

GAS Leak

Genuinely Approachable Sudoku
from the CtC Discord

Volume 35:

December 1 – December 31, 2023

Welcome to the December puzzles!

As usual we got a full month of GAS puzzles for you, one better than the other. We have a great mixture of old and new, including a few Zipper Lines. What's that? Well, you have to solve the puzzles (or at least read the text) to find out. Also we've got the very first GAS fog sudoku (only solvable online, sorry), a Christmas Special, ...

If you want to download old GAS Leaks you can now go to the GAS website:
<https://sudokutheory.com/gas>.

Have fun solving! - And welcome in 2024!

December 1, 2023: Dutch Whispers
clover!

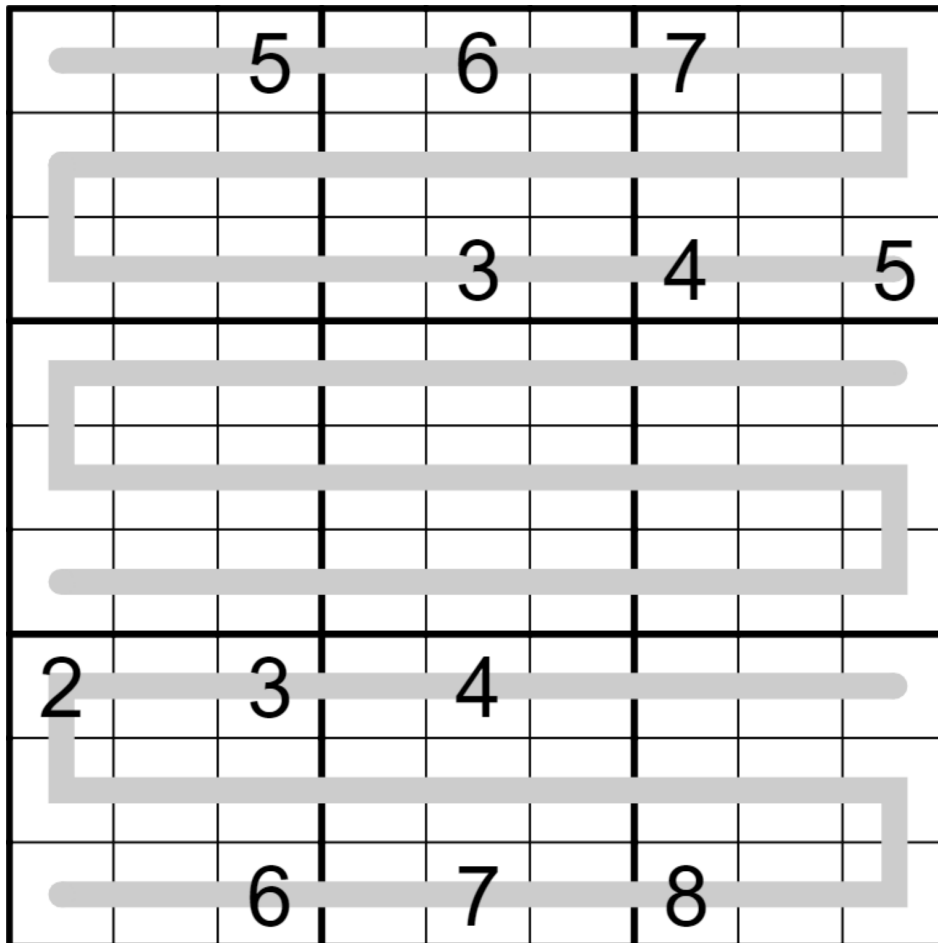
Walkthrough for Philip's 'Say what you See' - <https://youtu.be/yABQ3MNI3mQ>

Today's GAS is a Dutch Whispers sudoku. Please tell that to my neighbors here in the Netherlands, who seem more interested in Dutch Shouting and Stomping than in Dutch Whispering.

In other news, did you know that we're opening the SudokuCon Twitch channel to puzzle-related livestreams from anybody in the community (yes, that means you)? Watch this (under 5 minutes and very funny) video for details:

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

Rules: Normal sudoku rules apply. Along each line, adjacent digits must have a difference of at least 4. For instance, 1 and 7 can be adjacent along a line, but 1 and 4 cannot.



f-puzzles: <https://f-puzzles.com/?id=yul2kcln>

SudokuPad: <https://sudokupad.app/clover/dec-1-2023-dutch-whispers>

December 2, 2023: Corner/Edge Sudoku

Bill Murphy

Walkthrough for Dutch Whispers: <https://youtu.be/aAwYkO75v6k>

Forgot to write a joke for today's intro, so if you've ever where the odd titles of my puzzles come from, I keep a playlist of all the song titles I steal because thinking of puzzle names is weird and hard when you're up to...Number #146? Gosh. Link is here: <https://open.spotify.com/playlist/30FIGK1BD9c8nFpv4HpUq4?si=e814984399844f87>

Today's puzzle comes to you from the Bill Murphy Archives aka when I went overboard during REDACTED August and made so many puzzles in one go that I forgot most of them even existed until a couple of days back.

Today's GAS is a *Corner/Edge Sudoku!*

Normal Sudoku Rules Apply. Clues in cages outside the grid give digits that must appear in either the corner cells (denoted by C:) or the edge cells (E:) of the box that the region is connected to. (Eg. A clue of E:2 touching box 1 means that 2 must be found in either r2c1, r2c3 or r3c2.)

So, boxes 1, 3, 7 & 9 would be the corners of a sudoku grid and boxes 2, 4, 6 and 8 would be the edges of a sudoku grid, right? Picture that, but inside the box that the clue is touching. Cool? (Like a good neighbour, or State Farm, box 5 is there.)

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

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

E:2
C:48

E:27

E:3
C:15

E:59

E:78

E:1
C:37

E:56

E:4
C:26

Penpa: <https://tinyurl.com/yphrgebj>
 Sudokupad: <https://sudokupad.app/xhxr21vtvd>

December 4, 2023: Equal Sudoku
clover!

Walkthrough for Philip's 'World of Difference': <https://youtu.be/YB-PgzaIOGw>

So, Mark's decided to stop making GAS videos, and you know what that means: Now I can say naughty words in my intros. Boobies! Willy! Flibbertigibbet! ...*Bifurcation!* 😈

(On a more serious note, we were nearly as surprised by this change as all of you were; all we can do for now is try to pick up the slack on our own channel, linked above. I'm not as clever or as charming as Mark, but I do have really cute headphones.)

Today's GAS is an **equal sudoku**. Normal sudoku rules apply. Digits do not repeat in cages. Within each cage, the sum of the odd digits equals the sum of the even digits.

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

SudokuPad: <https://sudokupad.app/clover/dec-4-2023-equal-sudoku>

(Could you let me know if you really miss the f-puzzles links? It'll take some faff to get the userscripts to work properly on the computer I'm using for the next few months, and I want to know if it's worth bothering!)

December 5, 2023: Diagonal Serbian Frame Sudoku

Bill Murphy

Walkthrough for Equal Sudoku: https://youtu.be/P7pR_79Owy0

OK, so listen, as a science teacher, I have always kinda rolled my eyes at English teachers and their continual love of Shakespeare, but recently, I have had some thoughts:

The Weird Sisters putting a Dragon Fang into their potion means that canonically, Dragons exist in the STU (Shakespearean Theatrical Universe)

When Portia dies of eating hot coals in Julius Caesar, do you think they were like pringles in that once you pop you can't stop?

👏 Give 👏 Lady 👏 Macbeth 👏 a 👏 Scrub 👏 Daddy

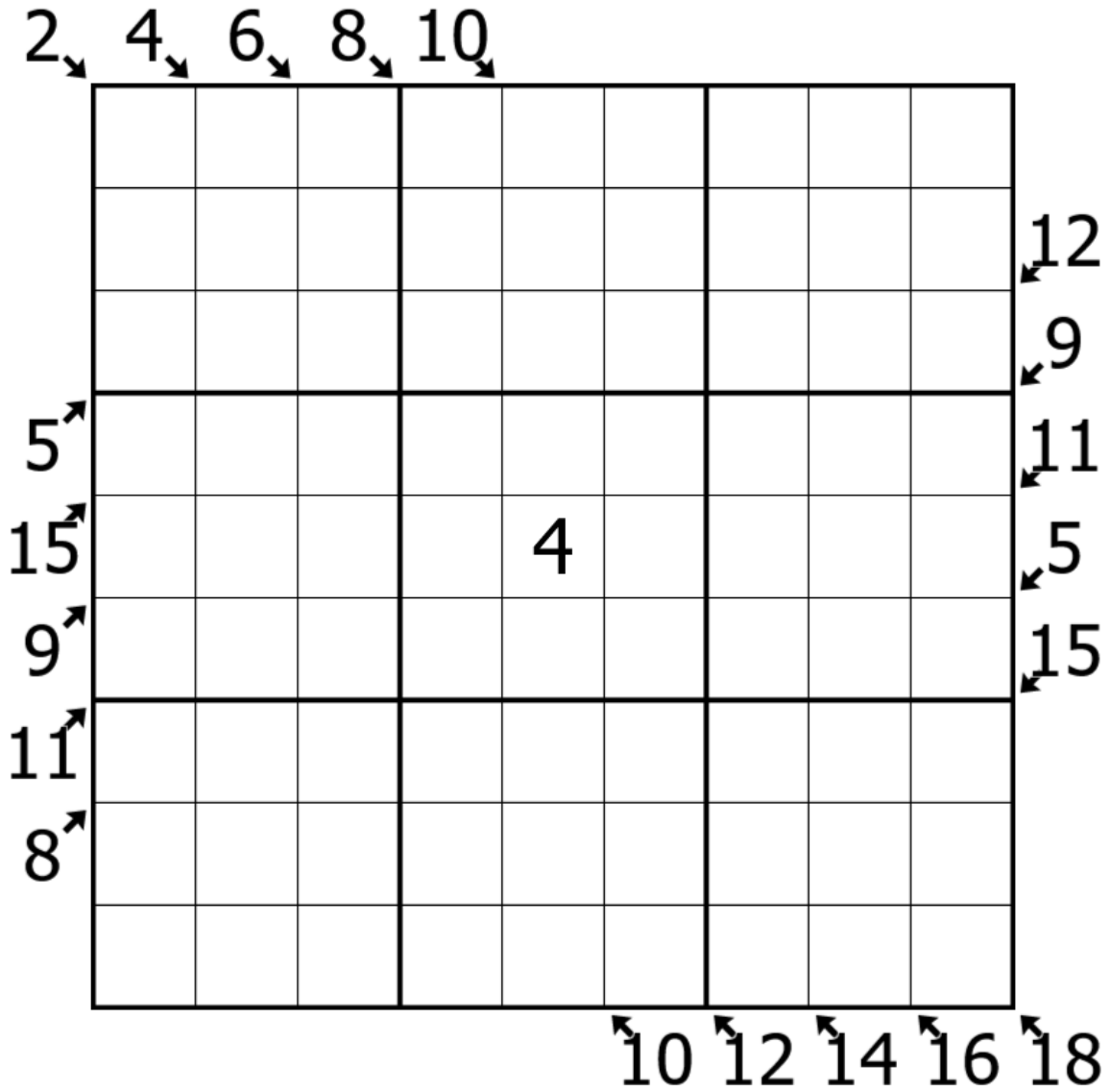
Jupiter descends in thunder and lightning, sitting upon an eagle is hard as hell and would've absolutely gotten me into Shakespeare as a kid.

None of that has anything to do with today's GAS which is a **Diagonal Serbian Frame** Sudoku and before you ask, yes there is something wrong with me.

Normal Sudoku Rules Apply. Clues above and below the grid (including the corner clues) give the sum of the third and fourth cell seen in the direction of the arrow. Clues to the left and the right of the grid give the sum of the second and third cell seen in the direction of the arrow.

(I'll attach a little colour coded image underneath if you're a little confused about which cells get summed by this) [note from typesetter: on an extra page since it's spoiled in the original]

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



Sudokupad: <https://sudokupad.app/6oypjtg33p>

[The hint image is on the hints page]

December 6, 2023: SLAP

Philip Newman

Walkthrough of "Diagonal Serbian Frame Sudoku" by Bill:

<https://www.youtube.com/watch?v=ldcOCXYWp1Y>

In some countries today is Saint Nicholas Day, the feast day of Saint Nicholas of Myra. This historical figure is the basis for the legendary Dutch figure Sinterklaas ("Santa Claus" is the Anglicized name, though the ~~character~~ absolutely real person bringing you gifts on Christmas has a more complicated history, look it up).

Saint Nicholas of Myra is the subject of a couple of other interesting legends aside from the whole gift-giving thing. From wikipedia:

An early list makes him an attendee at the First Council of Nicaea in 325, but he is never mentioned in any writings by people who were at the council. Late, unsubstantiated legends claim that he was temporarily defrocked and imprisoned during the council for slapping the heretic Arius. Another famous late legend tells how he resurrected three children, who had been murdered and pickled in brine by a butcher planning to sell them as pork during a famine.

(I like the idea that in a thousand years some future GAS solving community could have a legend of the time Bill flew to Texas and slapped me in the face, with a fish of course, for making one too many whispers puzzles.)

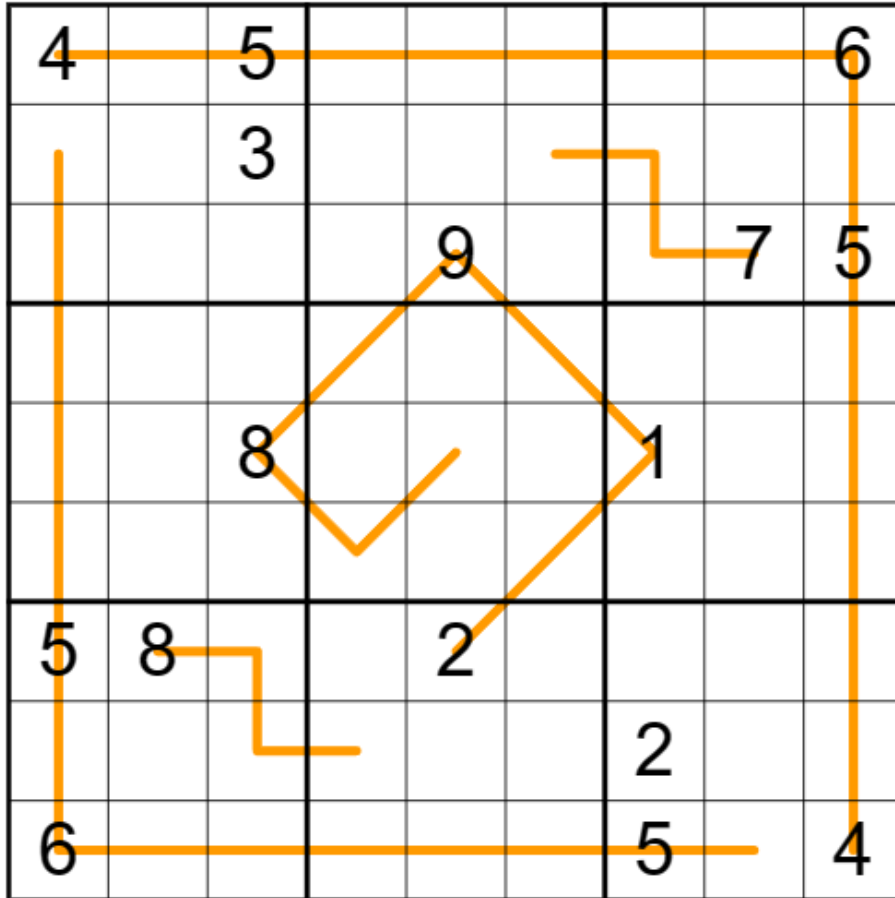
Bonus Intro Fact: The injury to my shoulder which recently required surgery is known as a Superior Labrum Anterior and Posterior tear (SLAP tear).

Today's **GAS** is a **Dutch Whispers Sudoku!**

Normal sudoku rules apply.

Dutch Whispers: Digits in cells directly connected by an orange line must differ by at least 4.

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



Play on f-puzzles: <https://f-puzzles.com/?id=yhm82hal>
Play on SudokuPad: <https://sudokupad.app/philip-newman/20231206-slap>

December 7, 2023: Foggy XV Pairs
clover!

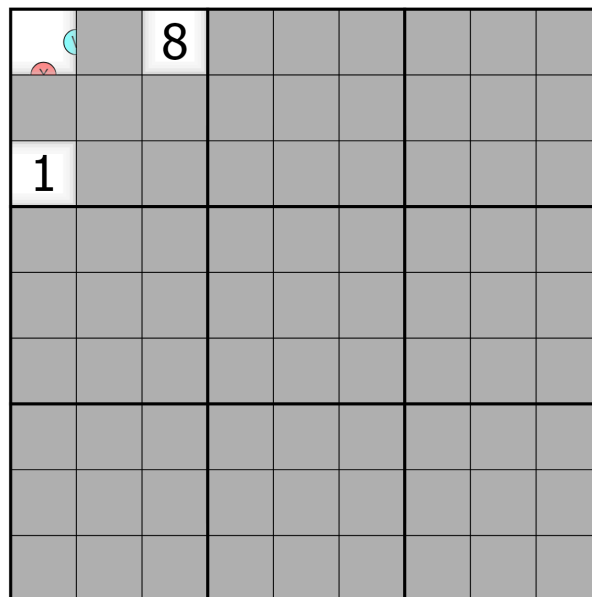
Walkthrough for Philip's SLAP: <https://www.youtube.com/watch?v=VIYAd8-ZLBU>

There's something I've been wondering about for a long time, and I thought I'd put it to you now: what is the English language adjective that means 'related to sudoku'?

I'm partial to 'sudokular', although 'sudokical' is a strong contender. 🤔

Today's sudokian GAS is a sudokaic **foggy XV pairs sudoku**. This is GAS's very first fog sudoku, so listen up! The fog doesn't affect the solution at all - it's just meant to enhance the experience, by letting certain parts of the grid surprise you once they're revealed. It will vanish as you solve the puzzle.

Normal sudoku rules apply. Also, some Xes (in red circles) and Vs (in blue circles) appear in the grid. Digits separated by an X sum to 10, and digits separated by a V sum to 5. Not all possible Xes or Vs are necessarily given.



[note from typesetter: only solvable online. Sorry.]

SudokuPad: <https://sudokupad.app/clover/dec-7-2023-foggy-xv-pairs>

December 8, 2023: Before You Gotta Go

Bill Murphy

Walkthrough for Foggy XV Pairs: <https://youtu.be/IJ9zgpNpKec> (I actually did this one blind)

B-B-B-BONUS CONTENT - Walkthrough for Perfect Squares Sudoku (from this month's GAS Leak): <https://youtu.be/Tn6U2Vj28q4>

(I don't know if we intend to do all GAS Leak puzzles every month yet, but I was asked specifically for this one)

As I write this, I am filled with absolute terror. Fear is a fundamental human emotion that serves a crucial role in our survival, but it can also be a powerful force that affects our thoughts, behaviors, and overall well-being. Shakespeare captures this state of speechless terror in Macbeth, after the murdered king's body is discovered: "Oh horror! horror! horror! Tongue nor heart cannot conceive nor name thee! Confusion now hath made his masterpiece!" Whilst I'm often brought comfort by that old adage from Doctor Who, 'Fear makes companions of us all', it still can still shake me to the very core.

The girlfriend is meeting the parents this weekend. It'll be fine, yeah.

Before I spend the next day and a half in the kitchen/cleaning, y'all should solve today's **GAS**, a **Renban Sudoku**!

Normal sudoku rules apply. Digits along a purple line must be continuous, but may be in any order.

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

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

Sudokupad: <https://sudokupad.app/mbtq69xhsb>

December 9, 2023: Quadrants

Philip Newman

Walkthrough of "Before You Gotta Go" by Bill:

<https://youtu.be/FgpQ2Wbjul8>

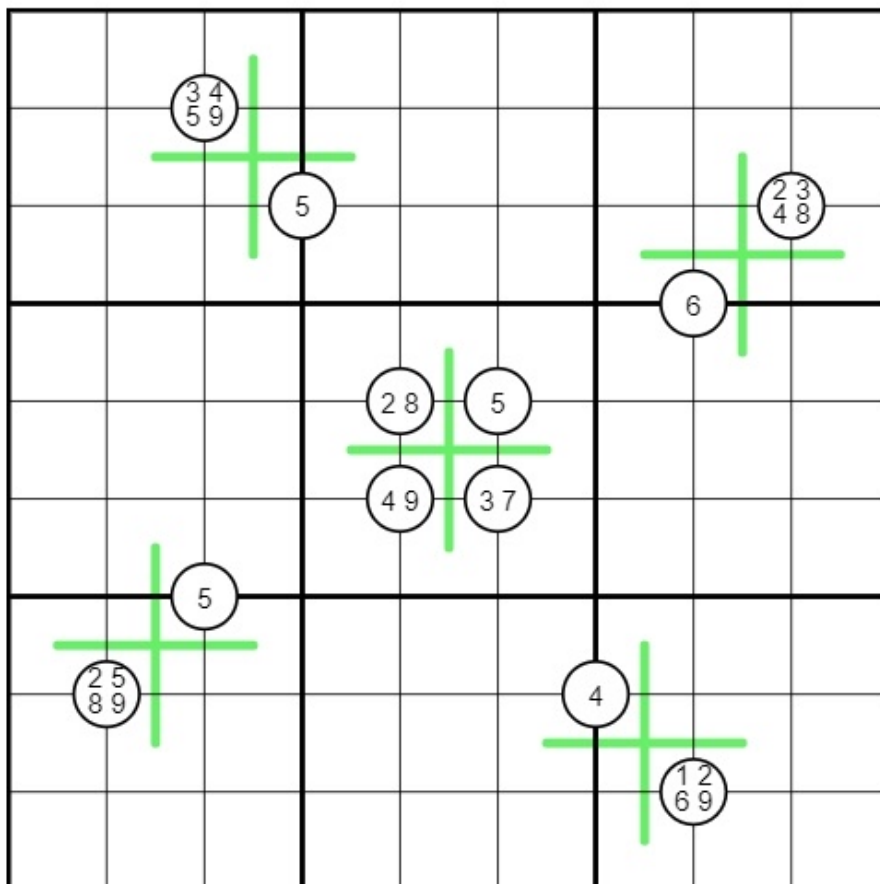
Posting from my phone today! How exciting. I'm visiting a friend for some birthday board games. Comment with your favorite board game!

Today's **GAS** is a **German Whispers Quadruples Sudoku**!

Normal sudoku rules apply.

German Whispers: Digits in cells directly connected by a green line must differ by at least 5.

Quadruples: Digits in corner circles must appear in the surrounding four cells, in some order.



Play on f-puzzles: <https://f-puzzles.com/?id=yn3ny7tb>

Play on SudokuPad: <https://sudokupad.app/philip-newman/20231209-quadrants>

December 10, 2023: Frameless Sudoku
 clover!

Walkthrough for Philip's 'Quadrants': <https://youtu.be/QHnYiTu5wxc>

Too many inmates languishing in sudoku prison are only there today because they were framed for sudoku crimes (like bifurcation, using uniqueness, or purchasing computer-generated puzzle books at the grocery store.) While the guilty must be punished, is it not far more unjust to persecute the innocent than it is to let puzzle criminals go free? Let this **frameless GAS** stand as a protest! 🇺🇸

Normal sudoku rules apply. Clues give the sum of some unknown number of adjacent digits in that row or column, starting immediately adjacent to the clue. For instance, the "7" clue to the right of r9 tells you that either the rightmost digit in that row is a 7, the rightmost two digits sum to 7, or the rightmost three digits sum to 7.

			16		6			4		4	
2		3									11
4		5				9					5
6		7									
8		9						5			
					4						
			3						2		1
									4		3
3				1					6		5
8									8		7
	5	5			6						

SudokuPad: <https://sudokupad.app/clover/dec-10-23-frameless-sudoku>

December 11, 2023: Anti-Diagonal Sudoku

Bill Murphy

Walkthrough for Clover's Frameless Sudoku: <https://youtu.be/Zv7yBI-5p4I>

Y'all know how I love to talk, right? Can't do that today though, gf is on my shoulder waiting for me to finish this so we can have our food delivery, so I gotta be quick. Just like today's puzzle, it's the opposite of what you'd expect, it's **Antidiagonal Sudoku!**

Normal Sudoku Rules Apply. Each marked diagonal must contain exactly three different digits.

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

Sudokupad: <https://sudokupad.app/ke3cqdebgz>

(It went well, thanks for asking)

December 12, 2023: Hurry-cane

Philip Newman

Walkthrough of "Anti-Diagonal Sudoku" by Bill:

<https://www.youtube.com/watch?v=ek2VvJc0mXg>

I mentioned in my last intro that I was away for the weekend for birthday board games. I neglected to share something that made me laugh a lot Saturday morning, so here it is!

The friend hosting the party has an older daughter and young twins. Saturday morning before I woke up, the following conversation took place between the older daughter and her dad.

AM: Is Philip still here?

R: Yeah, he's just enjoying the chance to sleep in while he can.

AM: Oh. So he has kids too?

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

Normal sudoku rules apply. **And that's it!**



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

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

Play on SudokuPad: <https://sudokupad.app/philip-newman/20231212-hurry-cane>

December 13, 2023: Between Lines
clover!

Walkthrough for Philip's 'Hurry-Cane':
<https://www.youtube.com/watch?v=BdzVOhSsGUE>

The 'GAS are YouTubers now, whether we like it or not' saga continues. I held my nose and started referring to it as "GAS Sudoku" for the sake of the algorithm; Bill is sending the rest of us hot tips for making our audio sound like it wasn't recorded on a toaster; I even caught Philip practicing his YouTube thumbnail face in the mirror at GAS HQ. We're old and we mostly just wanted to show off our puzzles, but gosh darn it, this is a thing now and we're going to make it work. (Hey @whirlpion , can I buy a ringlight???) 😊)

In today's **between lines GAS**, normal sudoku rules apply. Digits along lines must have values in between the values of the digits in the attached circles. For instance, if 2 and 7 appear in circles, then the only digits that can appear anywhere along the attached line are 3, 4, 5, and 6. Not all possible digits have to appear along a line. Digits may repeat on lines.

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

SudokuPad: <https://sudokupad.app/clover/between-lines>

December 14, 2023: Numbered Rooms Sudoku

Bill Murphy

Walkthrough of Clover's Between Lines: <https://youtu.be/K-5t0fa2ujo>

Today's **Numbered Rooms Sudoku** is brought to you by this shirt I really wanted to buy at Dangerfield today (uh, the closest touchpoint would be Hot Topic for non-australians, but less...I think I just like less here, tbh) which I wanted to buy for reasons (dinosaurs, ridiculous) but didn't buy for reasons (expensive, kinda hideous)

Normal sudoku rules apply. Clues outside the grid appear in the Xth cell from that clue, where X is the first cell seen by the clue.

So if you haven't seen a Numbered Rooms Sudoku before, the 3 in c6 would mean that if there was a 4 in r1c6, then 3 would be in r4c6, whereas a 7 in r9c4 would mean 1 was in r3c4.

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

8 1 2 8

SudokuPad: <https://sudokuapp.app/sx6ulq5bf2>



December 15, 2023: X-Factor
Philip Newman

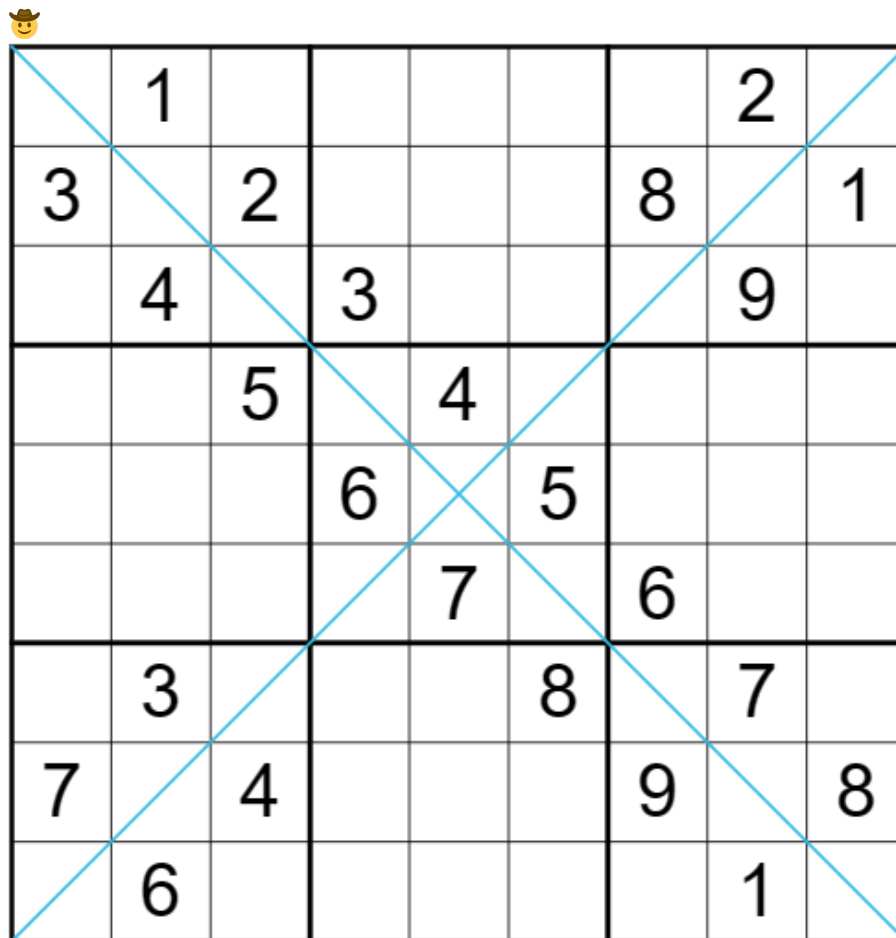
Walkthrough of "Numbered Rooms Sudoku" by Bill:
<https://www.youtube.com/watch?v=HyLyOxllqHQ>

Between physical therapy for my shoulder and catching up on other appointments that I couldn't keep while in a sling, this month has been... full. But I am happy to announce that I have now achieved APPOINTMENT BINGO for next week!

Today's **GAS** is a **Diagonal Sudoku**! (It's a teensy bit tricky so the times are generous compared to clover and Bill's...)

Normal sudoku rules apply.

Diagonal: Digits along the indicated diagonals cannot repeat.



Play on f-puzzles: <https://f-puzzles.com/?id=ysnhedt5>
Play on SudokuPad: <https://sudokuapp.philip-newman.com/20231215-x-factor>

December 16, 2023: Zipper Lines
 clover!

Walkthrough for Philip's "X-Factor": <https://youtu.be/KVLe-zUkACE>

Today's GAS is a **zipper lines sudoku**. You should be very careful not to get anything caught in this sudoku as you're zipping it up. Don't say we didn't warn you.

Normal sudoku rules apply. The grid also contains some lines, which are an odd number of cells in length. Each pair of digits along the line that is exactly the same distance from the center cell, sums to the value that appears in the center cell. For instance, r9c2 and r9c8 must sum to 8, because 8 appears in the central cell of that line.

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

SudokuPad: <https://sudokupad.app/clover/zipper-lines-gas>

December 17, 2023: Double Sudoku Anywhere / 77%
Bill Murphy

Walkthrough for Zipper Lines Sudoku: <https://youtu.be/GeoLT5JVb7g>

We're 8 days out now. Have you done all your christmas shopping? I started 2 days ago and finished today. If you're wondering about what to buy that special someone in your life, here's my advice: Always remember, rectangular boxes are easier to wrap.

Today's GAS is two **classic sudoku!** (Honestly, I made SO MANY classics over the course of the year that i've run out of space on my discord backlog post so now I gotta get rid of a few)

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

[The times for party hats are for both combined]

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

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

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

Anywhere: <https://sudokupad.app/yb1mcgs4fs>
77%: <https://sudokupad.app/hurmk13y9t>

December 18, 2023: Chickenfoot

Philip Newman

Walkthrough of "Anywhere" and "77%" by Bill:

<https://www.youtube.com/watch?v=VbTpFR7cRe8>

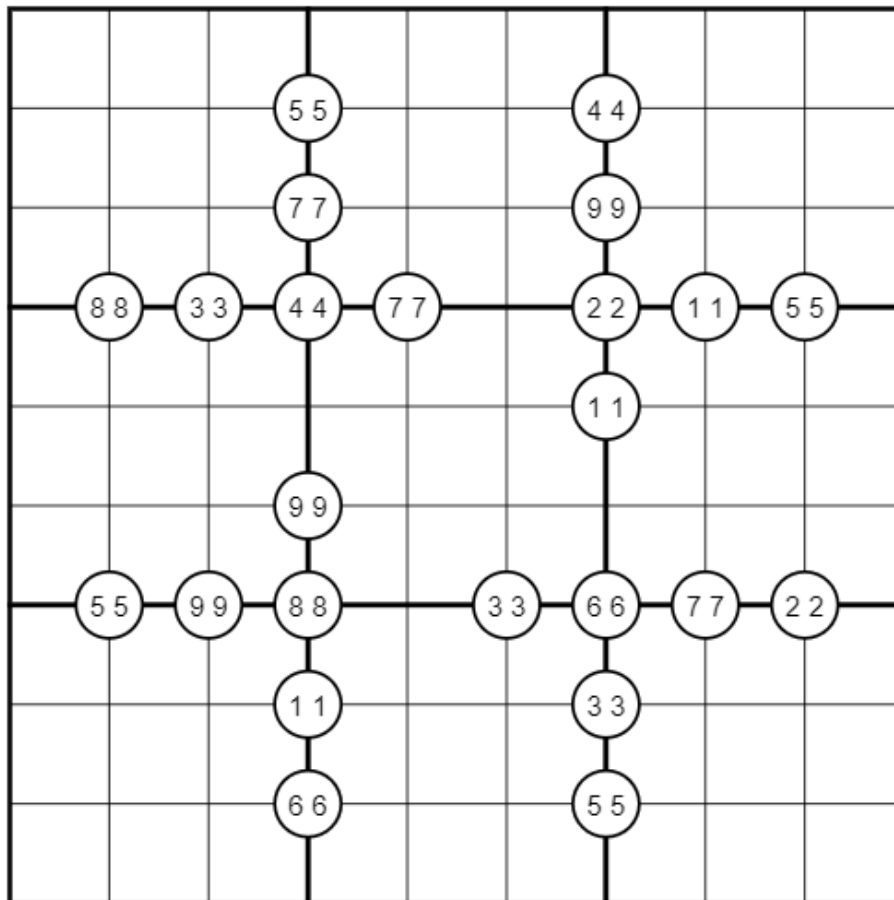
I have a reputation for sometimes posting puzzles on the harder end of the GAS spectrum... allegedly I have posted a couple of those recently. 🤖

This is not one of them!

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

Normal sudoku rules apply.

Quadruples: Digits in corner circles must appear in the surrounding four cells, in some order. (Digits appearing twice in a circle must appear twice in the surrounding cells.)



Play on f-puzzles: <https://f-puzzles.com/?id=ytiao62p>

Play on SudokuPad: <https://sudokupad.app/philip-newman/20231218-chickenfoot>

December 19, 2023: Heavy Difference Sudoku
clover!

Walkthrough for Philip's "Chickenfoot": <https://youtu.be/dBvdZHlgc8>

It's amazing, the things you learn on this very server. Just yesterday, I heard the single best dad joke I've ever encountered, courtesy of @zegres :

When does a dad joke become a dad joke?
When it becomes apparent!

...Okay, and when does it become apparent?
[see solution on the Hints page]

You're welcome. 😊

Today's GAS is a **heavy difference sudoku**, the companion to the heavy ratio sudoku I posted some weeks ago. Normal sudoku rules apply. Digits separated by a white dot must be consecutive, such as 2 and 3. **Also, everywhere a white dot appears, the larger of the two digits is on the bottom.** Not all possible dots are necessarily given.

								5
○	2			○				
○		○		○				○
○		○		○				○
	5	○	○	1		○	6	○
○		○			○	○		
○				○		○		○
○				○		○	9	○
1				○				○

SudokuPad: <https://sudokupad.app/clover/heavy-difference-sudoku>

December 20, 2023: Extra Space Sudoku

Bill Murphy

Walkthrough for Heavy Difference: <https://youtu.be/KKYDXXxhVFc>

As the end of the school year hits and the dial finally turns from “It’s so over” to “We’re so back” and I finally have the spoons to get ambitious with variants again, let’s go big. Real big.

(Sorry to Philip who’s got to record the video for this one.)

Today’s GAS is an *Extra Space Sudoku*!

Place the digits 1 to 9 into empty cells in this grid such that each box, row and column contains no repeats. The shaded cells must not contain numbers.

Today’s GAS is not brutal, but it is very long. The hat times reflect this. Do not be scared, fear is the mindkiller. Get yourself a cuppa, relax, put your feet up, remember what I taught you [link] and have fun. Love you xo

[note from typesetter: at the place of “link” was a link to his puzzle from June 20th 2023. The hint there is reproduced on the Hints page at the end of this document]

For two party hats, finish within 20:00 or less. For one party hat, finish within 35:00 or less. All other solvers will receive an Expanded Epidexipteryx. 🦎

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

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

Penpa: <https://tinyurl.com/ypbfc167>
SudokuPad: <https://sudokupad.app/26g7sle8s5>

December 21, 2023: #NoTouchThis

Philip Newman

Walkthrough of "Extra Space Sudoku" by Bill:

<https://www.youtube.com/watch?v=MVFIE5XUgT0>

Exciting news in the world of "having new sauropods for Philip to include"! The following paper, titled "A new gigantic titanosaurian sauropod from the early Late Cretaceous of Patagonia (Neuquén Province, Argentina)", was made available online only 3 days ago!

<https://www.app.pan.pl/article/item/app010862023.html>

Normal sudoku rules apply.

Antiking: Cells separated by a (chess) king's move cannot contain the same digit.



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

Play on f-puzzles: <https://f-puzzles.com/?id=yn5phsq5>

Play on SudokuPad: <https://sudokupad.app/philip-newman/20231221-notouchthis>

December 23, 2023: Frame Sudoku

Bill Murphy

Walkthrough for Clover's Outside Sum: <https://youtu.be/Ayaddc0tiho>

I think the beautiful thing about holidays is they're transient. People come and go, every holiday we celebrate is different, traditions fade and new ones come into view. (It's the second law of thermodynamics bit all over again) I'm writing this while we do a Love Actually viewing over zoom and it's still such an awful, problematic movie, but god is it nice to do it with friends.

Merry Christmas from me, big love, especially if this time of year is difficult for you and I'll see you on the other side.

Unlike most of my christmas presents, today's Frame Sudoku is perfectly wrapped.

Normal sudoku rules apply. Clues outside the grid give the sum of the first three digits seen from the direction of the clue.

If you're looking to avoid **MATH** this time of year (and who can blame you), the possible combinations are under this spoiler [see on Hints page]

	15	15	15	15	15	15	15	15	15	
15			1	4						15
15		2			5					15
15	3					6				15
15	9						4			15
15		8						6		15
15			7						5	15
15				7					1	15
15					8			2		15
15						9	3			15
	15	15	15	15	15	15	15	15	15	

Sudokupad: <https://sudokupad.app/3axq9uj0hi>

December 24, 2023: B1G3: Crossing the Streams

Philip Newman

Walkthrough of "Frame Sudoku" by Bill:

<https://www.youtube.com/watch?v=sZcyzPsJ3gw>

It's Christmas Eve! My present to you, as mentioned in daily-sudoku-discussion, is an extra long @clover video for Chrimstas!

Today's **GAS** is the return of Buy 1 Get 3. This time, the set of four 6x6 puzzles features some newish line variants!

Normal 6x6 sudoku rules apply: Place the digits from 1-6 exactly once each in every row, column, and 2x3 box.

Antirenbán: Digits along lines cannot repeat, and no two digits on a line can be consecutive (have a difference of 1), regardless of their positions on the line.

or

Zipper: On each line, the digit in the middle cell is equal to the sum of the digits at the ends of the line.

or

Mini Whispers: Digits directly connected by a line must differ by at least 2.

or

Modular Lines: Each line contains one digit equivalent to 1 mod 3 (1 or 4), one digit equivalent to 2 mod 3 (2 or 5), and one digit equivalent to 0 mod 3 (3 or 6).

[The time for the party hats is for the set]

Antirenbán

Play on SudokuPad:

<https://sudokupad.app/philip-newman/20231224-b1g3-crossing-the-streams-antirenbán>

Zipper

Play on SudokuPad:

<https://sudokupad.app/philip-newman/20231224-b1g3-crossing-the-streams-zipper>

Mini Whispers

Play on SudokuPad:

<https://sudokupad.app/philip-newman/20231224-b1g3-crossing-the-streams-mini-whispers>

Modular Lines

Play on SudokuPad:

<https://sudokupad.app/philip-newman/20231224-b1g3-crossing-the-streams-modular>

↓↓ ↓ (The puzzles are on the next page) ↓ ↓ ↓

Antirenbán

Zipper

Mini Whispers

Modular

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



					4
5					
	1		6		
3					2

Greyscale Version (no solution check)

Play on SudokuPad: <https://sudokupad.app/philip-newman/20231224-b1g3-greyscale>

December 25, 2023: Leaps and Bounds
clover!

Extra-long solve video for Philip's 'Crossing the Streams': <https://youtu.be/0ksbrG6xQvU>

Merry Christmas, friends! Today's GAS is a festive little **classic sudoku**, to give you plenty of time to peruse this year's Secret Santa puzzles (or, if you participated, enough time to refresh the channel repeatedly while waiting for your giftee to confirm receipt!). Why not pay a quick visit to GAPP today and check out their gifts for you, too?

Normal sudoku rules apply... and that's it. 😊

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

SudokuPad: <https://sudokupad.app/clover/leaps-and-bounds>

December 26, 2023: Descriptive Pairs Sudoku

Bill Murphy

Walkthrough of Leaps and Bounds, my favourite classic in a long while:

<https://www.youtube.com/watch?v=1gjk8TSSPlk>

In an episode of Adventuring Academy on the streaming service Dropout, Brennan Lee Mulligan bemoans that the internet has taken and run with the idea that he enjoys two very specific things, bird facts & snacking on almonds. As someone who received multiple Dinosaur and Trivia-related presents for christmas, Brennan, I see you and I feel you.

P.S. I am profoundly enjoying my Secret Santa gift, even if I'm on hour three of the solve and into my second big rewind. (I know it was one of you!)

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

Normal Sudoku Rules Apply. Clues outside the grid describe the position of a number in that row or column from that direction, but may be in any order. eg. A clue of 1 6 means that either 1 is in the 6th position or 6 is in the 1st position.

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

Penpa: <http://tinyurl.com/yus3t9uw>

SudokuPad: <https://sudokupad.app/0txol5oc68>

December 27, 2023: Playing Gooseberry
Philip Newman

Walkthrough of "Descriptive Pairs Sudoku" by Bill:
<https://www.youtube.com/watch?v=tvQ8KI6DunE>

Short intro today! I was sloooooow this morning and didn't have time to post before physical therapy, and after my killer shoulder workout it's already 11:11 GAS Central Time so I'd better stop stalling.

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

Normal sudoku rules apply.

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

The image shows a 9x9 Killer Sudoku grid. A cowboy hat emoji is positioned above the top-left cell. The grid contains the following numbers and cages:

8	3		14	2		9		
						1		
	15	12	1					
	2			10	4			
							15	
		20	6				8	
		21		18	9			
		9						
			16	8		22	7	

Play on f-puzzles: <https://f-puzzles.com/?id=yvnaj5kl>

Play on SudokuPad:

<https://sudokupad.app/philip-newman/20231227-playing-gooseberry>

December 28, 2023: Shaken Clones
clover!

Walkthrough for Philip's "Playing Gooseberry":
<https://www.youtube.com/watch?v=MvbiameYnJM>

I like my clones like I like my martinis: ~~non-alcoholic~~ *shaken*.

In today's **shaken clones GAS**, normal sudoku rules apply. Also, every shape from each matching set contains the exact same digits, but those digits do not necessarily appear in the same positions.

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

SudokuPad: <https://sudokupad.app/clover/dec-28-2023-shaken-clones>

December 29, 2023: Pillar of Truth

Bill Murphy

Walkthrough for Shaken Clones: <https://youtu.be/2LXVHUaNhYs>

What do you even call the weird awkward time of the year between Christmas and New Years? It's the awkward silence of the calendar.

I wanna tell you something fun and exciting, but the highlight of my day was buying half a kilo of cumin (I really got good at cooking in 2023) (You absolutely should put more cumin in your food)

Let's stop thumb twiddling and get to today's GAS, a **Row Index Sudoku!** (This is some big Philip nonsense)

Normal sudoku rules apply. A marked cell in row X indicates which row X appears.

(All cells are marked in this grid, that's why they're all blue)

What that means for us normals, as an example, if you had a 5 in row 1 of a column, in the same column, 1 would appear in row 5 in that column.

If you keep repeating to yourself "An X in Row Y means a Y in Row X" you'll both:

Find this puzzle pretty straightforward

Worry your friends and family

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

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

SudokuPad: <https://sudokupad.app/004z0pukbm>

December 30, 2023: Little Sister

Philip Newman

Walkthrough of "Pillar of Truth" by Bill:

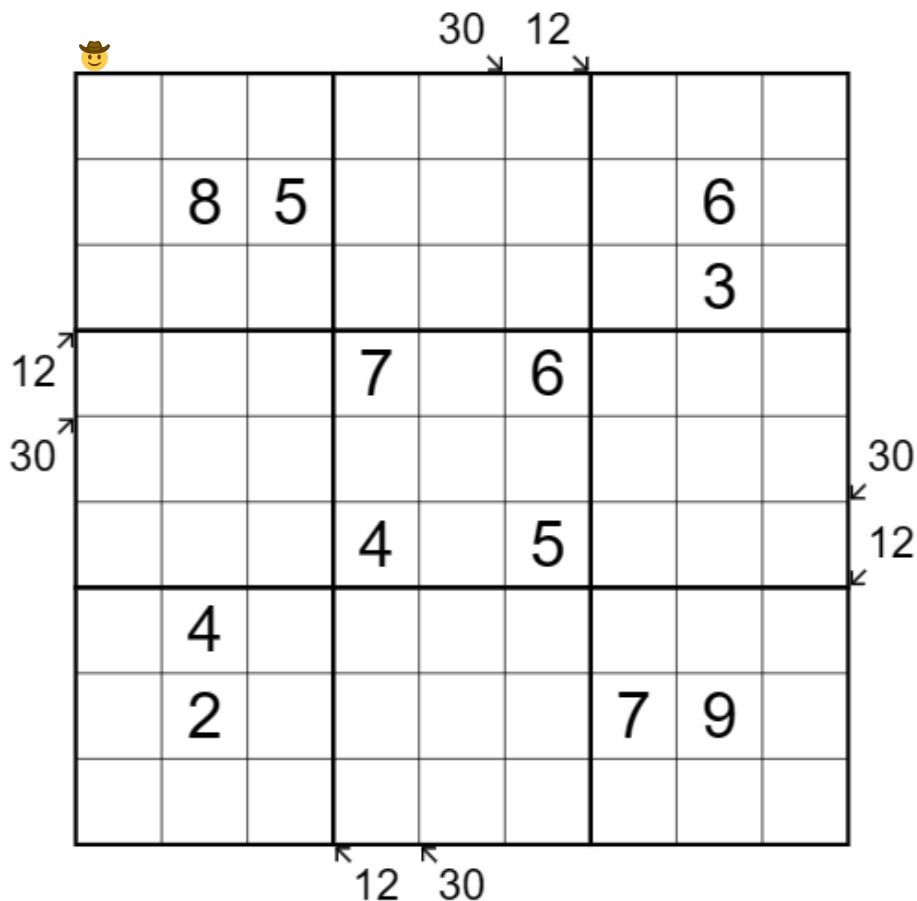
<https://www.youtube.com/watch?v=TShtKMIKwKE>

Happy birthday to my little sister, who turns [REDACTED] today! I made this puzzle for her. She doesn't solve sudoku, so you get to solve it for her!

For the last time this year: generous hat times from Philip, it's a bit tricky and a bit narrow. 😊

Normal sudoku rules apply.

Little Killer: Digits along the indicated diagonals must sum to the total given (digits may repeat if allowed by other rules).



Play on f-puzzles: <https://f-puzzles.com/?id=2xgf4w6n>

Play on SudokuPad: <https://sudokuapp.philip-newman/20231230-little-sister>

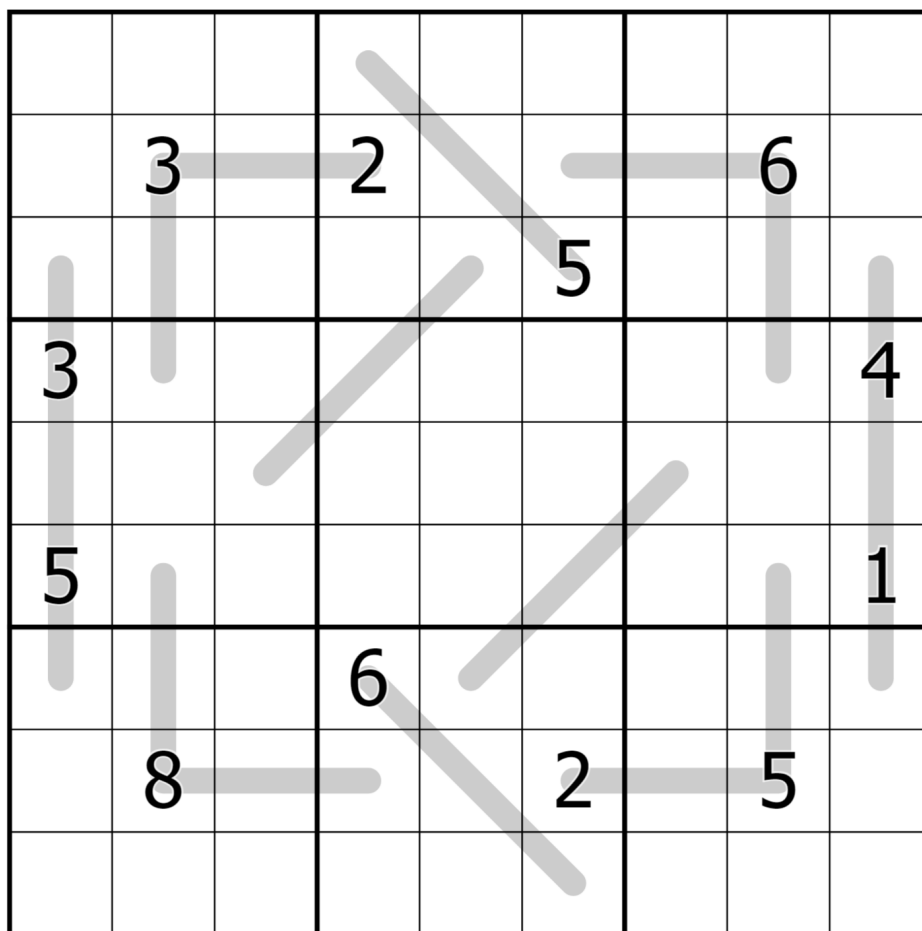
December 31, 2023: Zipper Lines
 clover!

Walkthrough for Philip's 'Little Sister': <https://www.youtube.com/watch?v=RgslJegUllg>

Happy birthday, 2023! It's a shame to see you go as soon as you turn 1, but I'm sure 2024 will be a very sweet baby who always sleeps through the night and doesn't involve any horrific diseases, political unrest, or bad puzzles. 🙄

Today's GAS is a **zipper lines sudoku** (again! We're excited about zipper lines here at HQ). Y'all just did this the other day, so here's a refresher on the rules:

Normal sudoku rules apply. There are some lines in the grid, each of which has an odd length. The digit in the exact center of the line represents a sum, and each pair of cells that are the same distance from the center of the line, sum to the value in the center. For instance, if "6" appears in the middle of a line, then the line could read 1436325, since $1+5 = 2+4 = 3+3 = 6$.

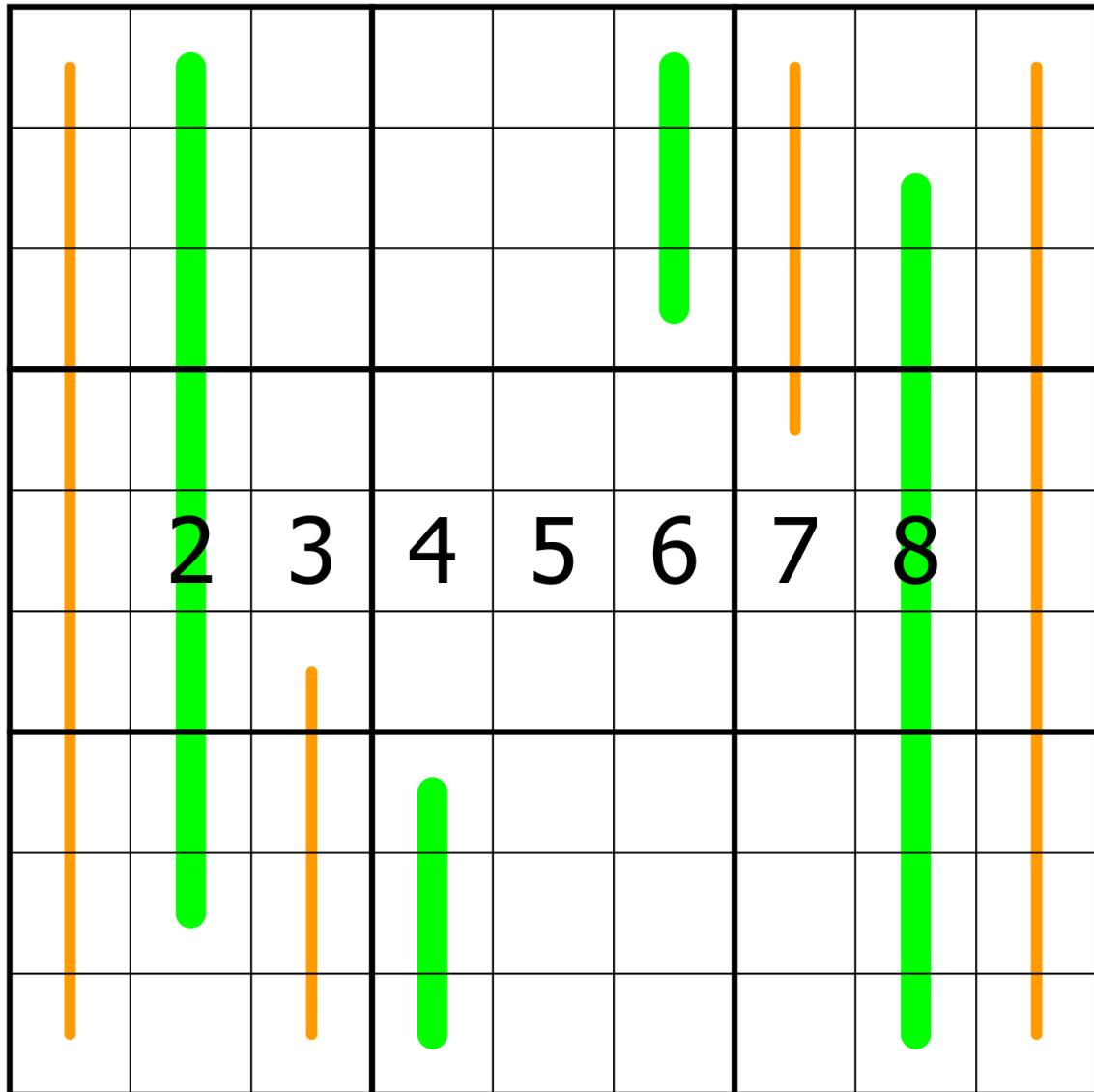


SudokuPad: <https://sudokupad.app/clover/zipper-lines01>

Bonus 1: Dutch and German Whispers

Philip Newman

Normal sudoku rules apply. Along thin orange lines, adjacent digits must differ by 4 or more. Along thicker green lines, adjacent digits must differ by 5 or more.



<https://sudokupad.app/z3sapwpy5f>

Bonus 2: Wild Horses

Philip Newman

Normal sudoku rules apply.

Antiknight: Cells separated by a (chess) knight's move cannot contain the same digit.

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

<https://f-puzzles.com/?id=yqwp589o>

<https://sudokupad.app/philip-newman/00000000-wild-horses>

Bonus 3: Crossing Guard

Bill Murphy

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

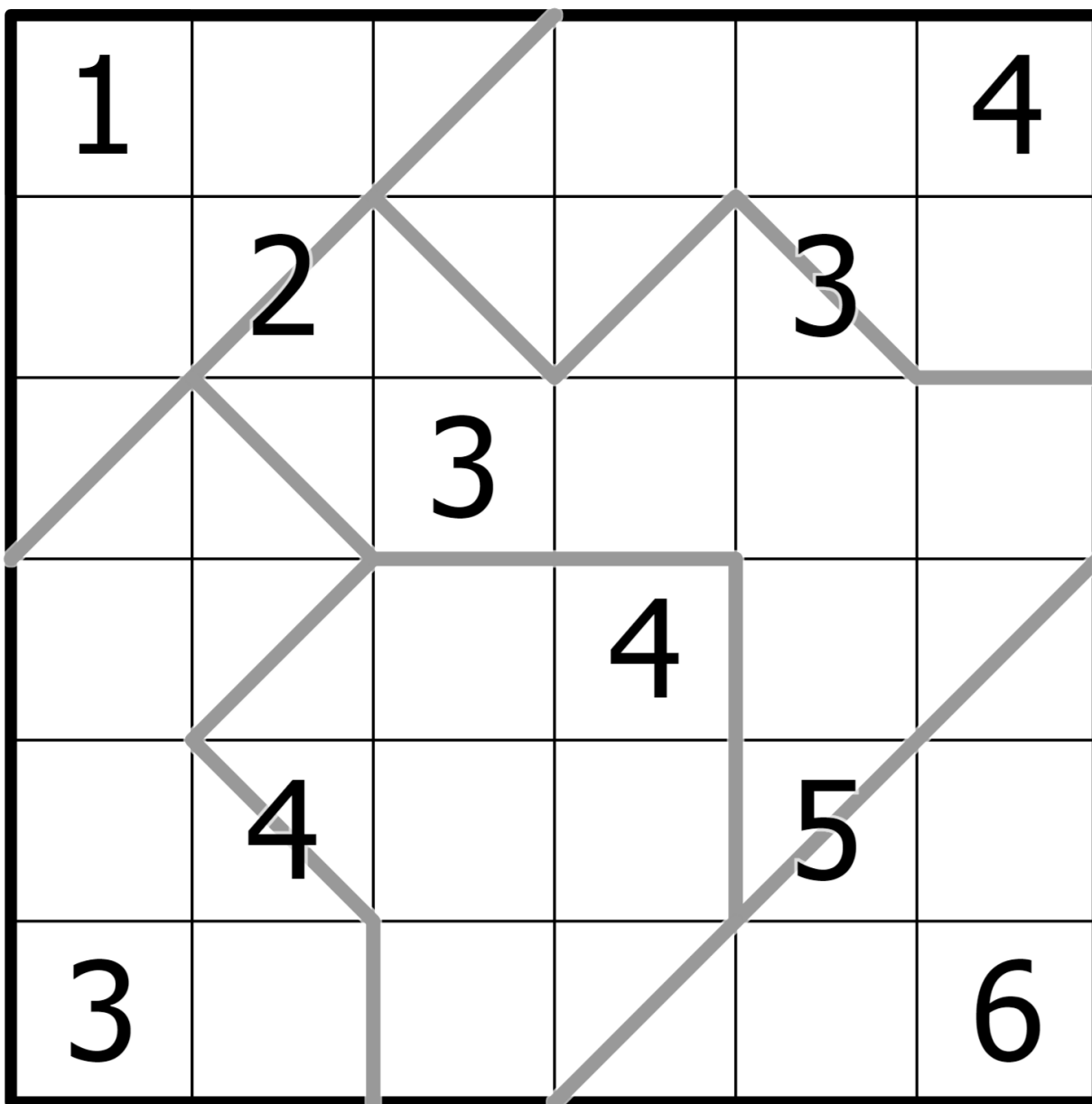
	3							
4		8						
			7	4	3			
		1	2		4	9		
		2		5		6		
		3	8		6	1		
			9	8	7			
						7		1
							9	

<https://sudokupad.app/uevinyafzl>

Bonus 4: Halved Squares

Bill Murphy

Normal Sudoku Rules Apply. Cells with a bold line running diagonally through them belong to either region they are adjacent to, but not both. The region they are in is to be determined by the solver.

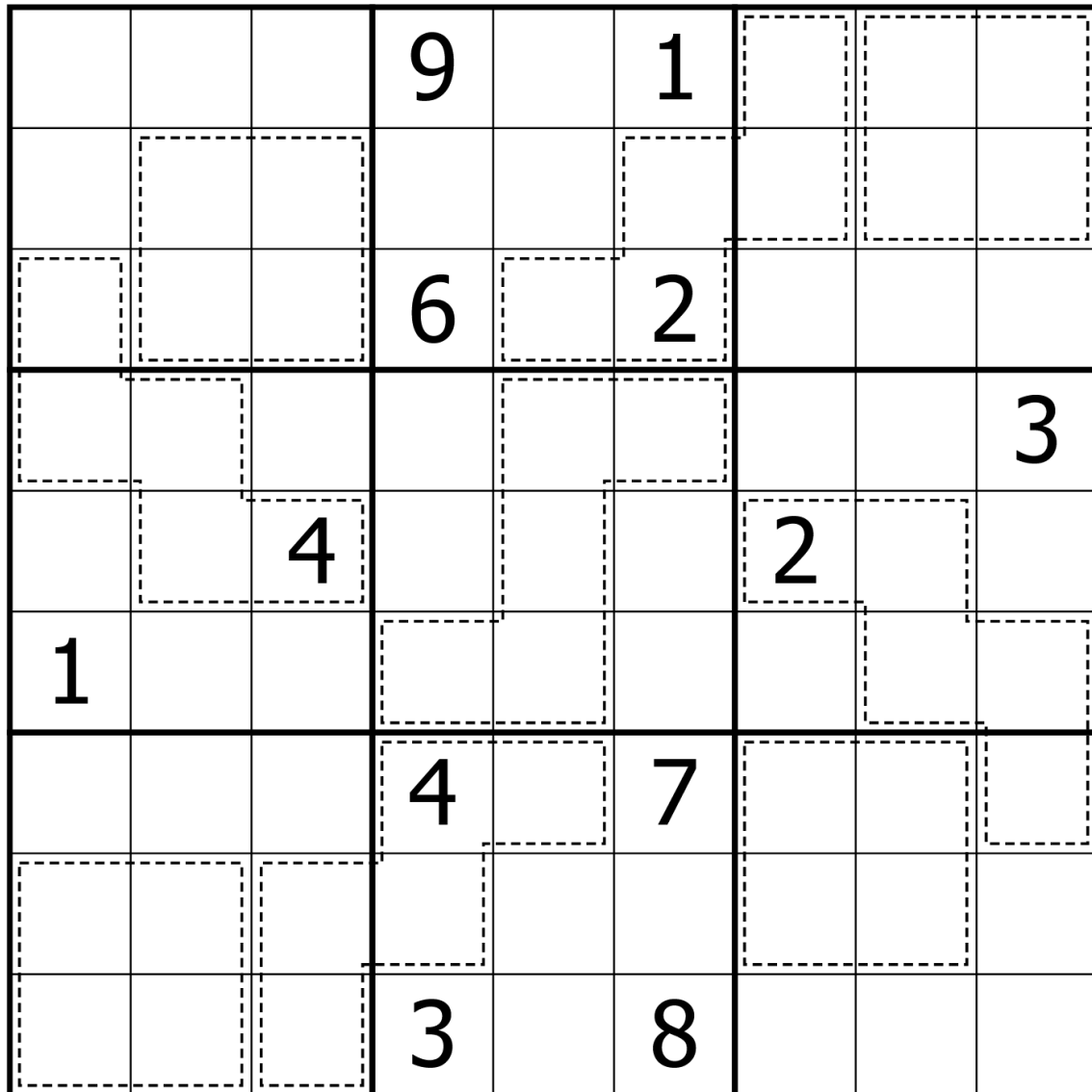


<https://sudokupad.app/2as488sp91>

Bonus 5: Shaken Clones (Harder)

Clover

Normal sudoku rules apply. All cages of the same size contain the same set of digits, which can appear in any order.



<https://sudokupad.app/juyglqbj8>

Time Benchmarks



Two party hats



One party hat

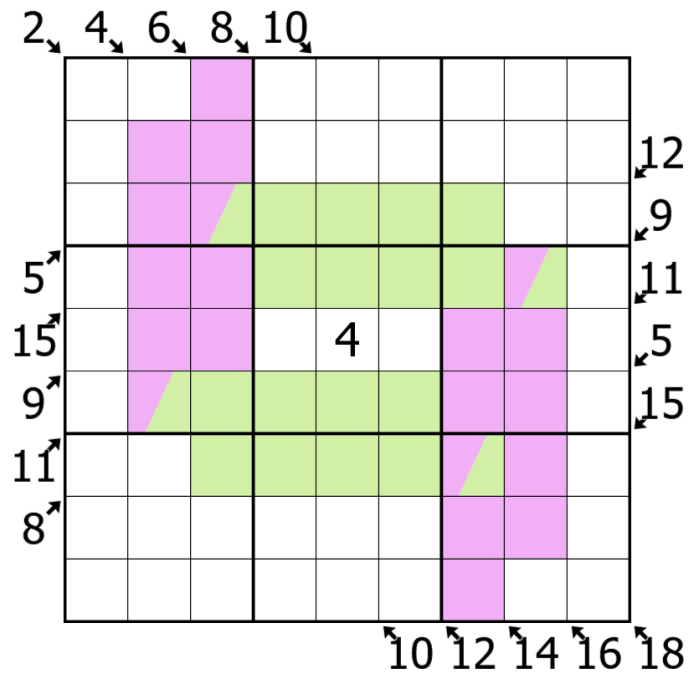


Today's dinosaur:

Dec 1, 2023	7:30	13:30	yelling Yutyranus
Dec 2, 2023	7:30	13:30	Manic Mahakala
Dec 3, 2023	7:00	14:00	Amanzia Arithmetician
Dec 4, 2023	7:00	13:00	steadfast Stegosaurus
Dec 5, 2023	7:30	14:00	Drachenfutter Drinker
Dec 6, 2023	8:00	15:00	Kris Kringled Kholumolumo
Dec 7, 2023	7:30	13:30	fogged Futalognkosaurus
Dec 8, 2023	7:00	13:00	YES CHEF Chialingosaurus
Dec 9, 2023	8:00	15:00	Ch-ch-ch-chia! Chiayusaurus
Dec 10, 2023	8:00	15:00	innocent Incisivosaurus
Dec 11, 2023	6:30	12:00	Hungry Hungry Huayangosaurus
Dec 12, 2023	6:00	11:00	Variant Volkheimeria
Dec 13, 2023	7:00	13:00	galvanized Gallimimus
Dec 14, 2023	6:30	12:00	polymer Poekilopleuron
Dec 15, 2023	8:30	120:00	Jaunty Jiangxititan
Dec 16, 2023	7:00	13:00	zippy Zephyrosaurus
Dec 17, 2023	10:00	18:00	Deal-Hunting Delapparentia
Dec 18, 2023	5:00	12:00	Auspicious Australotitan
Dec 19, 2023	6:00	11:00	lighthearted Lexovisaurus
Dec 20, 2023	20:00	35:00	Expanded Epidexipteryx
Dec 21, 2023	7:30	15:00	Brand-spanking-new Bustingorrytitan
Dec 22, 2023	7:00	13:00	glow-in-the-dark Genyodectes
Dec 23, 2023	7:00	13:00	Alan rickManidens
Dec 24, 2023	10:00	25:00	Monkeying-Around Moabosaurus
Dec 25, 2023	5:30	10:30	holly-jolly Hongshanosaurus
Dec 26, 2023	7:00	13:00	Self-Actualised Saichania
Dec 27, 2023	7:00	13:00	Angoraphobic Angolatitan
Dec 28, 2023	7:45	15:00	shook Shaochilong
Dec 29, 2023	7:00	13:00	Almost-Hatted Halticosaurus
Dec 30, 2023	9:00	20:00	Aged Atacamatitan
Dec 31, 2023	6:30	12:00	zaftig Zapalasaurs

Hints

Hint for December 5, 2023:



Joke for December 19, 2023:

When does a dad joke become a dad joke?
When it becomes apparent!

...Okay, and when does it become apparent?
At the delivery.

You're welcome. 😊

Hint for December 20, 2023:

[copied from the Hint on the puzzle for June 20:]

Classics in GAS commonly use the numbers 1234 to signal whatever you're supposed to spot, feel free to stare at the image attached for a second to spot it before you go for this puzzle.

Joke for December 22, 2023:

Outside of a dinosaur, a GAS is a solver's best friend.

Inside of a dinosaur, it's too dark to solve.

Hint for December 23, 2023:

the possible combinations are 159 168 249 258 267 348 357 456