply.

Killer: Digits in cages cannot repeat and must sum to the total given. Palindrome: Digits along a line must form a palindrome (read the same from either direction).



Play on f-puzzles: <u>https://f-puzzles.com/?id=2aern93z</u> Play on SudokuPad: <u>https://sudokupad.app/philip-newman/20240409-murdrum</u>

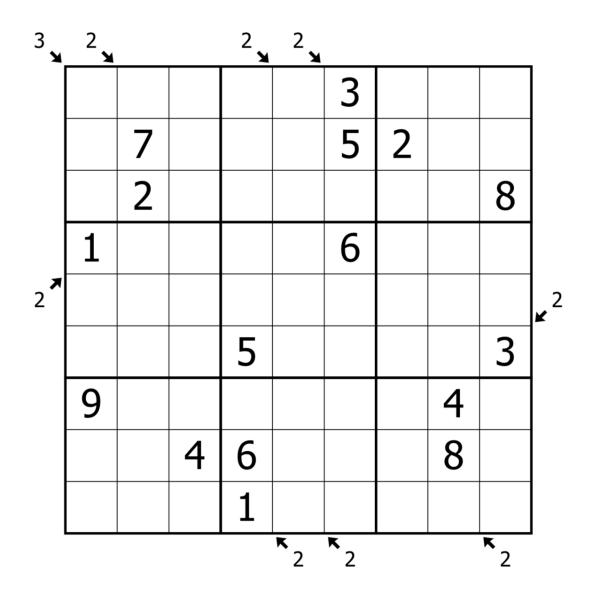
# April 10, 2024: Pointing Differents

by clover!

Walkthrough for Philip's "Murdrum": <u>https://youtu.be/niCiWfohu0o</u>

The neighbors seem to have caught on to my last post, and now they won't stop ominously pointing at me. Accordingly, today's GAS is a **pointing differents sudoku**!

Normal sudoku rules apply. Clues indicate the total number of distinct digits along the marked diagonal. For instance, there are only three different digits that can ever appear along the main negative diagonal.



SudokuPad: <u>https://sudokupad.app/g19kcxmim3</u>

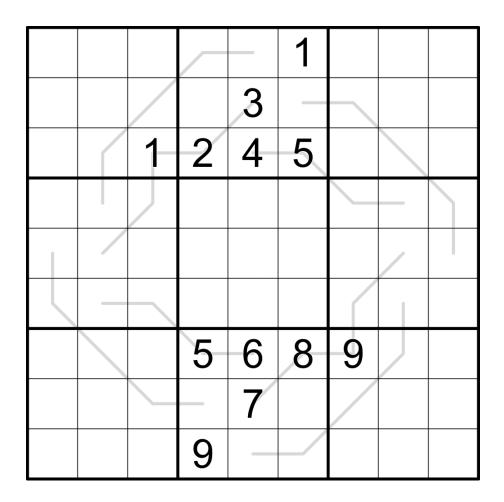
# April 11, 2024: The Sharpening

by Bill Murphy

Walkthrough for Pointing Differents: <u>https://youtu.be/P4WaQTeKxxY</u>

Been seeing a bunch of talk of people forgetting how **Palindromes** work in their sudoku, which is always a good motivation for me to get off my behind and make one for GAS. I mean, I want to be like "I get forgetting negative constraints and antiknight scanning, but how do you forget palindromes?" but I did get once asked by a student, *"What's a Palindrome?"* and her name was Hannah, so go figure.

Normal sudoku rules apply. Digits along grey lines must read the same backwards and forwards.



https://sudokupad.app/6rs44b4pv2

#### April 12, 2024: Sumception

by Philip Newman

Walkthrough of "The Sharpening" by Bill: <u>https://youtu.be/cLbdHz79ShQ</u>

Those of you who have been solving for a while will know that I am hurting myself all the time; most recently I had surgery on my left shoulder to repair a torn labrum.

Hips also have labrums. Two down, two to go. (No surgery in my immediate future, we're going to try something else first.)

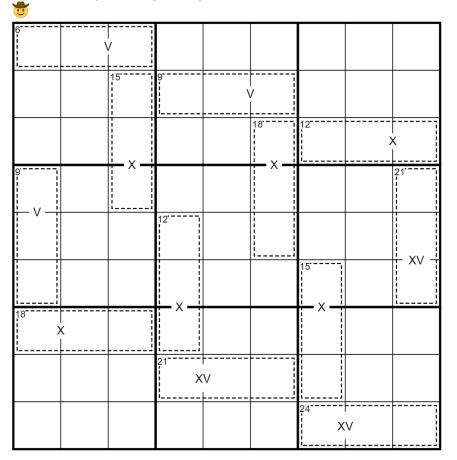
This has been another edition of Philip's Age-related Injury News. Subscribe to this channel so you don't miss out on any future PAIN.

Today's GAS is a Killer XVXV Pairs Sudoku!

Normal sudoku rules apply.

Killer: Digits in cages cannot repeat and must sum to the total given.

XVXV Pairs: Digits in cells separated by a 'V' must sum to 5; digits in cells separated by an 'X' must sum to 10; digits in cells separated by an 'XV' must sum to 15. (No negative constraint - other pairs of adjacent digits may sum to 5, 10, or 15.)



Play on f-puzzles: <u>https://f-puzzles.com/?id=2xsrzz2b</u> Play on SudokuPad: <u>https://sudokupad.app/philip-newman/20240412-sumception</u>

#### April 13, 2024: Heavy Difference

by clover!

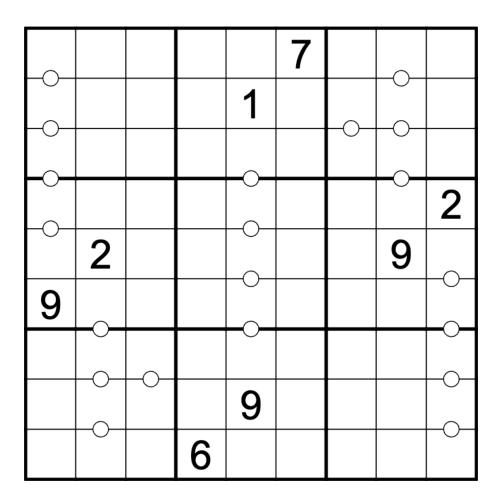
Walkthrough for Philip's "Sumception": <u>https://www.youtube.com/watch?v=C9hK7YX8QdU</u>

Not gonna lie, guys, today's GAS is a bit heavy.

Literally, I mean. It's a **heavy difference sudoku**. Don't worry, we might be YouTubers now, but the day has not yet arrived where we need to post an apology video.

**Weird constraint alert**!! Normal sudoku rules apply. Every time there is a white dot in the grid, the digit immediately below the dot is exactly 1 greater than the digit immediately above the dot. All possible dots are given. (However, there can be other consecutive pairs in the grid, as long as the lower digit is not immediately above the higher one).

In other words, there's a negative constraint, but only on the specific situation where (for example) 2 is immediately above 3, or 5 is immediately above 6.



SudokuPad: https://sudokupad.app/wxnpn3p543

#### April 14, 2024: If I Speak...

by Bill Murphy

Walkthrough for Heavy Difference: https://youtu.be/7UBY7Pny-d8

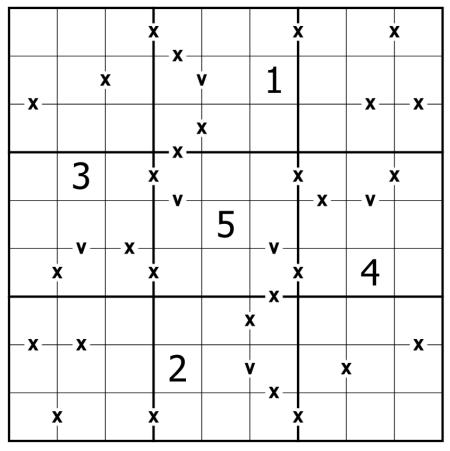
1st off, Happy Aphex Twin Day!

2nd off, Want to give a specific shoutout to R4 of the WPF Sudoku Grand Prix, which is the most fun I've had doing puzzles in the last couple of years. 15 straight heaters and it's live now! Regardless of how fast you solve, if you're looking to step up from GAS to GAS+, highly recommend you sign up and give this round a go! Instructions can be found here (thanks to @DreamLibrarian):

https://discord.com/channels/709370620642852885/854453473810186280/1228820224174981 260 and the Instruction booklet is here (put in the software courtesy of @engy): https://discord.com/channels/709370620642852885/854453473810186280/1228820257007734 814

3rd off, Today's XV (-) Sudoku is slightly overclued so it can have the negative constraint, because going for the negative constraint and rotational symmetry just struck my brain in a certain way 2 This one's built to go fast, you've been warned.

Normal Sudoku Rules Apply. Cells separated by an X sum to 10. Cells separated by a V sum to 5. All Xs and Vs are given.



https://sudokupad.app/6c6kgv8i3k

# April 15, 2024: Really Cool People

by Philip Newman

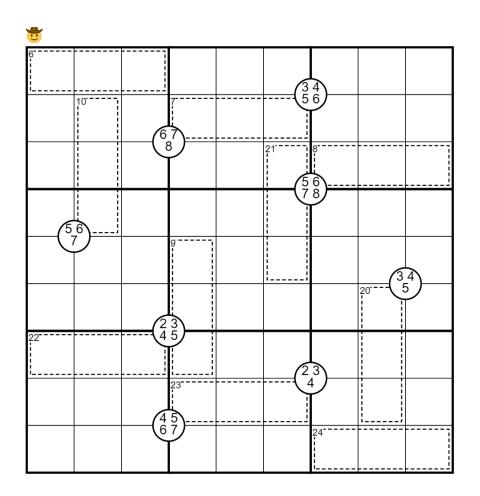
Walkthrough of "If I Speak..." by Bill: <u>https://youtu.be/udZY\_u0OEjc</u>

Welcome back for today's edition of "How did Philip's brain get from this puzzle to that title?"

Today's GAS is a Killer Quadruples Sudoku!

Normal sudoku rules apply.

Killer: Digits in cages cannot repeat and must sum to the total given. Quadruples: Digits in corner circles must appear in the surrounding four cells, in some order.



Play on f-puzzles: <u>https://f-puzzles.com/?id=26c2rccy</u> Play on SudokuPad: <u>https://sudokupad.app/philip-newman/20240415-really-cool-people</u>

# April 16, 2024: Classic Sudoku

by clover!

Walkthrough for Philip's 'Really Cool People': <u>https://youtu.be/Nv5b3Zijeyc</u>

Sometimes you just wanna keep things simple.

Today's GAS is a **classic sudoku**! Normal sudoku rules apply, and that's it.

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

SudokuPad: https://sudokupad.app/v0pfi050ff

By the way: come join us at <u>https://twitch.tv/sudokucon</u> at Sunday April 21, 2024 19:00 GMT for word puzzles with the one and only Glum Hippo!

# April 17, 2024: Better Way To Live

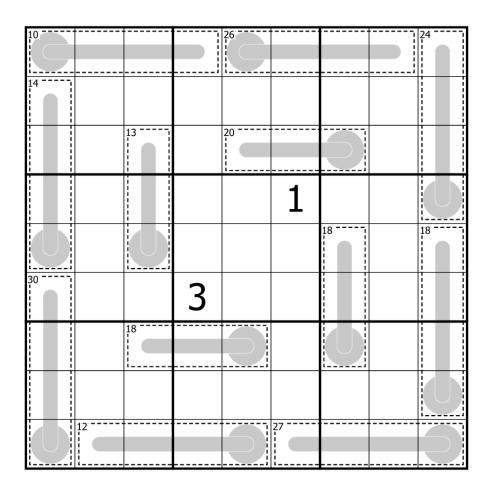
by Bill Murphy

Walkthrough for Classic: https://youtu.be/NOPHAi6stqQ

Time to get **Cronchy** 

Today's GAS is a Thermo Killer Sudoku!

Normal Sudoku Rules Apply. Digits in cages must sum to the given total. Digits along thermometers must increase from bulb to tip.



https://sudokupad.app/bg2b6slxu1

#### April 18, 2024: Cronchety

by Philip Newman

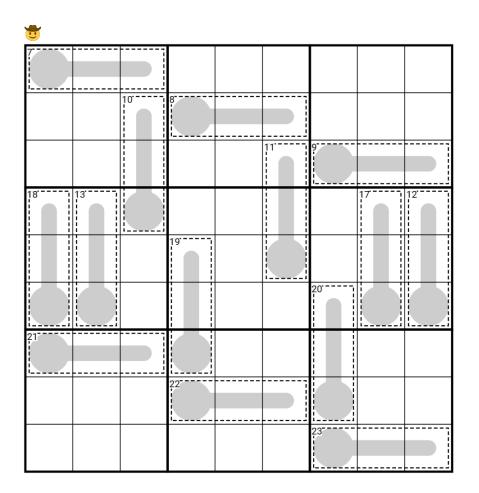
Walkthrough of "Better Way To Live" by Bill: <u>https://youtu.be/N05pkLSO1Xs</u>

As the old man of the GAS team, I'm allowed to be a little cronchety sometimes. (Also I forgot Bill had one of these lined up when I set this.)

Today's GAS is a Killer Thermo Sudoku!

Normal sudoku rules apply.

Killer: Digits in cages cannot repeat and must sum to the total given. Thermo: Digits along thermometers must strictly increase from bulb to tip.



Play on f-puzzles: <u>https://f-puzzles.com/?id=2btmr726</u> Play on SudokuPad: <u>https://sudokupad.app/philip-newman/20240418-cronchety</u>

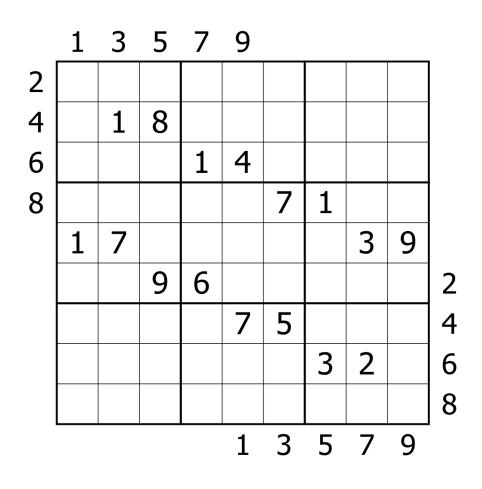
### April 19, 2024: First Seen Odd/Even

by clover!

Walkthrough for Philip's "Cronchety": <u>https://youtu.be/PDzj4BgZnZs</u>

Think back: all the way back to your very **first [seen] odd/even**. Was it a mysterious 4, peeking out from behind the curtains? A tantalizing glimpse of a 7 in your periphery? Today's GAS, perhaps?

Normal sudoku rules apply. Also, clues outside of the grid tell you the first odd or first even digit seen in that row or column, looking from the direction where the clue appears. For instance, row 4 could have any number of odd digits, but the leftmost even digit must be an 8.



SudokuPad: https://sudokupad.app/ue0c8jfe2q

#### April 20, 2024: We Live Here

by Bill Murphy

Walkthrough for Clover's First Seen Odd/Even: https://youtu.be/EnSi8Gs10WA

Got a question for not just sudoku constructors, not just pencil puzzle makers, but honestly anyone who crafts/makes anything: We've all heard of comfort food, comfort media, etc. etc., but do you have a thing that you comfort make? I always like making **Extra Regions** Sudoku, because I know that I can generally make a pretty great one, with very little stress, but I'm interested to hear from y'all if you make/construct/fabricate stuff, what's your comfort thing that you make?

(I also enjoy making chicken teriyaki, Iomo saltado, pulled pork & Bánh Xèo, so it's not just puzzles!!)

Anyway, GAS before I get hungry again

Put the digits 1-9 in each row, column, box and shaded region.

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

https://sudokupad.app/zax289niwv

### April 21, 2024: Å svelge noen kamel

by Philip Newman

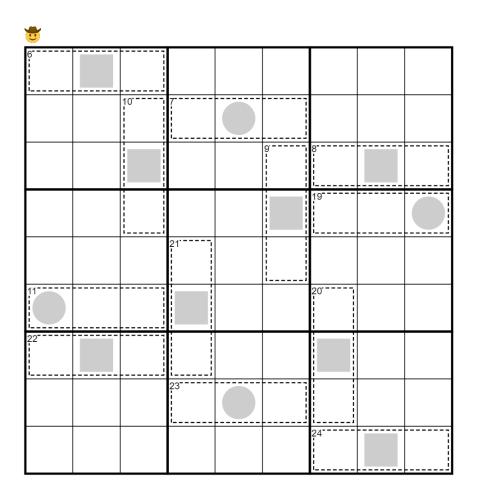
Walkthrough of "We Live Here" by Bill: <u>https://youtu.be/Wx\_ul0ygyls</u>

Yesterday I named one of my May Patreon puzzles after a funny Dutch idiom... so how about a Norwegian one here?

Today's GAS is a Killer Odd/Even Sudoku!

Normal sudoku rules apply.

Killer: Digits in cages cannot repeat and must sum to the total given. Odd/Even: Digits in grey circles must be odd; digits in grey squares must be even.



Play on f-puzzles: <u>https://f-puzzles.com/?id=277fhhkl</u> Play on SudokuPad: <u>https://sudokupad.app/philip-newman/20240421--svelge-noen-kamel</u>

# April 22, 2024: All Odd or Even

by clover!

Walkthrough for Philip's unspellable puzzle: <u>https://youtu.be/cqVbY9qUzWc</u>

One of my favorite palindromes is "NEVER ODD OR EVEN." Which is really *exceptionally* irrelevant, today, since this **all odd or even** GAS involves no palindromes whatsoever, and majors on digits being *very* odd or *very* even.

Normal sudoku rules apply. In each 3x3 region, either all shaded cells contain odd digits, or all shaded cells contain even digits.

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

SudokuPad: <u>https://sudokupad.app/43vbv7io6w</u>

## April 23, 2024: Serial Numbers

by Philip Newman

Walkthrough of "All Odd or Even" by clover: <u>https://youtu.be/dKYGuaQcock</u>

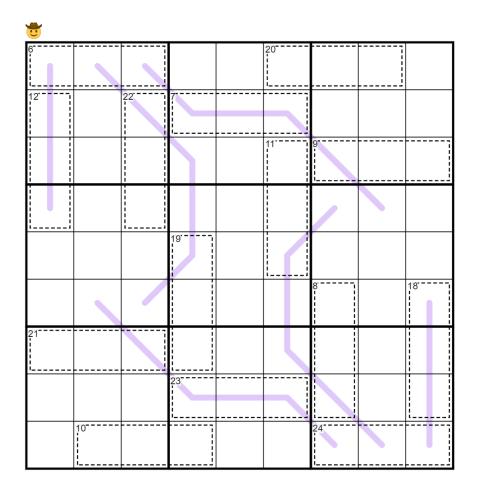
SURPRISE!

Today's GAS is a Killer Renban Sudoku!

Normal sudoku rules apply.

Killer: Digits in cages cannot repeat and must sum to the total given.

**Renban: Digits along lines must form a non-repeating consecutive set, in any order.** (For example, a 4-cell renban line could be 4352, but not 5679 or 2312.)



Play on SudokuPad: https://sudokupad.app/philip-newman/20240423-serial-numbers

#### April 24, 2024: Starburster

by Bill Murphy

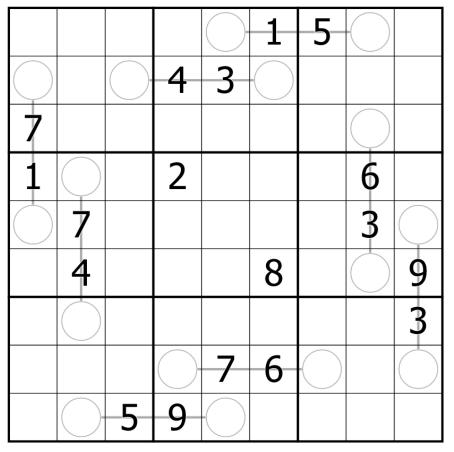
Walkthrough for Serial Numbers: https://youtu.be/31JVdVYkZbM

Sorry to Philip, Clover and anyone else worried about me yesterday! I literally just forgot and went to bed! (Like I was testing Philip puzzles two hours before I normally post, so yeah it was weird to Clover and Philip, but no, I just had my sleepy boy honk shoo energy going) <u>smash</u> that zzz emoji

Anyway, I felt so bad this morning after waking up and realising that I messed up at work and wasted a bunch of a reagent by accident. Now, that might seem like a medium deal, but it was about 0.3 of a mL. And if you're like that's a small deal, let me tell ya, listicles like this: <u>https://beyondtype1.org/the-10-most-expensive-liquids-in-the-world/</u> don't account for biochemical reagents, which, if I've done my math right, would put it comfortably into second on this list at \$5.3million per gallon. Rest of the day was good though  $\bigcirc$ 

Today's puzzle is a **Double Arrow Sudoku**, taking a set-up that I spent several days trying to make work a couple months back and the fresh eyes went a long way the second time around .

Normal sudoku rules apply. Digits along lines must have the same sum as the digits in the circles at each end.



Play on SudokuPad: https://sudokupad.app/atco7998hm

## April 25, 2024: Nearest Neighbors

by clover!

Walkthrough for Bill's "Starburster": https://youtu.be/-dllRl786Gk

For some reason, I can't even get good WiFi from my nearest neighbors this morning! 😭

Normal sudoku rules apply. Also, some cells in the grid have arrows. Arrows point to whichever of the orthogonally adjacent cells have digits whose values are the closest to the digit in the arrow cell. If there are multiple arrows, then two surrounding digits are equally close. For instance, if an arrow cell with a 6 were surrounded by 1, 3, 4, and 8, then it would have arrows pointing to the 4 and the 8 (both 2 away).

1	Ş	+					+ +
			9				
				3	+	7	<b>ĝ</b>
						3	1
4	8						
<b>Ş</b>	<b>Ģ</b>	+	2				
·				8			
<b>↑</b> →					<b>+</b>	4	2

SudokuPad: https://sudokupad.app/c1jh0nu5iv

# April 26, 2024: No Reservation / Love Comes Crashing [Double Sudoku] by Bill Murphy

Walkthrough for Nearest Neighbours: <a href="https://youtu.be/kze73CFX4WQ">https://youtu.be/kze73CFX4WQ</a>

Damn, today I ran my first educational session in my new job, teaching teenagers about how to test for genetic diseases with PCR and Gel Electrophoresis!

It's weird to be a teacher for a half dozen years and still be having *i don't know how to do this* nerves. (please rest assured, it went very well, i forgot a bunch of stuff, but i didn't break anything or waste more reagents, so i'll take this dub, thanks)

It's been about two weeks since i did a **Double Classic Sudoku** day, so let's go for that shall we!

Put the digits 1-9 in each box, row and column.

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

No Reservation: https://sudokupad.app/facd381sl9

 $\Downarrow \Downarrow \Downarrow$  (The second puzzle is on the next page)  $\Downarrow \Downarrow$ 

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

Love Comes Crashing: <u>https://sudokupad.app/tsd47jbcm0</u>

[Note from typesetter: The times in the table at the end are for both puzzles combined]

## April 27, 2024: Zippee-Ki-Yay

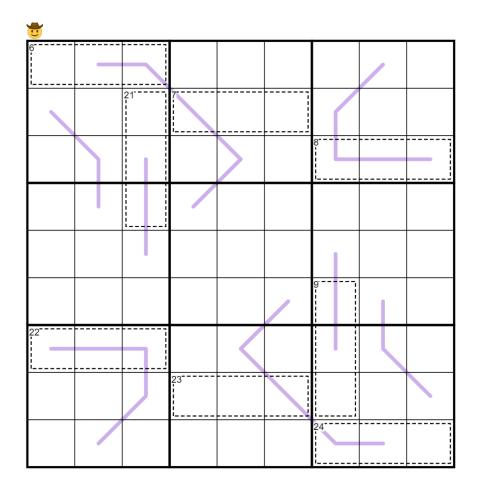
by Philip Newman

Walkthrough of "No Reservations" and "Love Comes Crashing" by Bill: <u>https://youtu.be/K11igEzzgb0</u>

I know many of you will be sad that the month is ending and I won't be posting more of this series of Killer + [Something] series... but of course I made so many more of these which didn't make the GAS cut. (Poor Bill.) So... bonus pack incoming on Tuesday!

Normal sudoku rules apply.

Killer: Digits in cages cannot repeat and must sum to the total given. Zipper Lines: For each line, the digits in each pair of cells an equal distance away from the central cell of the line sum to the digit in the central cell of the line.



Play on f-puzzles: <u>https://f-puzzles.com/?id=2xtzzomp</u> Play on SudokuPad: <u>https://sudokupad.app/philip-newman/20240427-zippee-ki-yay</u>

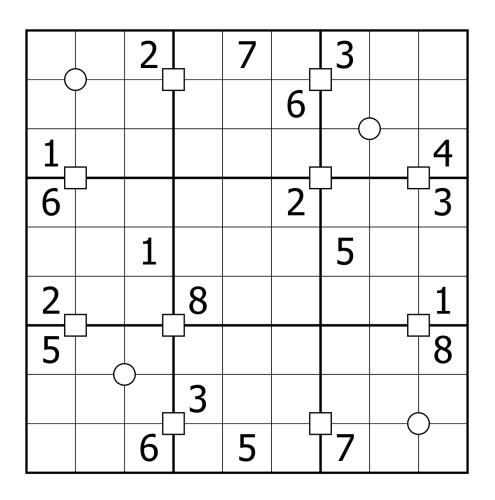
## April 28, 2024: Full or Half

by clover!

Walkthrough for Philip's "Zippee Ki Yay": https://youtu.be/nnOUe7d5sUI

In the immortal words of They Might Be Giants: "I don't want the sudoku, I just want your **full or half**."

Normal sudoku rules apply. Wherever a circle appears in the grid, the four surrounding digits must be either all odd, or all even. Wherever a square appears, exactly two of the four surrounding digits are odd and two are even.



SudokuPad: <u>https://sudokupad.app/stmr2en58o</u>

#### April 29, 2024: Cupid Sudoku

by Bill Murphy

Walkthrough for Full or Half: https://youtu.be/xnXPijOJWJk

OK, listen. Hear me out.

I have a bunch of easier GAS puzzles ready to go and was like, "I gotta bring the difficulty back down".

But I was just hanging with the girlfriend this weekend and we had sunday to ourselves, so I asked her a very strange request of "Hey, you wanna take me out and get a bunch of photos of me for thumbnails for the youtube channel?" To which her response was incredibly immediate and we went and did a bit of a photo shoot in the local area  $\bigcirc$ 

Today's Cupid Sudoku goes out to her. Love is cool as hell 😍

Normal Sudoku rules apply. If a digit is placed on an arrow then it must repeat somewhere else in the cells pointed at by the arrow.

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

https://sudokupad.app/tx2vdg53pi

#### April 30, 2024: Look Ma No Braids

by Philip Newman

Walkthrough of "Cupid Sudoku" by Bill: <u>https://youtu.be/WcVA\_oYBaR0</u>

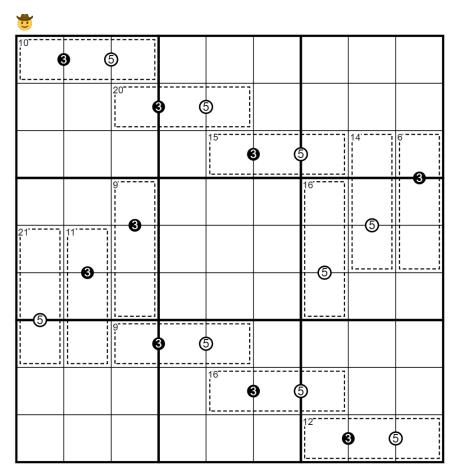
I am glad you are here with me. Here at the end of all things, @Daily Sudoku Solver.

...but if you want to see what over half of my GAS setting attempts end up looking like, I've posted a free pack on Patreon with 8 more Cronchy puzzles! <u>https://www.patreon.com/posts/patreon-preview-103346403</u>

Today's **GAS** is a **Gamma & Epsilon Sudoku**! Think of it like Kropki Pairs' edgier teenage cousin. It's too cool to be confined to the same pattern as the other variants.

Normal sudoku rules apply.

Killer: Digits in cages cannot repeat and must sum to the total given. Gamma & Epsilon: Digits in cells separated by a white dot must have a difference of 5. Digits in cells separated by a black dot must have a ratio of 3:1. (No negative constraint adjacent cells separated by no dot may have a difference of 5 or ratio of 3:1.)

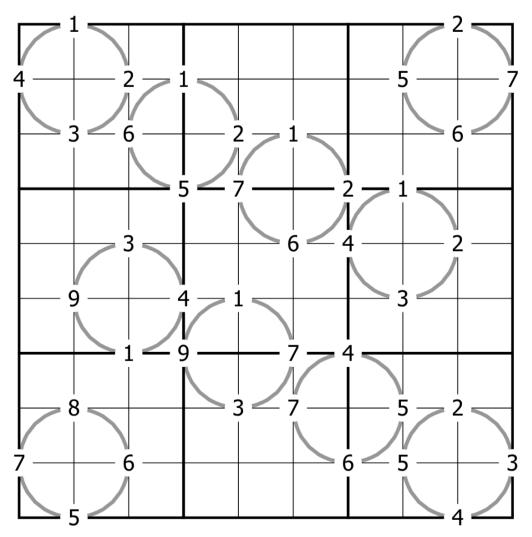


Play on f-puzzles: <u>https://f-puzzles.com/?id=yvrooqen</u> Play on SudokuPad: <u>https://sudokupad.app/philip-newman/20240430-look-ma-no-braids</u>

#### Bonus 1: Wheel Sudoku

Clover

Normal sudoku rules apply. The grid contains some circles which each cover 4 cells. The clues on each circle show the exact digits that must appear in those 4 cells. Digits must appear in the order shown, but wheels may be rotated clockwise or counterclockwise by any amount (but must not be flipped or shuffled).

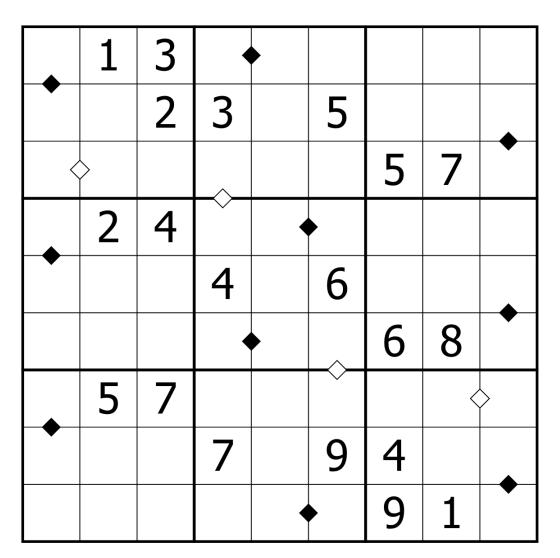


https://sudokupad.app/wgv9fdpg3a

# Bonus 2: Parity Diamonds

Clover

Normal sudoku rules apply. Digits separated by a black diamond must have the same parity (both odd or both even). Digits separated by a white diamond must have different parities (one odd and one even).



https://sudokupad.app/r1r2v7lwpn

## Bonus 3: Nonconsecutive

Philip Newman

Normal sudoku rules apply. Cells that share an edge must never contain consecutive digits.

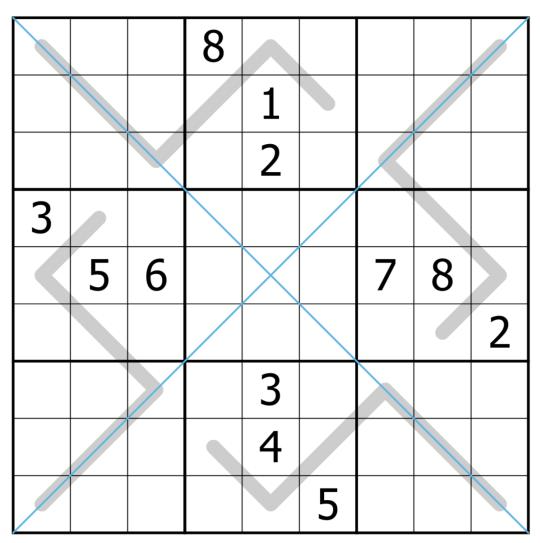
			1	2			
					1		
2						8	
	2						
	7	3			6	2	
						7	
	1						7
		8					
			7	8			

https://sudokupad.app/ml3wvwn6tw

# Bonus 4: Irreversible Damage

Bill Murphy

Normal sudoku rules apply. Digits must not repeat on the indicated diagonals. Grey lines are palindromes and must read the same from either direction.



https://sudokupad.app/pa8kdnj626

## Bonus 5: The Right Way Around

Bill Murphy

Normal sudoku rules apply.

If you feel like doing this hard mode style: Each box must be resolved in order and no pencilmarks or digits may be placed in other, non-resolved boxes.

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

https://sudokupad.app/li25ppramg

# **Time Benchmarks**

Time Denci	iiiidi k5	-	
		520	
	Two party hats	One party hat	Todays dinosaur:
Apr 1, 2024	7:30	14:30	pturgid Pteranodon (Slow Thermo / Entropic Lines)
Apr 1, 2024	21:00	39:00	<i>Experimental Eosinopteryx</i> (Killer Sudokus) 6,670,903,752,021,072,936,960 Sauropods on
Apr 1, 2024	in the Stelliferous Era	in the Degenerate Era	the Wall, 6,670,903,752,021,072,936,960 Sauropods, take one down, pass it around (No Wrong Answers)
Apr 1, 2024		any amount of time	(bonus hats for correctly guessing the setters)
Apr 1, 2024	5:00	10:00	Mr. Science Scipionyx (Legendary Tippers)
Apr 1, 2024	10:00	20:00	There was a charming sauropod and Bingo was its name-o (Nearly There)
Apr 2, 2024	6:00	11:00	April TWOSTegosaurus
Apr 3, 2024	7:30	15:00	Daffy Diplodocine
Apr 4, 2024	8:00	15:00	bleached Brachyosaurus
Apr 5, 2024	5:00	10:00	Big ShirtOrodremus
Apr 6, 2024	8:00	17:00	Debonair Dicraeosaurid
Apr 7, 2024	6:00	11:00	proud Proa
Apr 8, 2024	10:00	20:00	Twenty-Sided Trinisaura
Apr 9, 2024	7:00	13:00	Hipster Haplocanthosaurid
Apr 10, 2024	7:00	13:00	curious Chialingosaurus
Apr 11, 2024	7:37	13:31	griping Gryposaurus
Apr 12, 2024	6:30	12:30	Timid Tuebingosaurus
Apr 13, 2024	7:30	14:00	ukelele-playing Unenlagia
Apr 14, 2024	6:00	11:00	Avril Aviatyrannis
Apr 15, 2024	8:00	16:00	Glossy Guaibasaurid
Apr 16, 2024	5:00	10:00	traditional Tyrannosaurus Rex
Apr 17, 2024	9:00	17:00	Additive Anchiornis
Apr 18, 2024	9:00	20:00	Thermodynamic Titanosauriform
Apr 19, 2024	7:00	13:00	memorable Mercuriceratops
Apr 20, 2024	7:00	13:00	Crafty Citipati
Apr 21, 2024	7:00	14:00	Odd Eoraptor
Apr 22, 2024	6:30	12:00	non-sequitur Nomingia
Apr 23, 2024	9:00	20:00	Thematic Thecodontosaurid
Apr 24, 2024	7:30	13:00	Apologetic Anserimimus
Apr 25, 2024	7:00	13:00	very close Velociraptor
Apr 26, 2024	10:30	19:00	Annealed Ammosaurus
Apr 27, 2024	7:30	15:00	Mbira-ist Mbiresaurus
Apr 28, 2024	7:00	13:00	full Fulgurotherium
Apr 29, 2024	8:00	15:00	Romantic Rahonavis
Apr 30, 2024	8:00	15:00	Cronchety Chromogisaurus