

GAS Leak

Genuinely Approachable Sudoku
from the CtC Discord

Volume 36:

January 1 – January 31, 2024

Welcome in 2024!

We got a full month of GAS puzzles for you, one better than the other.

Have fun solving!

- Engy

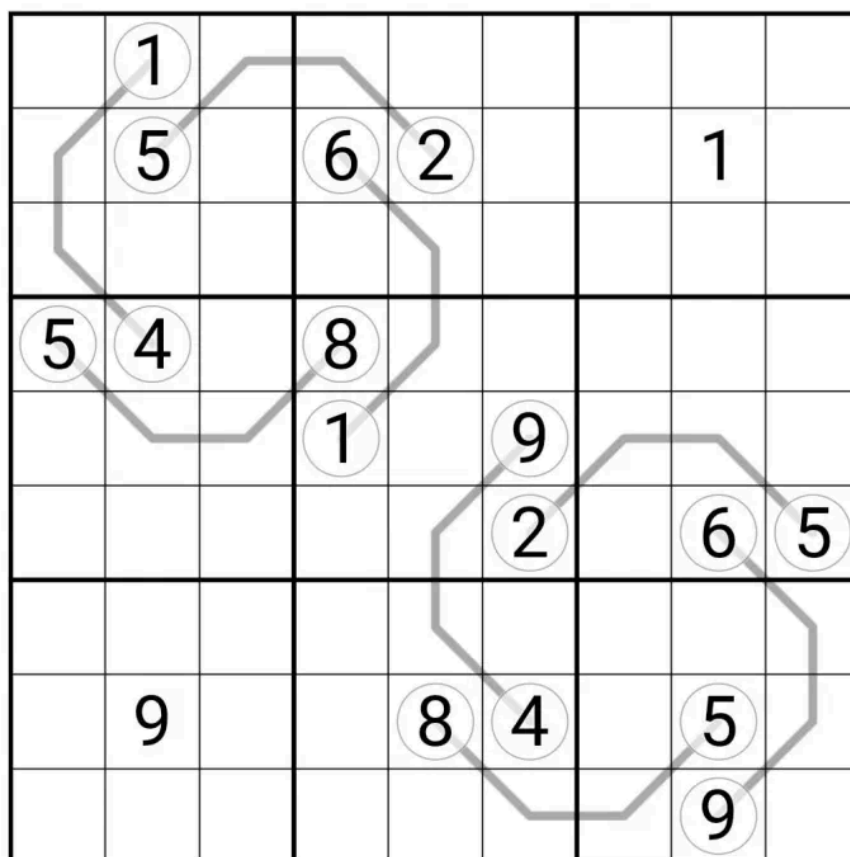
January 1, 2024: Nshingilile
Bill Murphy

Walkthrough for Zipper Lines 2 - The Zippering: <https://youtu.be/3XP33DCkfy0>

Happy new year from all of us at GAS HQ! Between you and me, I'm a bit tired from the celebrations, so if we could just pretend I wrote something funny here, that'd be nice.

Today's GAS is an *Between Lines Sudoku*!

Normal sudoku rules apply. Digital along lines must be between the digits in the circles at the end.



SudokuPad: <https://sudokupad.app/9mg3tl9xld>

January 2, 2024: Out With The Old
Philip Newman

Walkthrough of "Nshingilile" by Bill:
<https://www.youtube.com/watch?v=KK9anrN1Qb8>

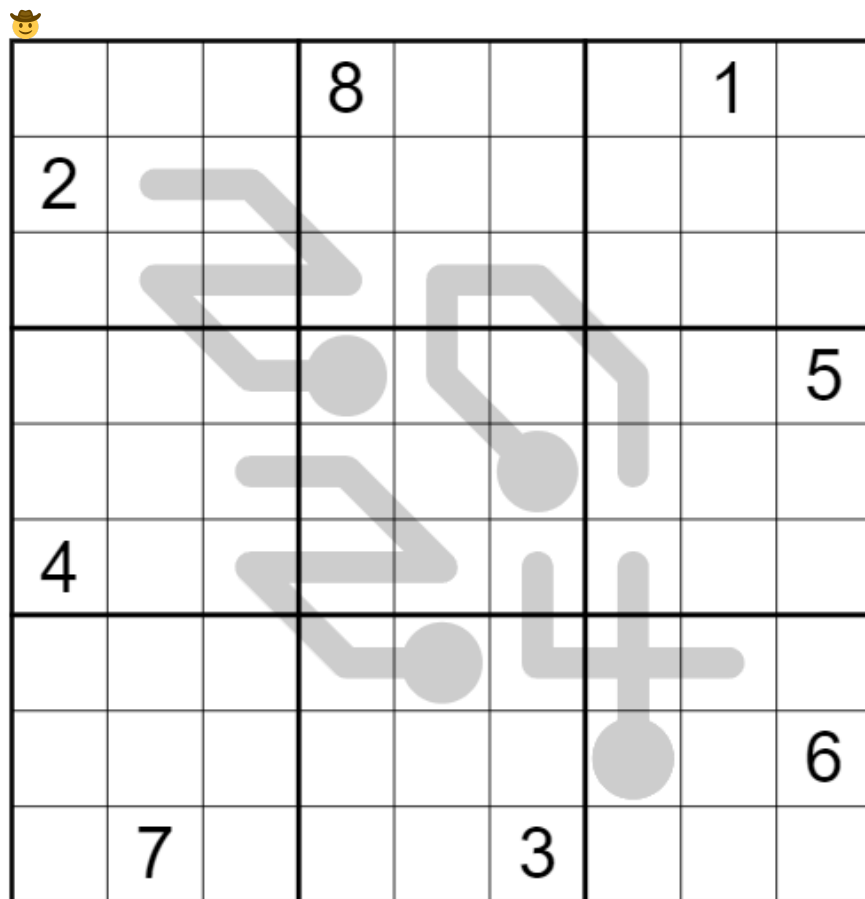
Happy New Year, GAS solvers!

My *completely original* new year's resolution this year is provide *completely original* GAS for you to solve. Also, *completely original* intros.

Today's **GAS** is a **Thermo Sudoku!**

Normal sudoku rules apply.

Thermo: Digits along thermometers must strictly increase from bulb to tip.



Play on f-puzzles: <https://f-puzzles.com/?id=yt4ht5a3>
Play on SudokuPad: <https://sudokupad.app/philip-newman/20240102-out-with-the-old>

January 3, 2024: Pair-Up Sudoku
clover!

Walkthrough for Philip's "Out With The Old":
<https://www.youtube.com/watch?v=NS5JuvwV4W4&t=46s>

There's a little soap opera happening in today's GAS, if you look closely. Desperate and lonely eights, having nearly abandoned the search for true love, still holding on to the last vestige of hope that the perfect two might come along. Sixes and ones bitterly feuding over fours. And who will finally crack five's stern facade and convince them to admit they need to **pair up** after all?

In this **pair-up sudoku**, normal sudoku rules apply. Also, each digit (except for 5) has at least one neighbor that pairs with it to sum to either 5 or 10. For instance, every 4 is orthogonally adjacent to at least one 1 and/or at least one 6.

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

SudokuPad: <https://sudokupad.app/clover/jan-3-2024-pair-up-sudoku>

January 4, 2024: What We've Learned / To Hell With Good Intentions (Double)
Bill Murphy

Walkthrough for Pair-Up Sudoku: <https://youtu.be/eLrRlqjbR6Q>

I asked at the bookshop if they had some plays written by Shakespeare for purchase.
"Of course", they said. "Which one?"
"William."

Today's GAS are **Two Classic Sudoku!**

(happy 20th birthday to 'mclusky do dallas' that album rules and you were so good at the corner hotel last night)

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

[The times in the table at the end of this Leak are for both combined]

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

What We've Learned: <https://sudokupad.app/hwr3r8xeq4>

↓↓↓ (The second puzzle is on the next page) ↓↓↓

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

To Hell With Good Intentions: <https://sudokupad.app/m13e6utm38>

January 5, 2024: Xerophilous
Philip Newman

Walkthrough of "What We've Learned" and "To Hell With Good Intentions" by Bill:
<https://www.youtube.com/watch?v=kGU92s5fnJ0>

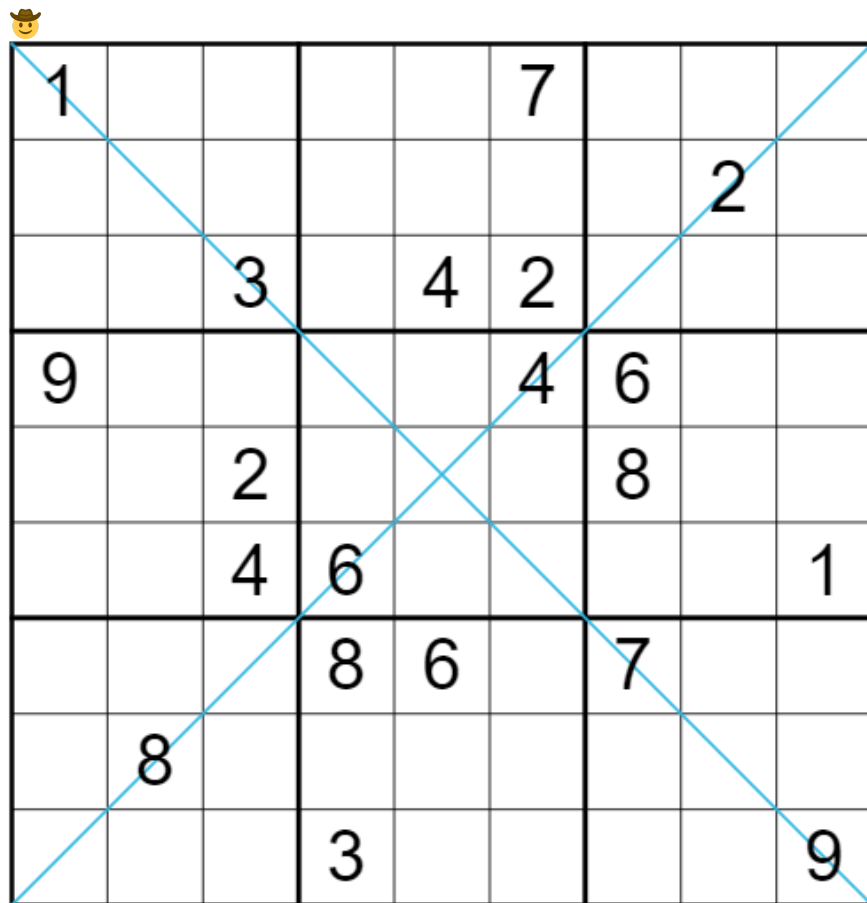
Genuinely Approachable Sauropods:
https://youtube.com/shorts/eMOrYBlg_rw

I've recorded my first short! I will be doing a series discussing whatever 🦖 appeared in my previous **GAS**, and we have a shiny new one for today's puzzle, a **Diagonal Sudoku**. The paper recognizing it as a new species was only published online two days ago!

(I will also do some sudoku shorts at some point, since it's a sudoku channel. But hopefully these will be fun too.)

Normal sudoku rules apply.

Diagonal: Digits along the indicated diagonals cannot repeat.



Play on f-puzzles: <https://f-puzzles.com/?id=ypgd49zs>

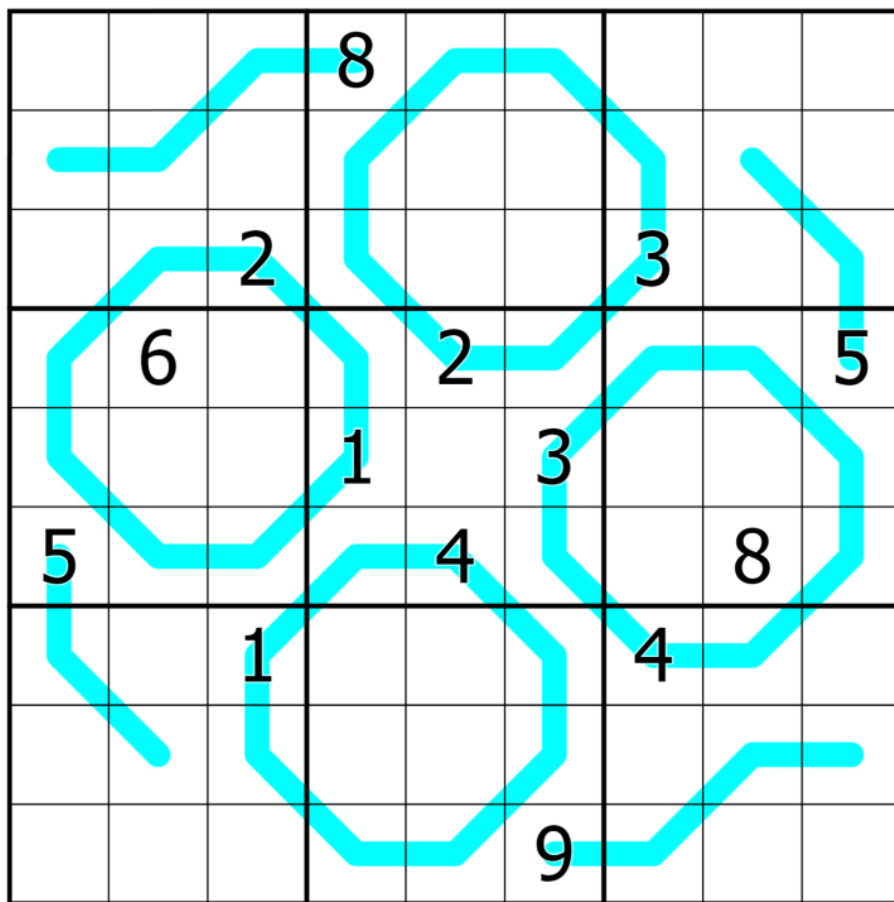
Play on SudokuPad: <https://sudokupad.app/philip-newman/20240105-xerophilous-v2>

January 6, 2024: Region Sum Lines
clover!

Walkthrough for Philip's 'Xerophilous':
<https://www.youtube.com/watch?v=P7kY31R9dK8>

Apologies for the delay on GAS Leak - entirely my fault again, it'll be here within a few days.

Today's GAS is a **region sum lines sudoku**! Normal sudoku rules apply. Also, each blue line passes through multiple regions in the grid. Along each line, the digits within each region have the same sum. Different lines may or may not have different sums.



SudokuPad: <https://sudokupad.app/8nz9v01I7a>

January 7, 2024: The Chocolate Teapots

Bill Murphy

Walkthrough for Clover's "Region Sum Lines": <https://youtu.be/euO8Z-AGTKc>

BONUS Walkthrough for my GAS Leak "Halved Squares Sudoku":
<https://youtu.be/DC5iVYcdhJQ>

Today's **Pencilmark Sudoku** was inspired by the phrase that's pretty common to CTC viewers, "The Chocolate Teapot Triple". A triple made up of three cells with two center marks in each cell, is often thought to be useless, a la "As useful as a chocolate teapot", but if you think a little bit, use a bit of cleverness and ingenuity, turns out a chocolate teapot might be exactly what you need.

<https://www.bbc.com/news/uk-england-york-north-yorkshire-29126161>

Normal Sudoku Rules Apply. Digits marked in cells are all possible candidates for that cell.

13	23	12	59					24
	56	67	57				68	12
			79				56	14
						25	58	28
47	78	48						
34	67				59			
23	68				58	78	57	
24					89	14	34	13

N.B. If you run into issues with this puzzle showing a blank grid, the way to go about fixing this is to open it up in a private browser where it will not read your stored cookie of the solve 😊

<https://sudokupad.app/p4u5xa8k9v>

January 8, 2024: Evitucesnoc
Philip Newman

Walkthrough of "The Chocolate Teapots" by Bill:
<https://www.youtube.com/watch?v=Y1JSugD4x34>

Genuinely Approachable Sauropods:
<https://youtube.com/shorts/4q0mqoypcy0>

We've posted **GAS** every day for 946 consecutive days... but do you ever wonder what would happen to spacetime if we posted GAS every day nonconsecutively? 😊

Today's GAS is a (somewhat spicy) **Nonconsecutive Sudoku!**

👤

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

Play on f-puzzles: <https://f-puzzles.com/?id=yvttwghn>
Play on SudokuPad: <https://sudokupad.app/philip-newman/20240108-evitucesnoc>

January 9, 2024: Rorschach Test
clover!

Walkthrough for Philip's 'Evitucesnoc': https://www.youtube.com/watch?v=TP_7JLIYvM8

Classic sudoku, if you ask me, is the hardest sudoku variant to set. It has this funny way of tricking you into believing that your beautiful setup will survive - right until you reach the very end of the process and discover that 1. it needs one more given and 2. every single given you could possibly add will ruin the entire thing. In short, be very impressed by Bill and Philip, they have uncommonly enormous brains. 🧠

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

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

SudokuPad: <https://sudokupad.app/clover/rorschach-test>

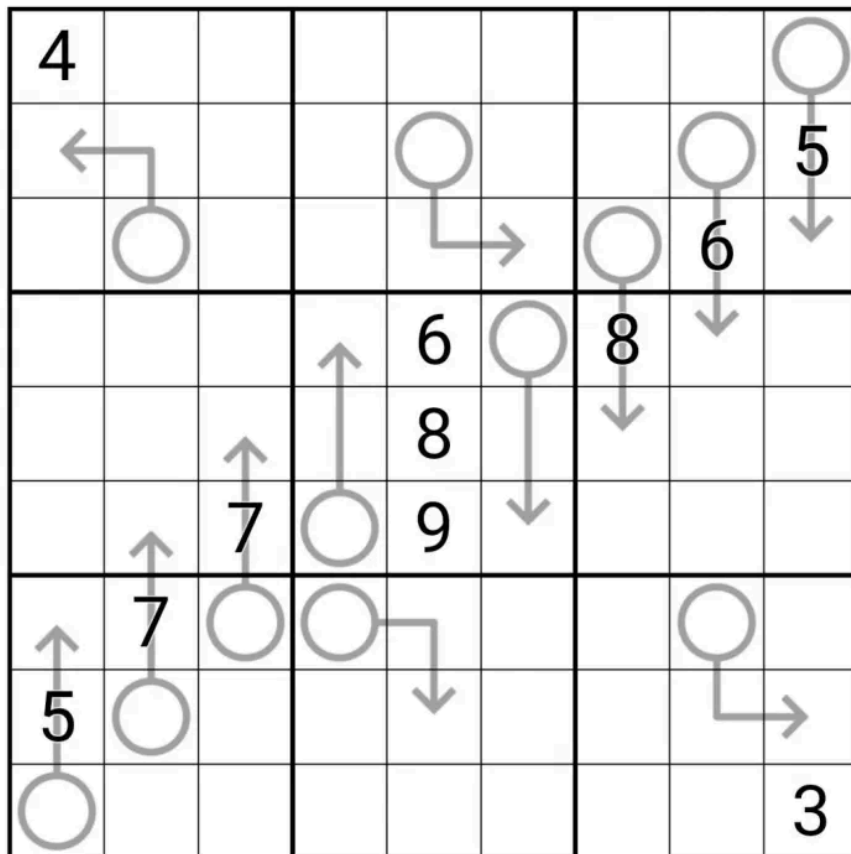
January 10, 2024: Days Like These
 Bill Murphy

Walkthrough of Rorschach Test: <https://youtu.be/vg46aYqkJiw>

A quote bouncing around my head a lot the last couple of days is also true of writing GAS intros: "It gets easier. Everyday it gets a little easier. But you got to do it everyday; that's the hard part. But it does get easier."

Today's GAS is an **Arrow Sudoku!** That's all I got for ya

Normal sudoku rules apply. Digits along arrows must sum to the digit in the bulb.



<https://sudokupad.app/186llsbi0c>

January 11, 2024: Dapper Lines

Philip Newman

Walkthrough of "Days Like These" by Bill:

<https://www.youtube.com/watch?v=vLidX4vn3L8>

Genuinely Approachable Sauropods:

<https://youtube.com/shorts/Wf4Anv4SOi4>

An "aggressively terrible" joke first shared on our patreon discord in #bad-jokes:

Two friends were preparing to hike up a mountain, and one friend noticed the other was packing some unusual flags.

"Why do you have flags with the number 2 on them?"

"I wanted to be prepared, in case we need to communicate in [see page at the end of this Leak]!"

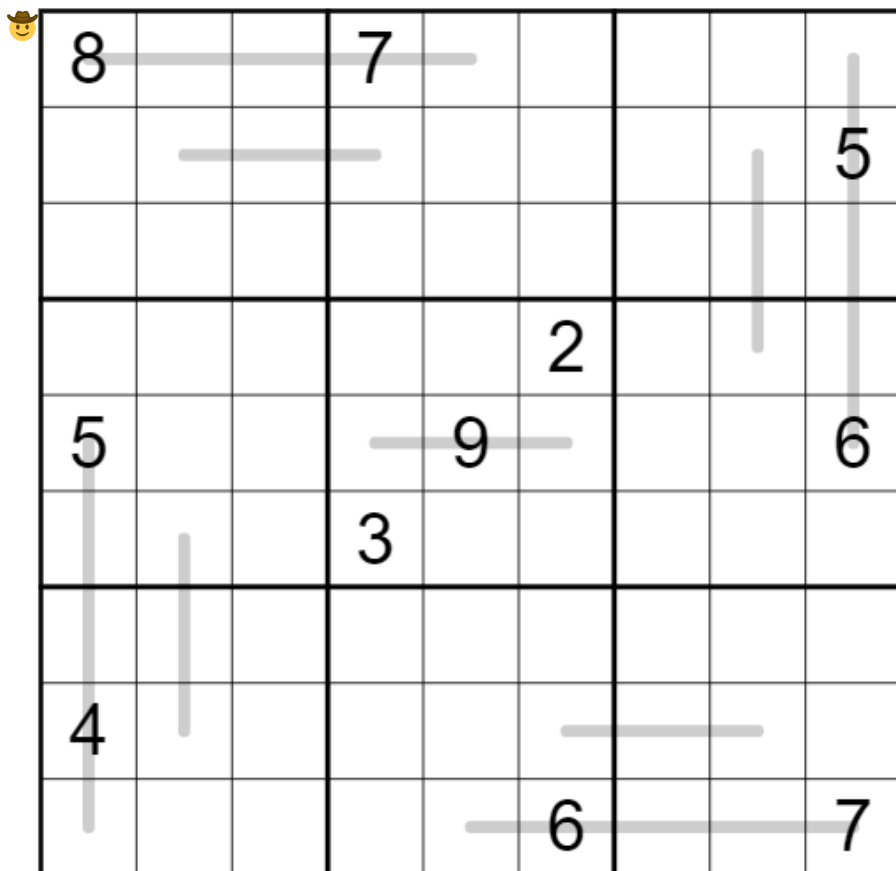
Today's **GAS** is a **Zipper Lines Sudoku!**

Normal sudoku rules apply.

Zipper: 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.

For example, $r1c3 = r1c1 + r1c5 = r1c2 + r1c4$

↓↓ ↓↓ (The puzzle is on the next page) ↓↓ ↓↓



Play on f-puzzles: <https://f-puzzles.com/?id=ynaspbb5>
 Play on SudokuPad: <https://sudokupad.app/philip-newman/20240111-dapper-lines>

**January 12, 2024: Quadro
clover!**

Walkthrough for Philip's 'Dapper Lines':

<https://www.youtube.com/watch?v=HCJSQ1WbTrQ>

Hello! Let's all quaff a quaint and quirky **quadro sudoku**. (Did you know that there are nearly 50 English - well, arguably English, anyways - words that contain a Q but no U? Maybe next time we'll have a Qadro sudoqu.)

Normal sudoku rules apply. No 2x2 group of cells contains only odd or only even digits.

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

SudokuPad: <https://sudokupad.app/clover/january-12-2023-quadro>

January 13, 2024: Moving On
Bill Murphy

Walkthrough for Quadro: <https://youtu.be/b1lpC2ycApg>

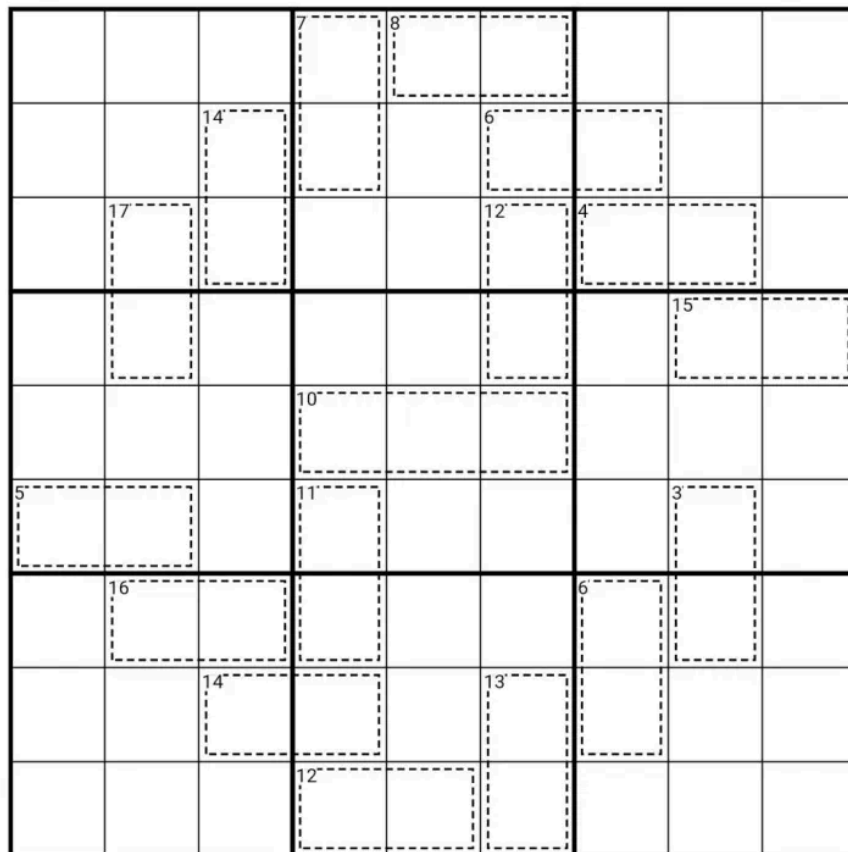
Hey. Today's the third anniversary of the worst day of my life, so I don't really have any jokes in the pocket today. Thank you to this community with whom the kindness, the laughs, the compassion and the puzzles have helped me feel somewhat normal in a time when my life felt anything but. Lisa would take care of me if she could, so I have no doubt that she would be delighted in place of everyone who has kept an eye out.

If the worst's yet to come, then the worst's not invited.

Today's GAS is a *Killer Sudoku*!

Today's GAS also uses a trick that we've done several times before but some people have had difficulties with before, so in anticipation, I recorded a short for you yesterday as a GAS101: (there's a bonus puzzle attached to it)

<https://youtube.com/shorts/UYHHMhKjYAw>



<https://sudokupad.app/gphymbolds>

January 14, 2024: A Touch of Class

Philip Newman

Walkthrough of "Moving On" by Bill:

<https://www.youtube.com/watch?v=E-cJeJ74ofo>

Genuinely Approachable Sauropods:

https://youtube.com/shorts/mRQ1_jg-kcs (January 11)

<https://youtube.com/shorts/Wf4Anv4SOi4> (January 8)

Today's **GAS**, a **Classic Sudoku**, is very unusual for one of my puzzles. I actually started setting this in the middle of a meeting with pen and paper. I'll post it as a spoiler [Note from typesetter: on the „Hints and Spoilers“ page in this Leak], but even if you can actually figure out what's going on and how it applies to today's puzzle (which is modified and heavily morphed) I'd be surprised if it makes you any faster!

Normal sudoku rules apply. And that's it!



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

Play on f-puzzles: <https://f-puzzles.com/?id=ypageoth>

Play on SudokuPad: <https://sudokupad.app/philip-newman/20240114-a-touch-of-class>

January 15, 2024: Cupid Sudoku
 clover!

Walkthrough for Philip's 'A Touch of Class':
<https://www.youtube.com/watch?v=UkqJojfwmeE>

Romance is in the air! The romance, that is, between your humble sudoku setter (me) and my very favorite symbol in Penpa, the 'fat gray arrow'. What is that arrow good for, you might ask? Well, solve this puzzle (and the next three or four that I have coming up!) and find out.

In this **cupid sudoku**, normal sudoku rules apply. Also, the digit in an arrow cell must appear at least once more in the direction that the arrow is pointing (not necessarily in the immediately adjacent cell). For instance, because there is a 1 in the arrow cell at r4c1, there must be a 1 in either r3c2 or r1c4 (or both).

		6	↖		1		9	
8		2						
		↗			↗	↘	3	7
1		↘						↖
↘						↘		1
9	4	↖	↖			↖		
						5		6
	6		1		↗	8		

SudokuPad: <https://sudokupad.app/clover/january-15-2024-cupid-sudoku>

January 16, 2024: Headz Gone West

Bill Murphy

Walkthrough for Cupid Sudoku: <https://youtu.be/Tvj3m1zLZ0c>

Hey, You! Yes, You!

Do you like puzzles? If Yes, Continue Reading. If Not, go to google.com and search for "hobbies", something there will probably take your fancy. I've heard the teens like "Extreme Ironing", "Chessboxing", "Swedish Death Cleaning" and "Fun".

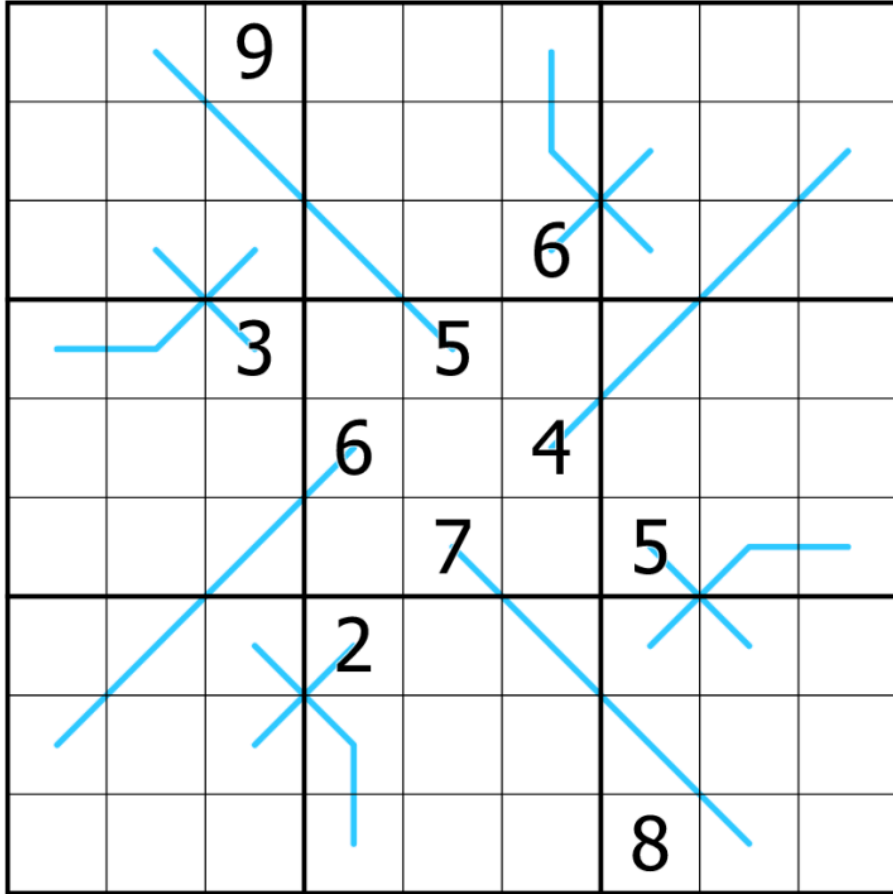
A couple of the yearly puzzle competitions are coming soon, with IB of R1 of the WPF Sudoku Grand Prix coming (friday?) and R1 of Sudoku Mahabharat coming in three weeks, and I'm honourbound to tell you they're open to everyone, not just the speedsolvers! We tend to do funky things from the IB of the WSC as they come so look out for us doing weird things soon.

BUT!

As much as the weird ones are unique, it's always good to practice the basics, so today's GAS is a **Region Sum Lines** sudoku!

Normal Sudoku Rules Apply. Clues along lines sum to the same total in each box it enters. (eg. $R1C2+R2C3 = R3C4 = R4C5$)

↓↓ ↓↓ (The puzzle is on the next page) ↓↓ ↓↓



SudokuPad: <https://sudokupad.app/zzt17hxo3>

January 17, 2024: Mighty Krop
Philip Newman

Walkthrough of "Headz Gone West" by Bill:
<https://www.youtube.com/watch?v=L3rR55luOyA>

Genuinely Approachable Sauropods:
https://youtube.com/shorts/i2G5s2Z_0rI

Those of you who have been with us for a while will probably remember all the intros we did talking about Tears of the Kingdom. Those of you who haven't: we did a lot of intros talking about Tears of the Kingdom.

This morning, I was watching an explanation of a Tears of the Kingdom speedrun, and there was an example given of how using Amiibo to get a bunch of fish could be useful.

To which Zoe responded: That's a lot of Mighty Crap!

Today's **GAS** is a **Kropki Pairs Sudoku!**

Normal sudoku rules apply.

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.)

↓↓ ↓↓ (The puzzle is on the next page) ↓↓ ↓↓



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

Play on f-puzzles: <https://f-puzzles.com/?id=yodl7cu6>

Play on SudokuPad: <https://sudokupad.app/philip-newman/20240117-mighty-krop>

January 18, 2024: Elimination Sudoku
 clover!

Here's a walkthrough for Philip's 'Mighty Krop'. You'll notice that I got a haircut and an Australian accent in this walkthrough video. This is because my neighbors are loudly removing the ceiling -THUNK - from their - THONK - apartment and I neglected to record - CLONK - last night while they were quiet. 😊
<https://www.youtube.com/watch?v=xQWqMX1n-Uc>

And here's today's GAS! We're still celebrating the mighty 'fat gray arrow' in Penpa with an **elimination sudoku**. Normal sudoku rules apply. If a digit appears in a cell with an arrow, then that digit does NOT appear in any of the cells in the direction that the arrow points. For example, whatever digit goes in r3c4 can't be repeated in r4c3, r5c2, or r6c1.

↖			2	3	↖			6↗
	↖1		5	↗	6		↖	
		↗	↖	4	1	↖		
↖	5					↖	3	
1	↖	2				9	↖	4
	9	↖					6	↖
		↖	4	8	↖	↖		
	↖		1	↖	9		↖2	
↖9			↖	2	3			↖

SudokuPad: <https://sudokupad.app/clover/january-18-2024-elimination-sudoku>

January 19, 2024: Skyscrapers

Bill Murphy

Walkthrough for Elimination Sudoku: <https://youtu.be/KA-Gtkuh2cY>

Hi it's 3:30 in the morning in Victoria and I'm heading out to the Yarra Valley to get into a hot air balloon as my lovely girlfriend has decided to spoil me over several days for my birthday this year.

So between that, Walker posting a Skyscraper puzzle for GAPP and Philip has already recorded a video for this one, no better time for this deeply silly *Skyscraper Sudoku*!

Normal sudoku rules apply. Consider each digit in the grid as a building of that height. Clues outside the grid give the number of buildings that can be seen from that direction, with larger buildings hiding smaller ones.

If you're new to Skyscrapers, then there's an attached image which might help! [Note from typesetter: although not spoiled I placed it on the „Hints and Spoilers“ page]

Re: Hat Times today, there's no way to correctly hat this one, so I'll err on the side of the generous. (You will probably see some very quick times today)

1	4	7	2	5	8	3	6	9

<https://sudokupad.app/xqkuuxphar>

January 20, 2024: Trapper Lines

Philip Newman

Walkthrough of "Skyscrapers" by Bill:

<https://www.youtube.com/watch?v=aKBX72NCDq4>

Genuinely Approachable Sauropods:

[to be recorded later]

We've done a few Zipper Lines puzzles now (most recently my January 11 GAS)... hopefully you've gotten the hang of them, because now it's time to pair Zipper Lines with another constraint!

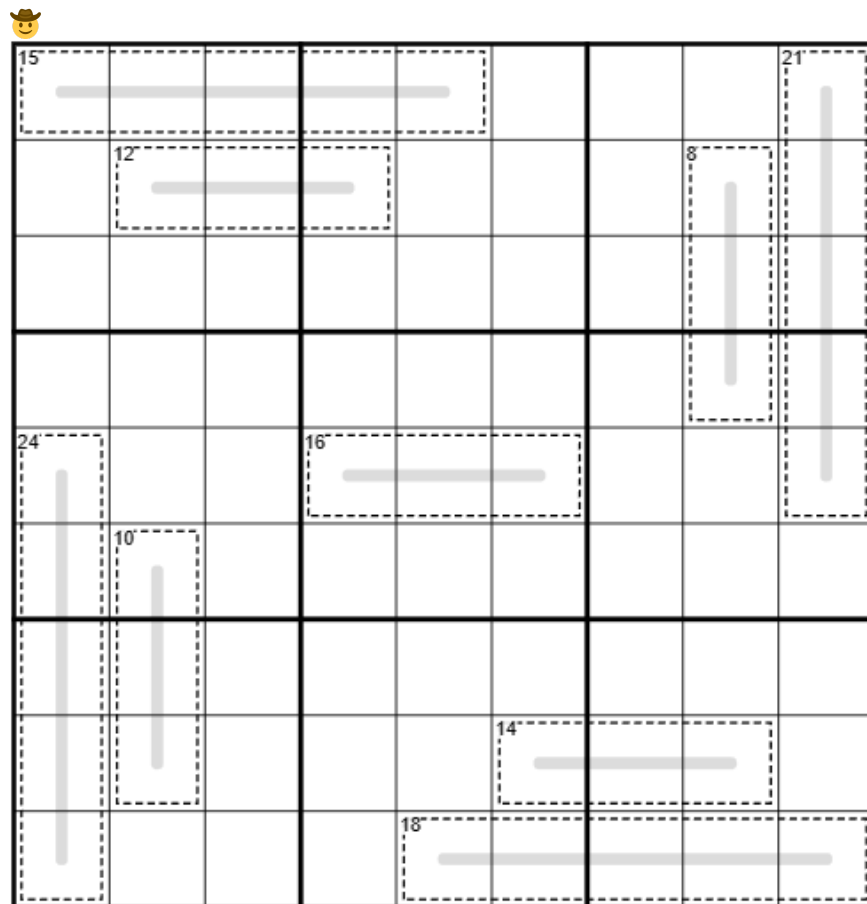
Today's **GAS** is a **Killer Zipper Lines Sudoku**!

Normal sudoku rules apply.

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

Zipper: 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.

For example, $r1c3 = r1c1 + r1c5 = r1c2 + r1c4$



Play on f-puzzles: <https://f-puzzles.com/?id=y1rxukkr>

Play on SudokuPad: <https://sudokupad.app/philip-newman/20240120-trapper-lines>

January 22, 2024: Return of the Mack
Bill Murphy

Walkthrough for Point to Next: <https://youtu.be/XaZb-tejVo8>

I'm busy, sorry. *Little Killer Sudoku* today.

Normal sudoku rules apply. Digits along indicated diagonals sum to the given total

		2	1		6	5				
	1									4
	7								2	28
15										25
22	8									3
	6									9
		5	4		9	8				

16, 15 (diagonal sums)

25, 34 (diagonal sums)

<https://sudokupad.app/vs2ce89psz>



January 23, 2024: Monte Cristo

Philip Newman

Walkthrough of "Return of the Mack" by Bill:
<https://www.youtube.com/watch?v=almAPhTzWU>

Genuinely Approachable Sauropods will return! (I picked a crazy month to try to do this.)

It's time for a rare Breath of the Wild update! Luke has decided that he's ready to tackle it on his own (he'll be 8 soon after all). A couple days ago he woke up one of the guardians on the Great Plateau trying to destroy it with bombs; in order to escape he ran directly off a cliff. "Well at least it didn't shoot me with its laser!" (I mean, he's right, he avoided a Game Over!)

Today's **GAS** is a **Sandwich Sudoku**, celebrating both my favorite sandwich [edit from typesetter: there was spoiled text here. See the „Hints and Spoilers“ page] and favorite book.

Normal sudoku rules apply.

Sandwich: A value outside of the grid is a sandwich clue — it tells you the sum of the digits between the 1 and the 9 in that row or column, not including the 1 and 9 themselves.

⇓⇓ (The puzzle is on the next page) ⇓⇓



	12	33	0		35		0	30	6
8									
31		1			2			3	
0									
35		4			5			6	
0									
32		7			8			9	
14									

Play on f-puzzles: <https://f-puzzles.com/?id=yn2p45mw>

Play on SudokuPad: <https://sudokupad.app/philip-newman/20240123-monte-cristo>

**January 24, 2024: Sum Detector
clover!**

Walkthrough for Philip's "Monte Cristo":
<https://www.youtube.com/watch?v=26J4hkpO9oU>

I am stunned – shocked – utterly flabbergasted that not a single one of you took me up on my bonus hat offer the last time I posted. It's as if you don't *care* where the arrows are pointing! Well, to solve today's puzzle you'll have no choice but to notice those arrows! It's a **sum detector sudoku**, and normal sudoku rules apply. Also, whenever a digit appears in a cell with an arrow, some number of digits immediately following that arrow must sum to the digit in the arrow cell. For instance, because there is a 9 in a downwards pointing arrow in r1c1, then either $r2c1+r3c1 = 9$, or $r2c1+r3c1+r4c1 = 9$.

9					8			
6		8			4		9	
		3				4		
						8		2
7								9
3		9						
		6				2		
	9		3			7		4
			6					8

SudokuPad: <https://sudokupad.app/e51dmx05mj>

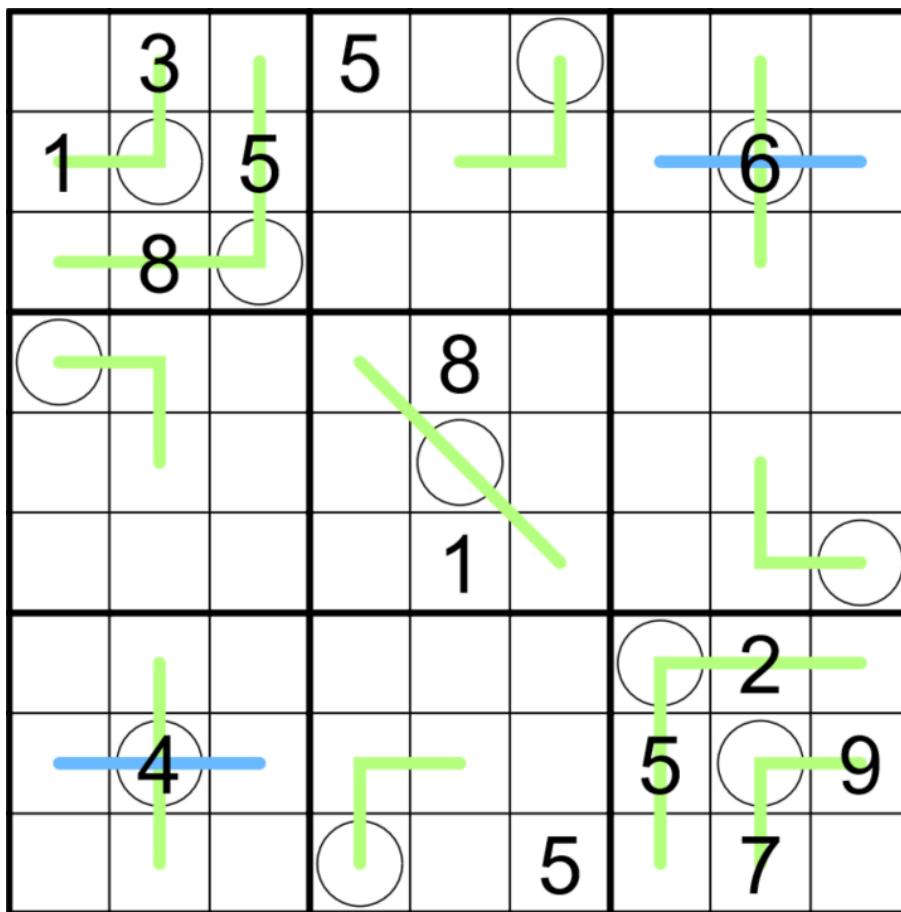
January 25, 2024: Average Lines Sudoku
 Bill Murphy

Walkthrough for Sum Detector: <https://youtu.be/rOpVdF3stwl>

Hello! Thankyou for all the birthday wishes! I'm someone who's historically had an awful run of luck on birthdays, from 28 hour blackouts, to two hospitalisations, to the bleakest one which is a story I do not wish to tell. I am very blessed to have someone in my life now who thinks I deserve to be celebrated which is very very nice and not at all average.

Unlike today's **Average Lines Sudoku!**

Normal Sudoku Rules Apply. Digits in circles are the average of the rest of the digits along that line. (Different coloured lines are for distinguishing purposes)
 (So the digit in the circle is half the sum of the other digits on a three-cell line and a quarter of the sum on a five-cell line)



Sudokupad: <https://sudokupad.app/0gjxjm3plg>

January 26, 2024: Category 3
Philip Newman

Walkthrough of "Average Lines Sudoku" by Bill:
<https://www.youtube.com/watch?v=TXU4rgnf-Og>

Today's intro:

Today's **GAS** is a **Classic Sudoku!**

And that's it!

Normal sudoku rules apply. And that's it!



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

Play on f-puzzles: <https://f-puzzles.com/?id=yopxrhkx>
Play on SudokuPad: <https://sudokupad.app/philip-newman/20240126-category-3>

January 27, 2024: Quadruples clover!

Walkthrough for Philip's 'Category 3':

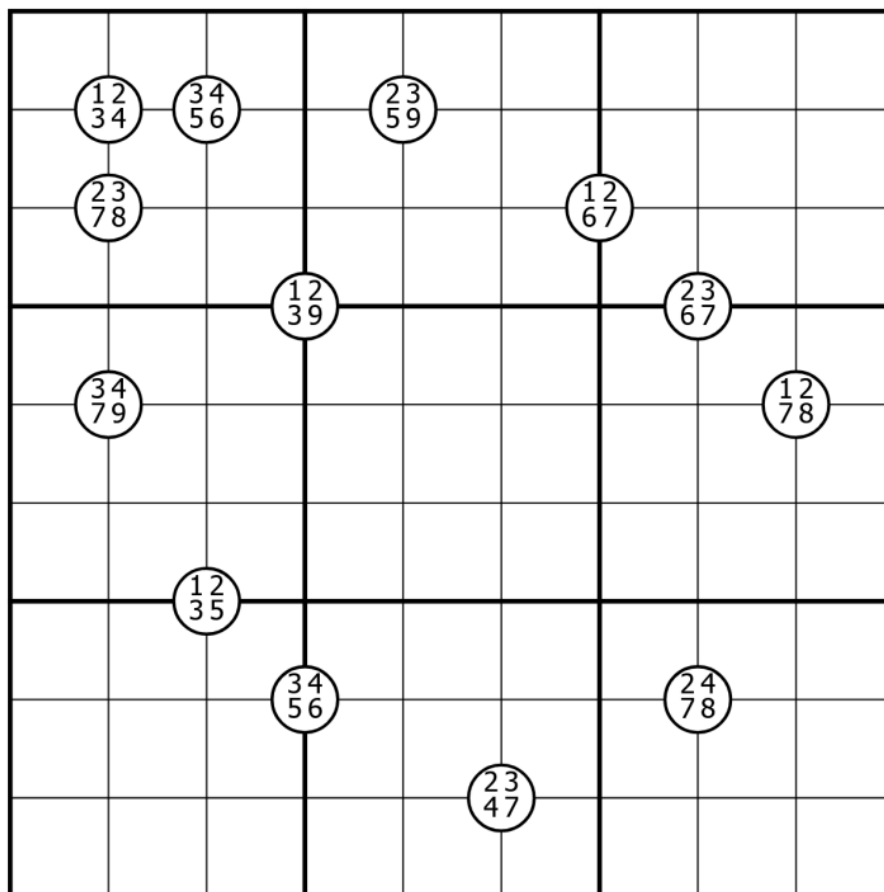
<https://www.youtube.com/watch?v=Pkl2mmKES8s>

So my friend had quadruplets the other day after a challenging pregnancy. She named them Eenie, Meenie, Minie, and Rodney.

"Rodney?" I asked. "Surely you should've called the last one Mo?"

"No way," she replied. "After all that, I didn't want no Mo'."

Today's GAS is a quadruples sudoku! Normal sudoku rules apply. Also, digits in white circles must appear somewhere in the four cells immediately surrounding that circle.



SudokuPad: <https://sudokupad.app/clover/quadruples-sudoku-gas>

January 28, 2024: Expert In A Dying Field
Bill Murphy

Walkthrough for Clover's "Quadruples": <https://youtu.be/XgUIQ3tjcDA>

Damn, I know it's a meme, but like, it's the last day of school holidays in Australia and first day back to school nerves definitely don't get any better, even at age 32. Speaking of being able to draw parallels between points of your life like dots on a temporal grid, Today's GAS is a **Palindrome Sudoku!**

Normal Sudoku Rules Apply. Digits along grey lines must read the same backwards and forwards.

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

Sudokupad: <https://sudokupad.app/f0d6t0yix3>

January 29, 2024: Half a Cake

Philip Newman

Walkthrough of "Expert In A Dying Field" by Bill:

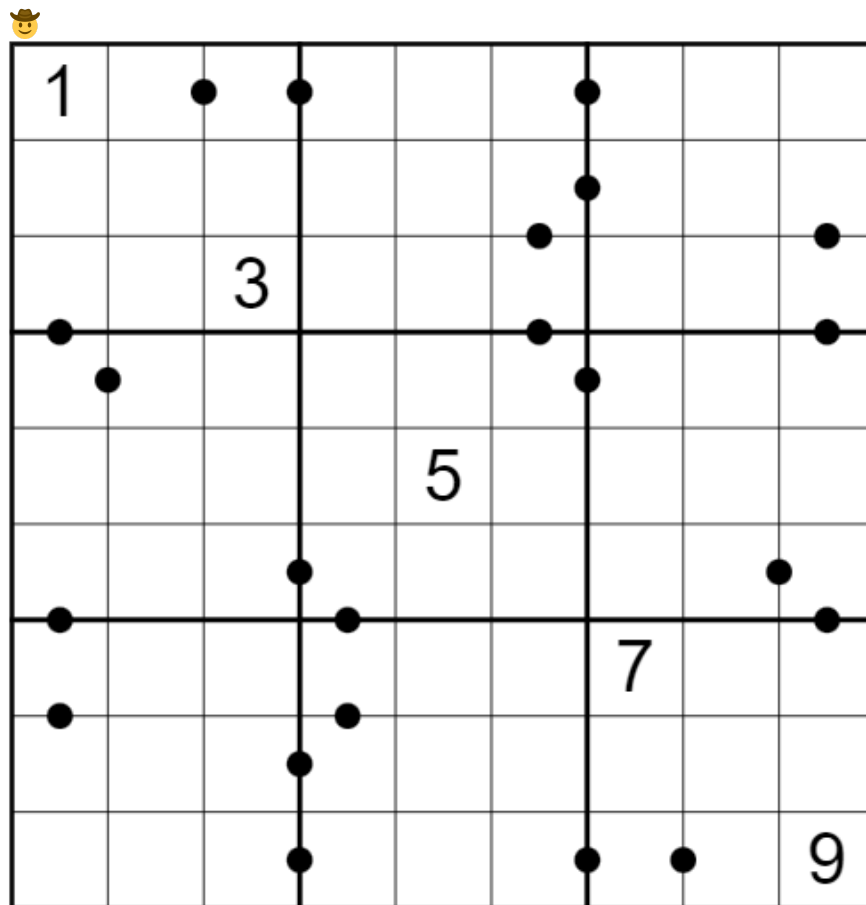
<https://www.youtube.com/watch?v=htzyzBLoPoo>

Today is my half-birthday, so I thought it would be funny to make a **Ratio Pairs Sudoku**. Then I had a dumb idea for a gimmick and it resulted in the puzzle being maybe a bit tricky, so I was going to save it for leak. Then last night I had a headache and realized I have no backlog, so you're getting it anyway! Welcome back to **GAS 101!**

(You may not need these hints, as we have certainly used all of them before. But they are very important to making any progress in the puzzle!)

Normal sudoku rules apply.

Ratio Pairs: 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 ratio of 2:1.)



Play on f-puzzles: <https://f-puzzles.com/?id=y1a5mowv>

Play on SudokuPad: <https://sudokupad.app/philip-newman/20240129-half-a-cake>

January 30, 2024: Consec. Pairs Killer
clover!

Walkthrough for Philip's 'Half a Cake': <https://www.youtube.com/watch?v=kbLcU4hf01U>

Whew! I'm so sorry I'm late coming back to GAS HQ – I had to try every store in town to find the white kropki you wanted for @Philip Newman's half-birthday cake –

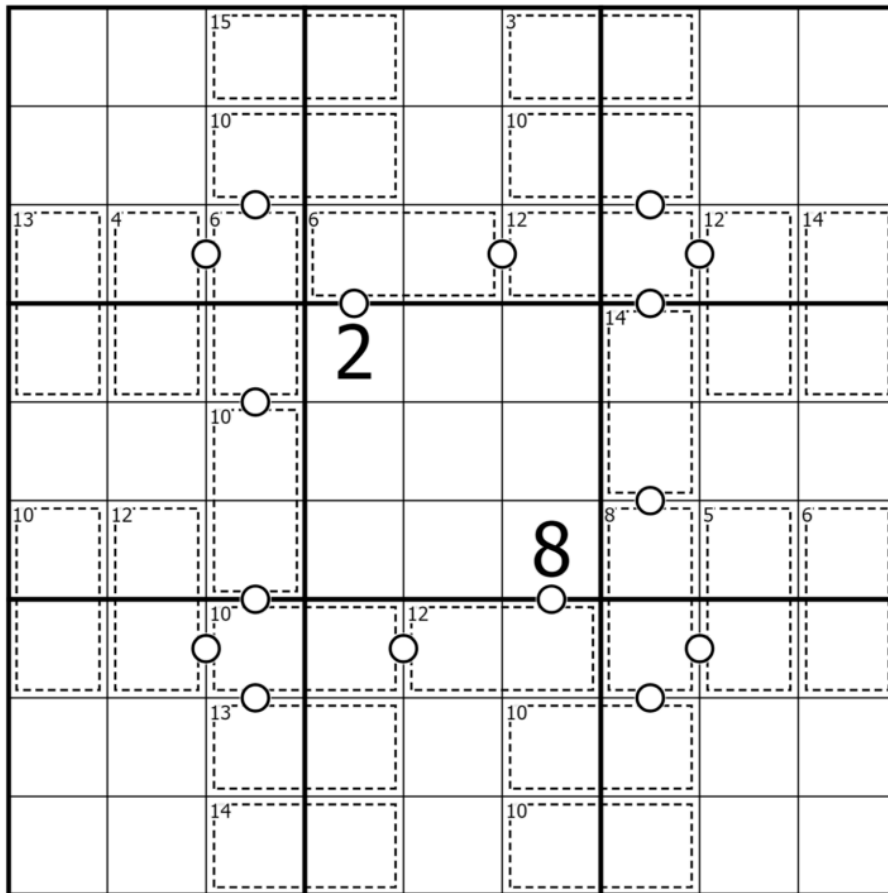
Wait, why is it such an absolute mess in here?

Did you guys bake the cake without me?



I suppose I'll have to give these to the solvers, then, at least they're always grateful for my baking... 🙄🍰

Today's GAS is a **consecutive pairs killer** sudoku. Normal sudoku rules apply. Also, digits in cages do not repeat and must sum to the indicated totals. Digits separated by a white dot must be consecutive, such as 2 and 3. Not all possible dots are necessarily given.



SudokuPad: <https://sudokupad.app/clover/consec-pairs-killer>

January 31, 2024: Dead or Alive Arrows

Bill Murphy

Walkthrough for Consec Killer: <https://www.youtube.com/watch?v=PWiu6juTnJU>

It's finally time to ask a big question, one that's straight up haunted me for easily two decades.

In the original 1994 Japanese show, Iron Chef, when Chairman Kaga takes a bite out of the Capsicum/Pepper, what is that thing he does?

It's at 0:13 here <https://www.youtube.com/watch?v=5mhAPrBddfM>

Did this man nearly choke? Was it too spicy? Was this a stifled laugh?

Also, why keep that shot in?

If you're like, "where did this come from?", today's GAS is a **Dead or Alive Arrows** Sudoku and it was very hard to not just type **YOU SPIN ME RIGHT ROUND BABY RIGHT ROUND LIKE A RECORD BABY RIGHT ROUND ROUND ROUND** over and over again

*Normal Sudoku Rules Apply. Digits in cells containing white arrows **must** appear in the given direction. Digits in cells containing grey arrows **must not** appear in the given direction.*

(Your time on this puzzle will probably depend on you noticing the grey arrows in r3c7 and r7c3. I haven't hidden them, but I feel like if I don't say this, people will yell at me.)

↓↓ ↓↓ (The puzzle is on the next page) ↓↓ ↓↓

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

Sudokupad: <https://sudokupad.app/1q8ntzcmyn>

Bonus 1: Sum 10 Clone

Bill Murphy

Normal Sudoku Rules Apply. Cells in corresponding positions in clones must sum to 10.

1		3						
	2		4					
				9				
			2		3			
				6				
						2		4
					1		3	

<https://sudokupad.app/e6oq58o7xy>

Bonus 2: Dragon Sudoku

Bill Murphy

Normal Sudoku Rules Apply. Each 9 in the grid sees exactly 8 other cells in the 4 vertical and horizontal directions before a wall is seen (either a bold red line or the edge of the grid). Numbers placed in each of these sets of 8 cells must not repeat.

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

<https://sudokupad.app/psbp996eby>

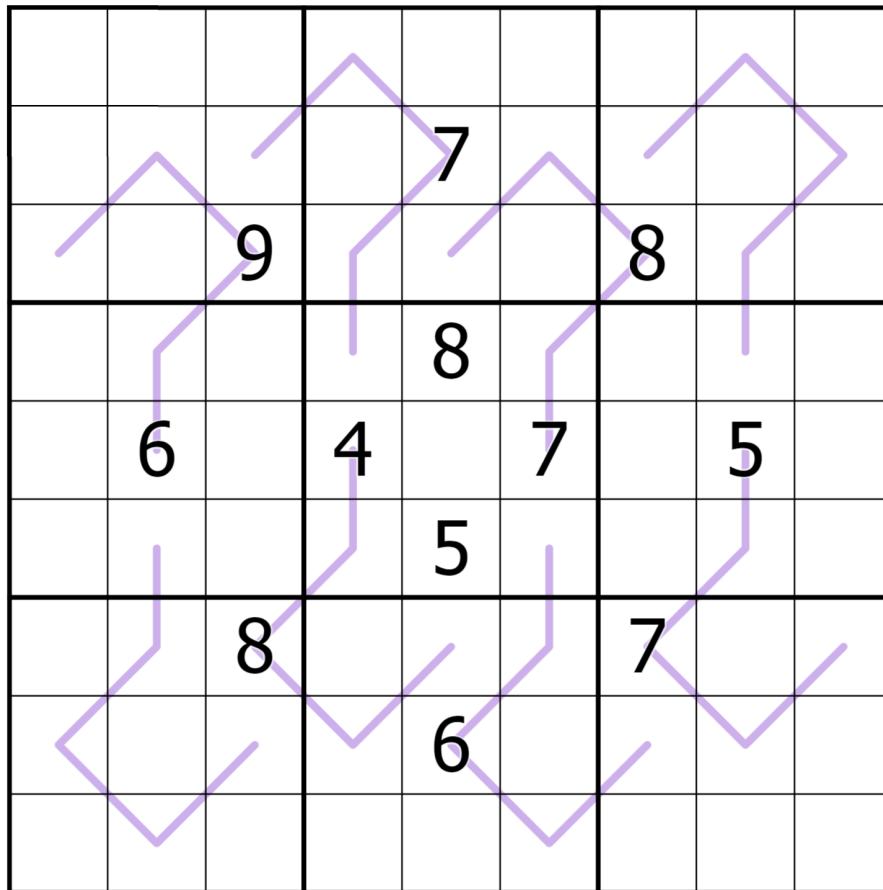
Bonus 3: Zipper Line Sudoku

Philip Newman

Normal sudoku rules apply.

Zipper: 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.

For example, $r3c3 = r3c1 + r5c2 = r2c2 + r4c2$



<https://sudokupad.app/h18ro16w17>

Bonus 4: Chipper Lines

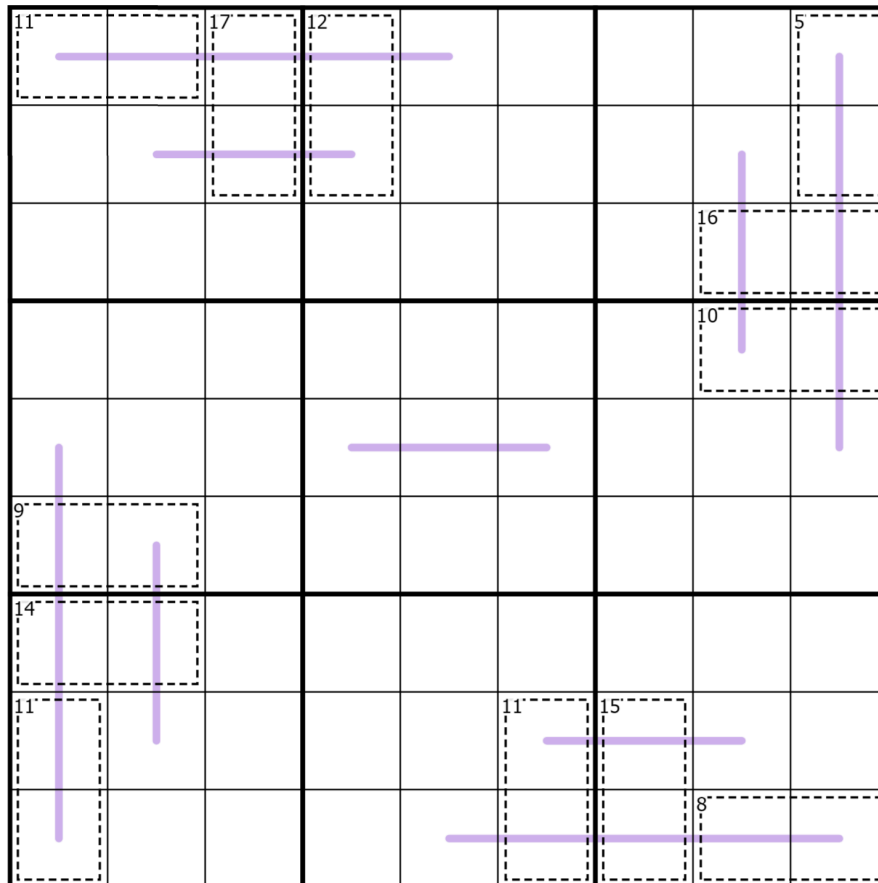
Philip Newman

Normal sudoku rules apply.

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

Zipper: 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.

For example, $r1c3 = r1c1 + r1c5 = r1c2 + r1c4$



<https://sudokupad.app/uh9pfqgztb>

Bonus 5: Battenburg Sudoku (-)

Clover

Normal sudoku rules apply. Some checkerboard symbols appear in the grid at the corner of four cells. Whenever a symbol appears, the parity of the digits in the surrounding cells must be in a 'checkerboard' pattern (odd/even even/odd, or even/odd odd/even). If there is no such symbol at the corner of four cells, then the parity of those cells must not be in this pattern.

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

<https://sudokupad.app/i8wdunfilb>

Time Benchmarks



Two party hats



One party hat



Today's dinosaur:

Date	Two party hats	One party hat	Today's dinosaur:
Jan 1, 2024	6:45	20:24	Exhausted Europelta
Jan 2, 2024	9:20	17:24	Syne Sefapanosaurus
Jan 3, 2024	7:30	14:00	paired Piatnitzkysaurus
Jan 4, 2024	10:00	20:00	Gareth Brontomerus Says. (don't ask)
Jan 5, 2024	7:00	13:00	Shiny Sidersaura
Jan 6, 2024	7:30	14:00	regional Regaliceratops
Jan 7, 2024	6:00	11:30	a slightly melted Melanorosaurus (It's still good, it's still good!)
Jan 8, 2024	10:00	18:00	Marvelous Macrurosaurus
Jan 9, 2024	5:30	10:30	open-to-interpretation Othnielia
Jan 10, 2024	7:00	13:00	Bojack HorseMantellisaurus
Jan 11, 2024	7:00	13:00	Marzipan Maraapunisaurus
Jan 12, 2024	7:30	14:00	quizzical Qantassaurus
Jan 13, 2024	9:00	17:00	delightful Dahalokely
Jan 14, 2024	6:30	12:30	Masticating Mongolosaurus
Jan 15, 2024	7:00	13:00	blushing Berberosaurus
Jan 16, 2024	7:30	13:00	competitive Chirostenotes
Jan 17, 2024	8:00	15:00	Mistaken Microcoelus
Jan 18, 2024	7:00	13:00	benchwarming Barsboldia
Jan 19, 2024	6:30	11:00	Ascending Alwakeria
Jan 20, 2024	8:00	20:00	Algorithmic Algoasaurus
Jan 21, 2024	8:00	16:00	pointy Podokesaurus
Jan 22, 2024	7:00	13:00	Birthday Brontosaurus. (His name is Steve).
Jan 23, 2024	7:00	13:00	Kakariko Karongasaurus
Jan 24, 2024	6:00	11:00	encoded Ekrixinatosaurus
Jan 25, 2024	8:00	15:00	encoded Ekrixinatosaurus
Jan 26, 2024	5:00	10:00	Geoguessn Gandititan
Jan 27, 2024	6:30	12:00	dad Diceratops
Jan 28, 2024	7:00	13:00	Reverseable Rahiolisaurus suruasiloihaR elbaesreveR
Jan 29, 2024	10:00	20:00	Ominous Oshanosaurus
Jan 30, 2024	6:00	11:00	satiated Saltasaurus
Jan 31, 2024	7:00	12:30	Capsi Cumnoria

Hints and Spoilers

(The actual spoiled text parts are in a different font and color)

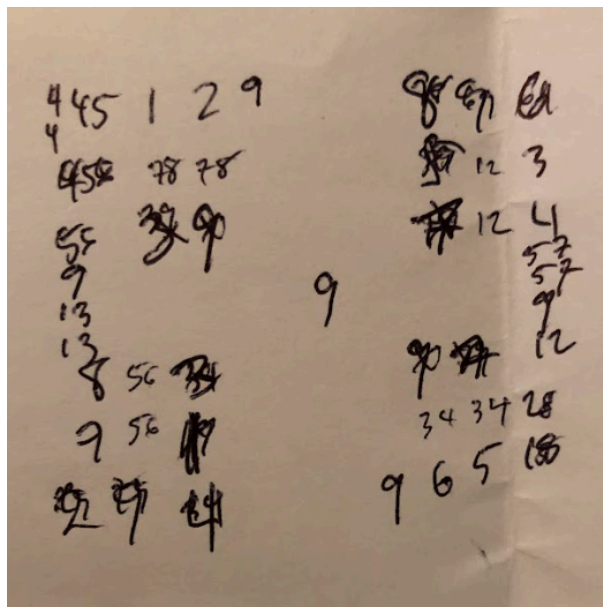
Joke for January 11, 2024:

Two friends were preparing to hike up a mountain, and one friend noticed the other was packing some unusual flags.

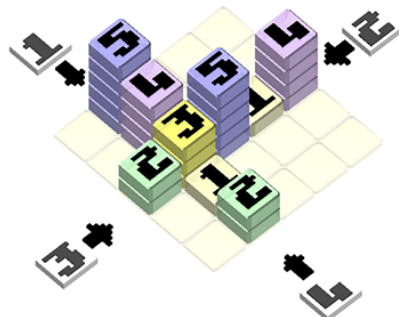
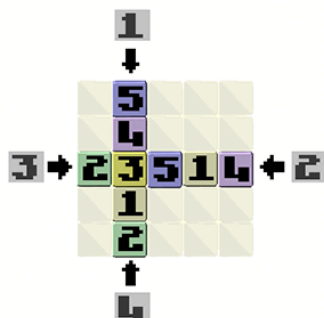
“Why do you have flags with the number 2 on them?”

“I wanted to be prepared, in case we need to communicate in [semi-four!](#)”

Pen and Paper Original of January 14, 2024:



Hint for January 19, 2024:



Spoiler for January 23, 2024:

Today's GAS is a Sandwich Sudoku, celebrating both my favorite sandwich [ok](#), [top 5](#) but not my favorite, [guess my actual favorite](#) in the comments and favorite book.

wenn

There are only four valid pairs for a 2:1 black dot: 12, 24, 48, and 36.

If we have three cells in the same row, column, or box, connected by two black dots, our options are 124 or 248, in some order. We can't have 363 or 636, that would repeat a digit.

If we already have 124 or 248 in three cells, and we have another two cells connected by a black dot in the same row, column, or box, we can't have another pair from 12, 24, 48; that would result in five cells contain 1248. So the lone black dot must be 36 in some order.

If a cell is limited to the two digits in a valid pair (say 36), and two cells connected by a black dot see that cell, those two cells must correspond to a different pair. Otherwise, we would have three cells containing only two digits.

The classic might also be tricky in this puzzle. >_>