

GAS Leak

Genuinely Approachable Sudoku from the CtC Discord
Volume 6: September 15, 2021 - October 4, 2021



Good morning, friends!

This document compiles GAS days 101 through 120. This includes the now-infamous Great Wall of Quad Max, as well as four puzzles with suspiciously rumped and overworked-looking given digits. We've also got three bonus puzzles, including the first puzzle to be rejected from GAS for "being a huge pain to typeset." Ready? You'd better be.

As always, on the **last page of this document**, you'll find a table of time benchmarks for each puzzle. To earn **two party hats**, finish the puzzle within the faster time benchmark. To earn **one party hat**, finish the puzzle within the slower time benchmark. And anybody who just finishes (whether you have a slower time, or simply don't record your time at all) will receive a lovely collectible **dinosaur**.

Happy solving!

- *Clover*

September 15, 2021: Sum More Arrow

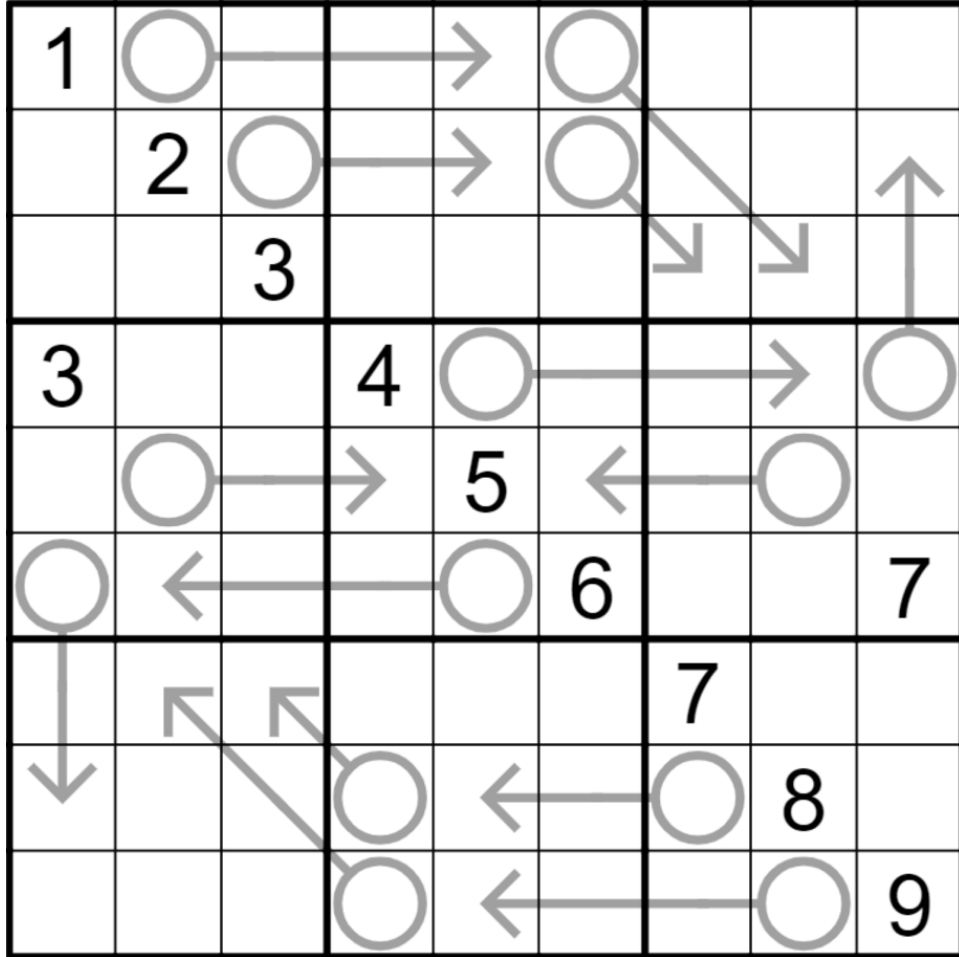
Philip Newman

*To be, or not to be, that is the Question:
Whether 'tis Nobler in the mind to suffer
The Slings and **Arrows** of outrageous Fortune,
Or to take Armes against a Sea of troubles,
And by opposing end them: to dye, to sleep
No more; and by a sleep, to say we end
The Heart-ake, and the thousand Naturall fhockes
That Flesh is heyre too? 'Tis a consummation
Deuoutly to be wilh'd. To dye to sleepe,
To sleep, perchance to Dream; I, there's the rub,
For in that sleep of death, what dreams may come,
When we haue fhuffel'd off this mortall coile,
Muft giue us pause. There's the respect
That makes Calamity of long life:
For who would beare the Whips and Scornes of time,
The Oppreffors wrong, the poore mans Contumely,
The pangs of dilpriz'd Loue, the Lawes delay,
The infolence of Office, and the Spurnes
That patient merit of the unworthy takes,
When he himfelfe might his Quietus make
With a bare Bobbins?*

[The real question: Did I really just quote Hamlet because it uses the word "Arrows"?
Yes, yes I did.]

Normal sudoku rules apply. Digits along arrows must sum to the circled total.

[The puzzle appears on the following page.]



Play on f-puzzles: <https://f-puzzles.com/?id=yj6lf5tj>

Play on CTC App: <https://tinyurl.com/ywydf69s>

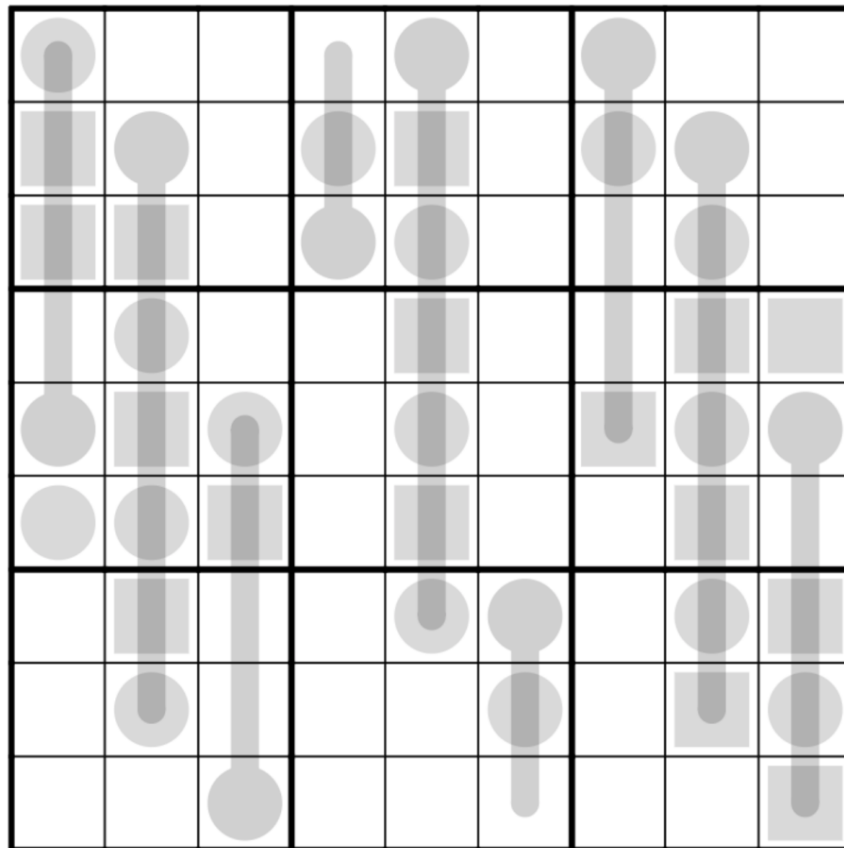
September 16, 2021: Odd-Even Thermo

Clover

*There once was a lass from Tohoku
who devoted her life to sudoku;
she sharpened her brain
playing Number Place Game -
but she bored everybody she spoke to.*

Good morning! Today's GAS is an odd-even thermo. Normal sudoku rules apply; on top of that, there are two (count 'em!) variants. Along a thermometer, digits increase, starting at the round end. (They don't necessarily have to be consecutive.) Digits in a grey circle are odd; digits in a grey square are even. Note that thermometer bulbs are not necessarily odd.

Editor's note: When this puzzle was originally published, many solvers found it very tough to read! In an attempt to clarify things, in the online solving links, **even squares have been colored blue, and odd circles have been colored orange**. *Uncolored* grey circles are thermometer bulbs, and may be either odd or even.



f-puzzles: <https://f-puzzles.com/?id=yj3pnryg>

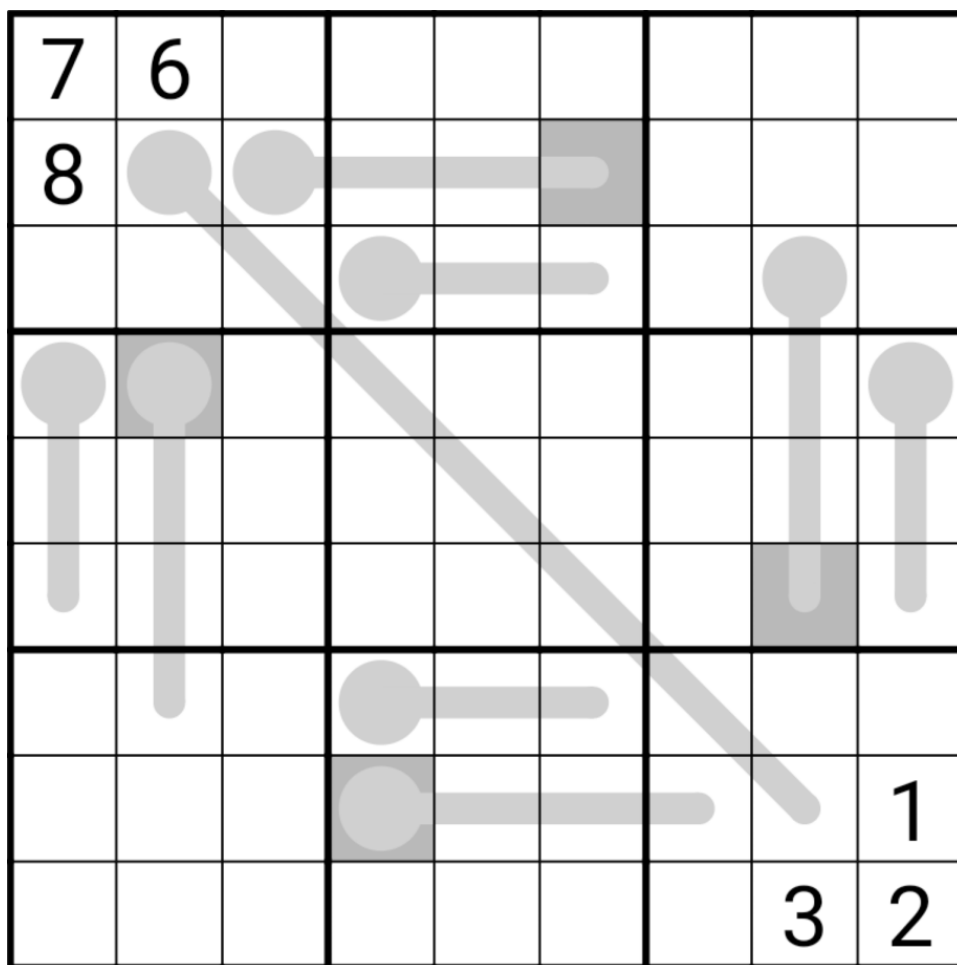
CtC: <https://tinyurl.com/5dyj23hz>

September 17, 2021: Thermo Clones

Sam Cappleman-Lynes

You know what's hot right now? Thermometers. You know what else is hot? Single-cell clones. Put them together and you've got an absolutely off-the-chart blistering inferno. If only we had some sort of temperature-measuring device that could tell us exactly how scorching this puzzle is 😞

In this Thermo Clones Sudoku, normal Sudoku rules apply. The digits placed on each thermometer shape must strictly increase starting from the bulb. The four shaded cells are clones and must all contain the same value.



f-puzzles: <https://f-puzzles.com/?id=yff6tvlt>

CtC: <https://tinyurl.com/59m8wa4m>

Penpa: <https://git.io/JzTeM>

September 18, 2021: Dead or Alive

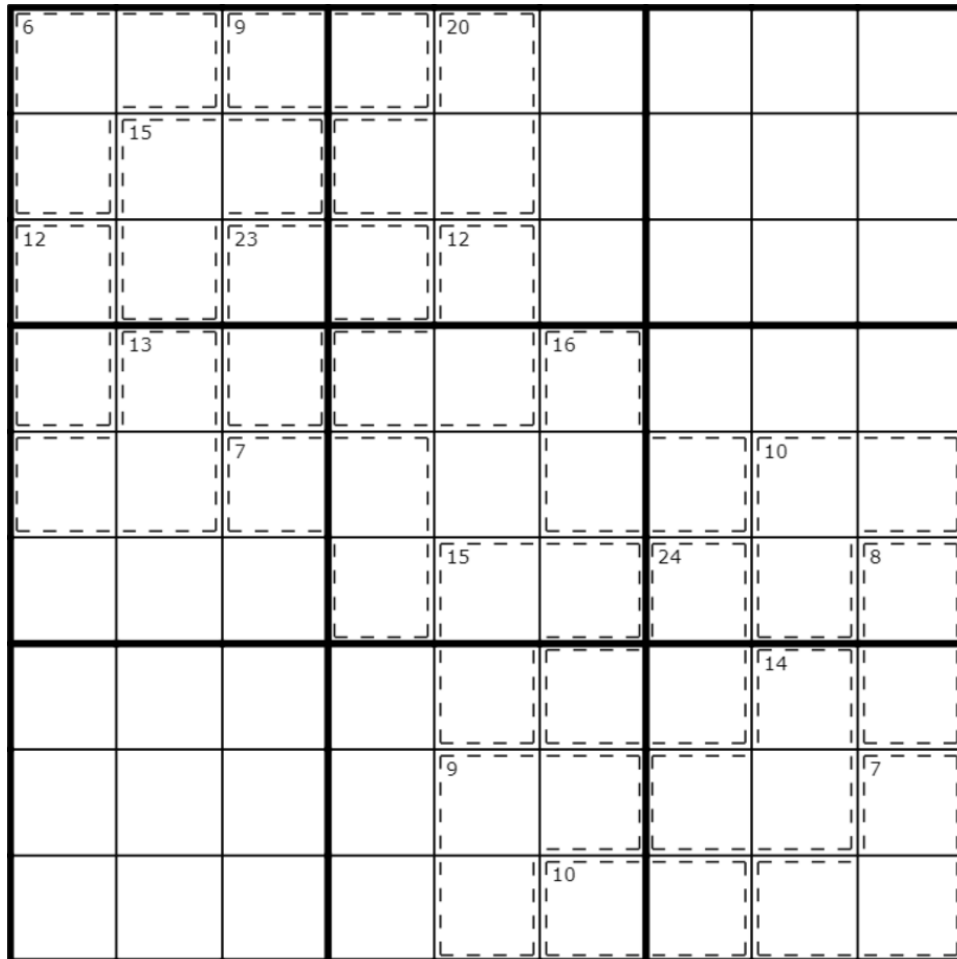
Philip Newman

WANTED: A funny intro for this puzzle.

I'm really struggling to come up with a Killer intro this morning, so in the interest of getting the puzzle up before you all riot... let's make a game out of it!

Bonus challenge: Write an intro for a GAS puzzle! Post in spoilers, and make sure to ping me so I don't miss it. I will pick a favorite (read: whichever one makes me laugh the hardest) and use it for the next puzzle I post, whether it makes any sense with that puzzle or not!

Today's GAS is a Killer Sudoku: Normal sudoku rules apply. Digits in cages cannot repeat, and must sum to the total given.



Play on f-puzzles: <https://f-puzzles.com/?id=yjmzvnc1>

Play on CTC App: <https://tinyurl.com/3tf22cae>

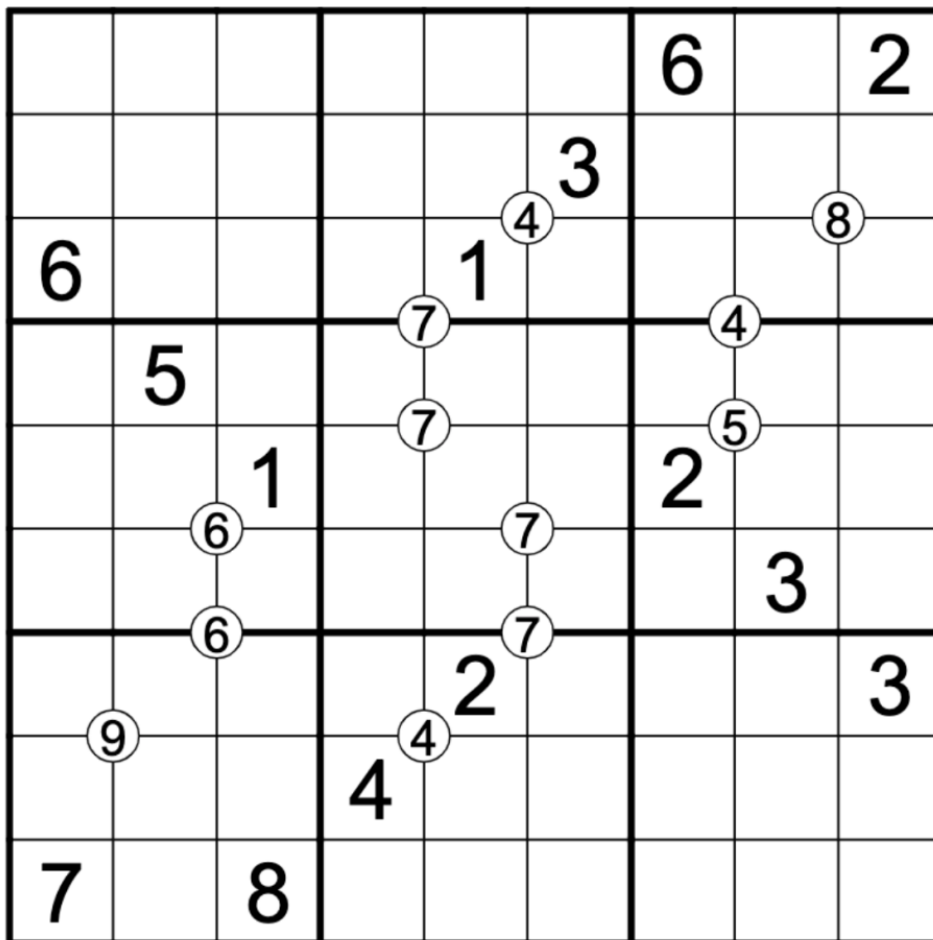
September 19, 2021: Quad Max

Clover

Today's GAS is a Quad Max Sudoku. That's short for Quadriceps Maximillian Sudoku, which is, coincidentally, the full name of my champion track cyclist alter ego. 🚴

Normal sudoku rules apply. Also, a value in a white circle shows the largest digit that appears in the four cells surrounding that circle. (Digits around a white circle may repeat as long as they follow sudoku rules.)

Note for new solvers: the digit in the white circle *must* appear somewhere in the four cells surrounding that circle.



f-puzzles: <https://f-puzzles.com/?id=yjt9ybwd>

CtC: <https://tinyurl.com/22jhd43j>

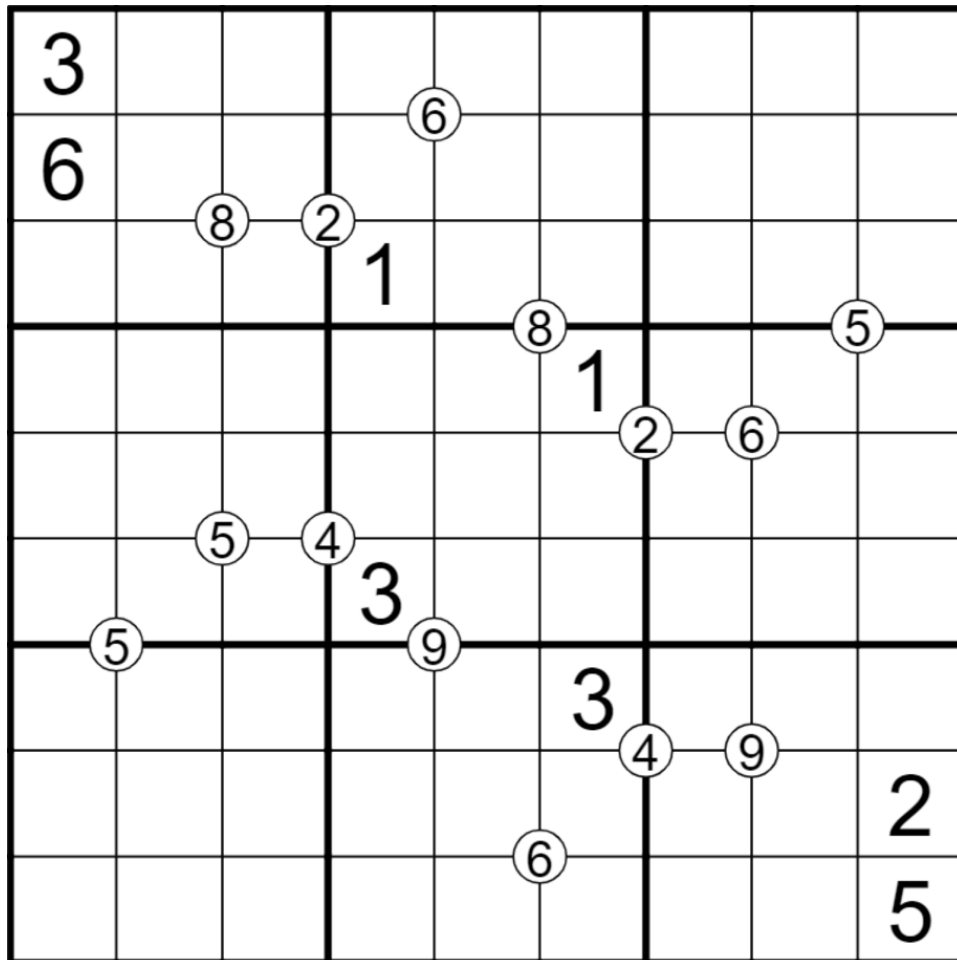
September 20, 2021: Quad Max (Again)

Sam Cappleman-Lynes

Today's GAS is a Quad Max Sudoku. That's short for Quadrillionaire Maximalist Sudoku, which is, coincidentally, an accurate description of my lifestyle in a parallel world where puzzle-making is somehow a lucrative career.

Normal Sudoku rules apply. Also, a value in a white circle shows the largest digit that appears in the four cells surrounding that circle. (Digits around a white circle may repeat as long as they follow sudoku rules.)

Note for new solvers: the digit in the white circle *must* appear somewhere in the four cells surrounding that circle.



f-puzzles: <https://f-puzzles.com/?id=yjpa2zfp>

CtC: <https://tinyurl.com/r4575u6u>

September 21, 2021: Crash Into Me

Philip Newman

Editor's note: This is going to need a little explaining! This was the third day in a row of the same Quad Max ruleset. As such, this puzzle is harder than the previous two (after all, you've had some time to get used to the rules by now!) Also, this was the day that Philip had set aside to post the winning puzzle intro from the intro-writing contest three days prior, which was won by GAS solver **mahn**. What you'll see here, is Philip adroitly handling both of those situations in the same flavor text...

Today's GAS is a Quad Max Sudoku. That's short for Quad. Max. Sudoku III, Esq., which is, coincidentally, short for Quadrature Maxwell Soduko, Third of His Name, Lord of the Nine Boxes, and Protector of the Grid, which is, coincidentally, the name of my Dave Matthews cover band.

Unfortunately, the scheduled performance of the band has been cancelled for legal reasons:

Hey, um, hey. It's me, your lawyer. Hey, I just got a letter from this, uh, setter? Satyr? No, it must be setter. Like an English Setter? Anyway, a dog sent you this letter, and it says that you're going to be sued (oku).*

If I'm reading between lines correctly, this lawsuit is about some killer from a while ago. Not a big one, a little one. Is it about this dog's lunch? Uh, I guess this killer stole a bunch of swordfishes from this dog, and the dog couldn't make sandwiches? This dog is still broken up about that, and I guess wants you (ren)banned from its life.

The demand in the letter is pretty simple: Place the numbers 1 through 9 in these boxes nine times each, and [rest of ruleset].

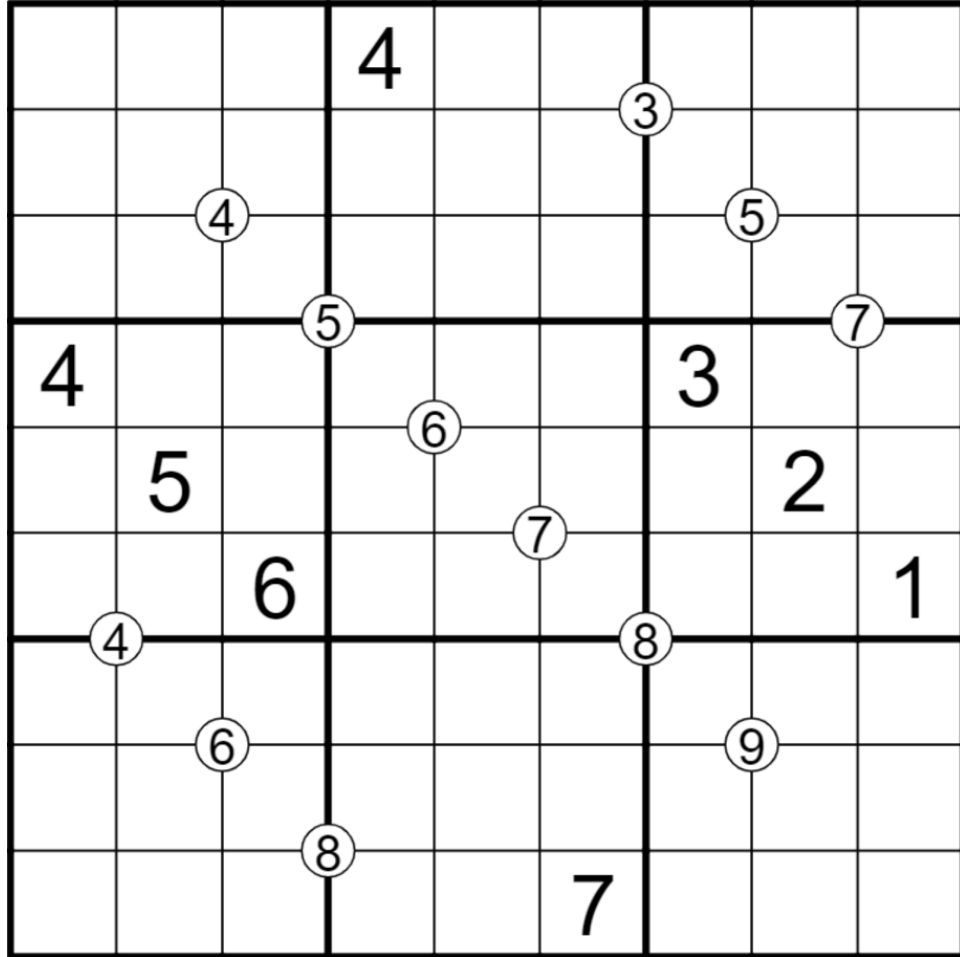
This letter is kind of disjoint. You could say it's odd, even. But we should take it seriously: a tiny pill can have a domino effect. We don't want to take this to trial (and error), so hopefully we can settle this before there are German whispers around town and the temperature starts to rise (from the bulb end).

Anyway, call me back. But during normal business hours, please, I'm anti-(k)night.

I am not admitted in the state of Hawaii, the state of confusion, the gaseous state, or any other state, and I am not your attorney. This is not an attorney-client relationship, unless the numbers in row 7 add up to 46. Clover will probably create a ruleset now where this is true.

Normal sudoku rules apply. Also, a value in a white circle shows the largest digit that appears in the four cells surrounding that circle. (Digits around a white circle may repeat as long as they follow sudoku rules.)

[The puzzle appears on the following page.]



Play on f-puzzles: <https://f-puzzles.com/?id=yj2g9qhp>
Play on CTC App: <https://tinyurl.com/2rypnzsm>

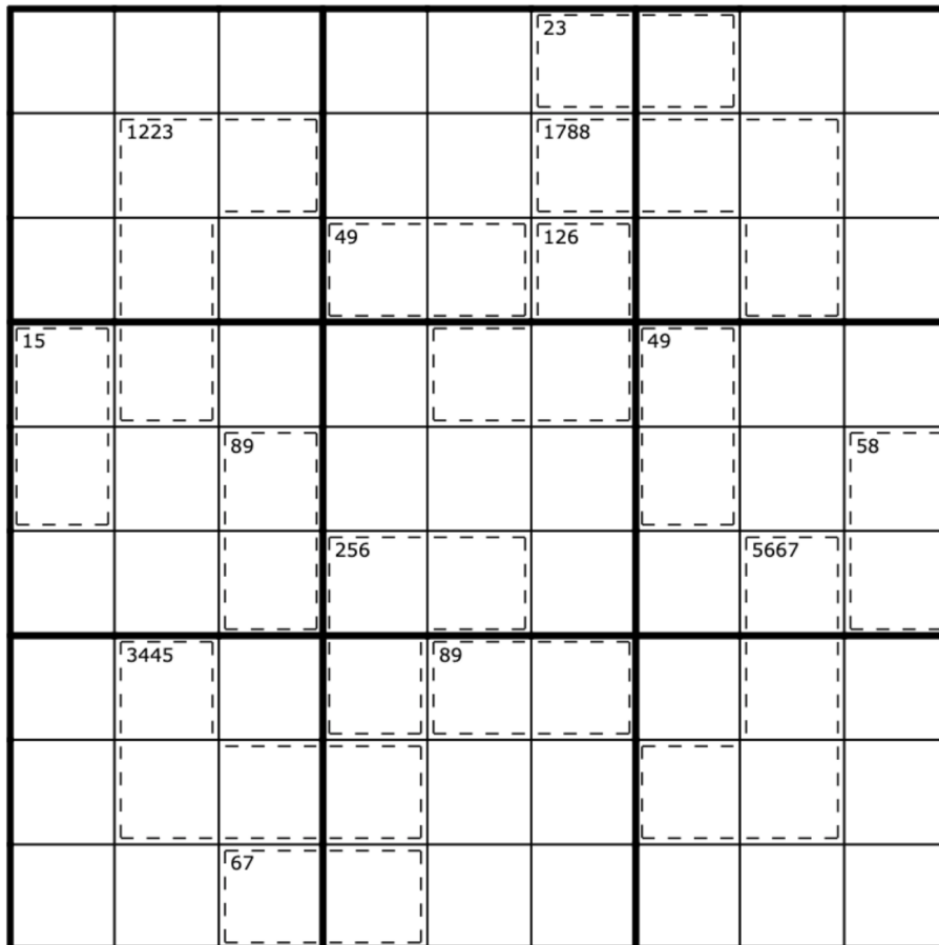
September 22, 2021: Zone Sudoku

Clover

Today's GAS is this hideous mutated mashup of killer and quadruples that I found at the very bottom of my underwear drawer after not doing laundry for a few weeks: a zone sudoku.

Kill meeeeeeee, it croaked as it saw the light of day for the first time in years. But not until you solve *meeeeeeeeeeee*.

Normal sudoku rules apply. Also, the top left corner of each cage shows all of the digits that appear in that cage. (Be careful: this is not a killer cage puzzle and those are not sums!)



f-puzzles: <https://f-puzzles.com/?id=ygvgv2xz>

CtC: <https://tinyurl.com/2rj6vmzk>

September 23, 2021: Classic Sudoku

Sam Cappleman-Lynes

Today's GAS is a Classic Sudoku. That means it has a lighter, clearer texture than a Baroque Sudoku but, unlike a Romantic Sudoku, is not typified by the drawing of inspiration from other forms of artistic expression. One of the main innovations that exemplifies the Classic Sudoku period is the development of writing implements that can produce both hard and soft markings, sometimes known as pencilmarks, as opposed to the instruments favoured by composers of Baroque Sudoku which were capable only of producing uniform markings.

As usual, normal Sudoku rules apply, and today, that's it!

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

f-puzzles: <https://f-puzzles.com/?id=yhdrtv8>

CtC: <https://tinyurl.com/ehtww6hs>

Penpa: <https://git.io/Jz23Q>

September 24, 2021: Modern Sudoku

Philip Newman

Yesterday's Classic GAS was quaint, but we've moved on from such old fashioned ideas. Today, we move forward to the future... that's right, it's time for a Sudoku that would fit perfectly in the early 20th Century (you know, when Sudoku was really popular): Modern Sudoku.

Look at the bold, abstract regions of color. Admire the uniformity of design and rules. We can borrow the givens of past periods without falling into their antiquated solution paths. Not only can you solve this one-of-a-kind piece of puzzle art, you can purchase it as well. For the low low price of \$15,000, I will put this beauty to paper, possibly using my children's crayons. Limited to three prints, jump on this opportunity now before it passes you by!

Normal sudoku rules apply. Digits in red regions must sum to 15. Digits in yellow regions must sum to 15. Digits in blue regions must sum to 15. Digits in grey regions must sum to 15. Digits in white regions must sum to 15.

Note for new solvers: Don't panic - it's really just a killer sudoku. :) Both online solving links are colorblind-friendly!

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

Play on f-puzzles: <https://f-puzzles.com/?id=yjdsqqu4>

Play on CTC App: <https://tinyurl.com/uur2kn3>

September 25, 2021: Full Rank Sudoku

Clover

There is a sudoku beyond that which is known to man. It is a sudoku as vast as space and as timeless as infinity. It is the middle ground between light and shadow, between science and superstition, and it lies between the pit of man's fears and the summit of his knowledge. This is the sudoku of imagination. It is the sudoku which we call: full rank.

Normal sudoku rules apply.

Now imagine, if you will, reading each row and each column - from each of the two possible directions - as a nine-digit number. (You should end up with 36 nine-digit numbers in total.) Now, imagine putting those 36 nine-digit numbers in order from smallest to largest. The value outside of a row or column tells you where the corresponding nine-digit number would appear in that list.

For instance, a value of 1 above a column would tell you that the column, read top to bottom, contains the smallest of the 36 numbers. A value of 32 to the right of a row would tell you that the row, read right to left, contains the 32nd-smallest (or fifth-largest) of the 36 numbers.

	4	7	29			33			
1			8		7				
35						4			
	3								
32									
	4						5		36
		1				7		3	
8						6			30
				1				2	6
						8		9	3
				5	31		34		2

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

CtC: <https://tinyurl.com/323cb5j6>

September 26, 2021: Odd Sudoku

Sam Cappleman-Lynes

Yesterday's puzzle was rather odd, wasn't it? Well today's puzzle is even odder. So odd, in fact, that the variant itself is actually called Odd Sudoku. Imagine!

Normal Sudoku rules apply, and additionally, digits in grey circles must be odd. That's it!

Maybe not so odd after all...

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

f-puzzles: <https://f-puzzles.com/?id=yfdg22gz>

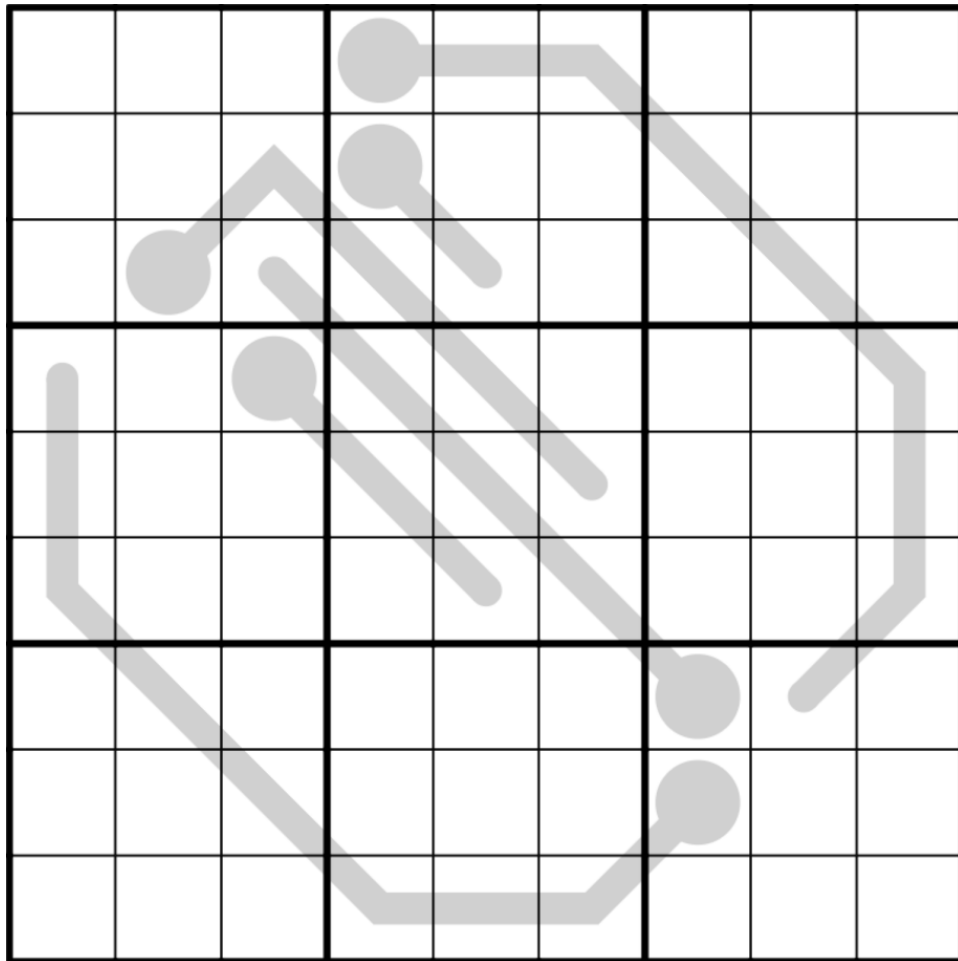
CtC: <https://tinyurl.com/vwtpauk9>

September 27, 2021: Ring of Fire

Philip Newman

The days are getting shorter... and cooler. *checks weather* It's only going to be 305K here today, positively chilly. Make sure your GAS furnace is working, curl up with your Snuggie, and keep your mind warm with this Thermo Sudoku!

Normal sudoku rules apply. Digits along thermometers must increase from bulb to tip.



Play on f-puzzles: <https://f-puzzles.com/?id=yfw4dh4t>

Play on CTC App: <https://tinyurl.com/ytmzkkn7>

September 28, 2021: TOWTBART Sudoku

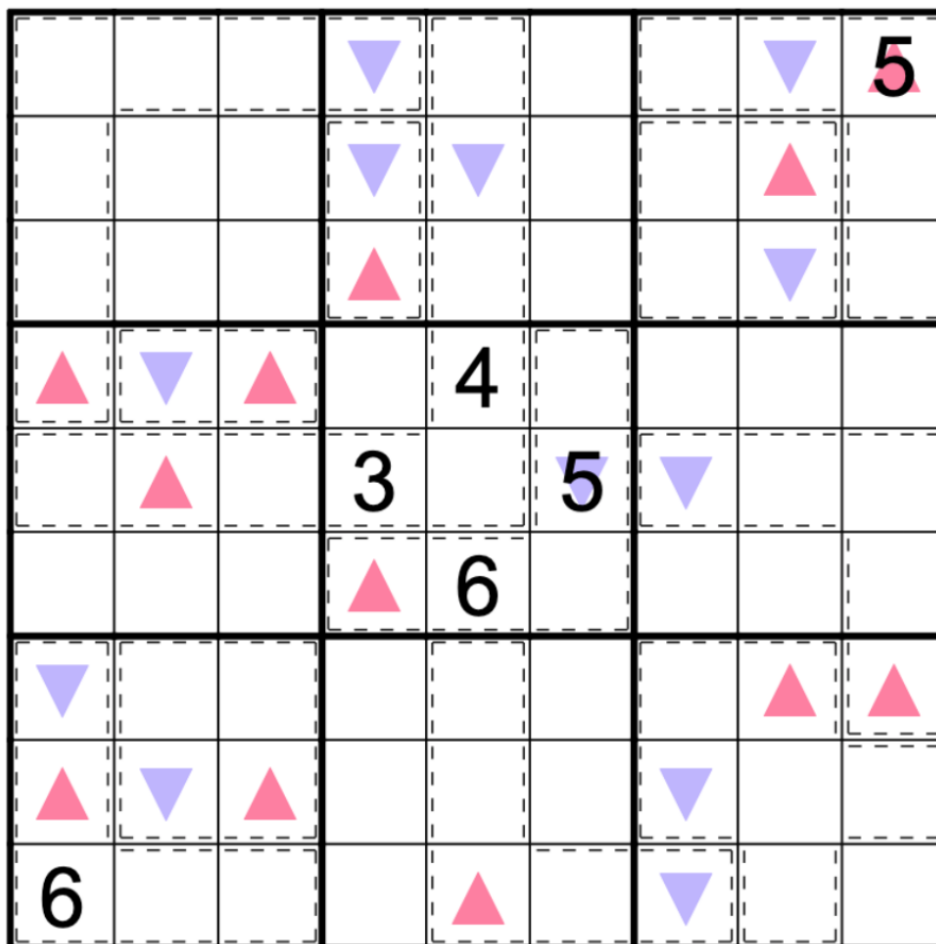
Clover

Today's GAS is a **the one with the blue and red triangles showing the smallest and largest digits in a cage, respectively sudoku**, or TOWTBARTSTSALDIAC,R sudoku. I named it myself, because I came up with it myself. Can you tell? 😊

Normal sudoku rules apply.

Digits in an outlined cage may not repeat. The highest digit in each cage is marked with a red upwards-pointing triangle, and the lowest digit in each cage is marked with a blue downwards-pointing triangle.

Editor's note: In each cage, the cells containing the triangles are the exact cells that contain the highest and lowest digits in that cage.



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

CtC: <https://tinyurl.com/ywhwtrns>

September 29, 2021: ~~Odd~~ Even Sudoku

Sam Cappleman-Lynes

I appear to have made a terrible mistake in my previous puzzle. I have no idea how it happened and I can only offer my sincerest apologies. I must have got muddled when posting it because I just checked my notes and it turns out that instead of an Odd Sudoku, it was supposed to be an Even Sudoku! I'm just glad you all still appeared to be able to solve it... Anyway, here's the corrected puzzle, with the odd clues all now changed to be even, as intended.

In this Even Sudoku, normal Sudoku rules apply, and digits placed in grey squares must be even.

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

f-puzzles: <https://f-puzzles.com/?id=yexg7qb8>

CtC: <https://tinyurl.com/55jrhwcw>

September 30, 2021: Sam-ish Sudoku

Philip Newman

I can't believe this has happened. Sam appears to have made another terrible mistake. Not only was Sunday's puzzle not supposed to be an Odd Sudoku, yesterday's puzzle wasn't supposed to be an Even Sudoku either! In fact, it wasn't supposed to be Sam's puzzle at all! Somehow, Sam got a copy of my notes and filled in some other variant rules.

This puzzle is actually supposed to be a Little Killer Sudoku. Don't worry about divisibility by two in this one, just make the digits add up.

Normal sudoku rules apply. Digits along the indicated diagonals must sum to the total given (digits may repeat if allowed by other rules).

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

Play on f-puzzles: <https://f-puzzles.com/?id=yzwv7qdj>

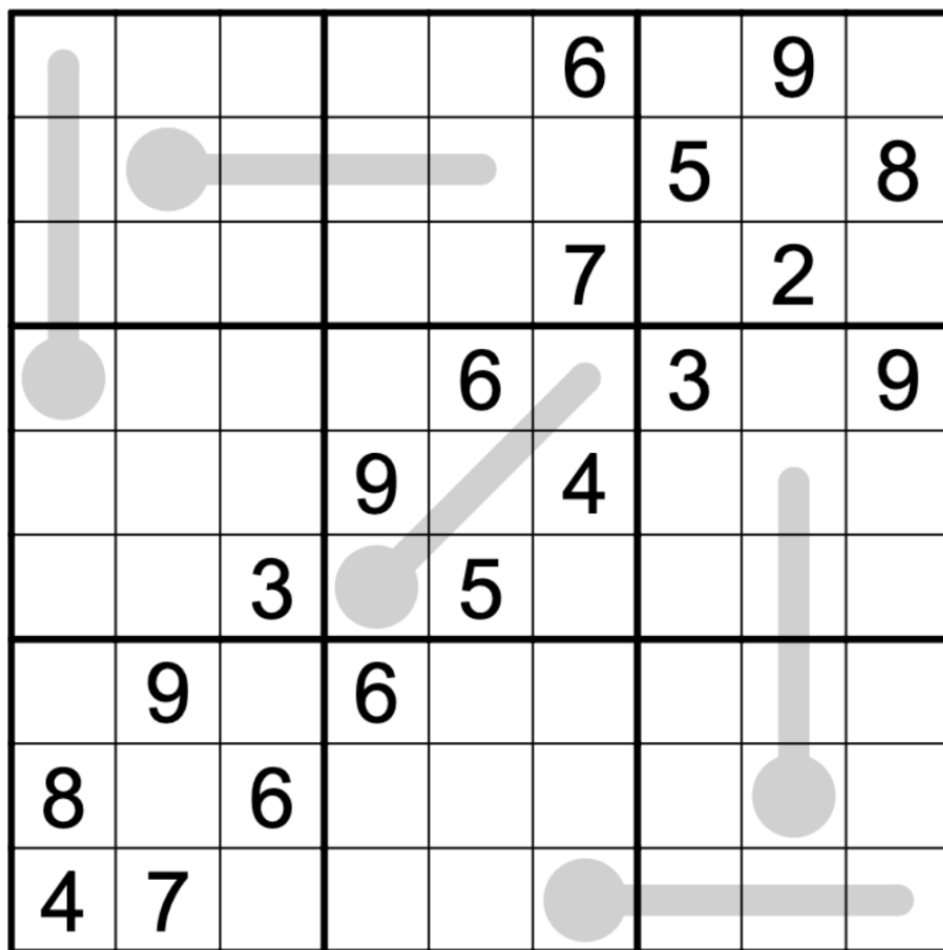
Play on CTC App: <https://tinyurl.com/kc239h7s>

October 1, 2021: Thermo Sudoku

Clover

I found this perfectly good set of given digits in the dumpster outside of Big Pisto's Discount Sudoku Components Emporium. They look a bit battered and I haven't got the slightest idea why, but I'm sure they'll make a lovely puzzle! 🙄

Normal sudoku rules apply. Digits along a thermometer line must increase, starting at the round bulb. For instance, the digits 3 6 7 9 could appear along a thermometer in that order.



f-puzzles: <https://f-puzzles.com/?id=ygeeu4fi>

CtC: <https://tinyurl.com/ystvdt9a>

October 2, 2021: Neighbours Sudoku

Sam Cappleman-Lynes

Due to staff shortages, we have been unable to localise this puzzle into US English. For the best solving experience, speakers of US English are advised to install patch file 211002--en-us, known colloquially as the "no u" update.

In this Neighbours Sudoku, normal Sudoku rules apply. In addition, whenever two digits are given outside a row or column, those two digits must appear as direct neighbours, in the given order, in that row or column.

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

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

CtC: <https://tinyurl.com/4ks6fntt>

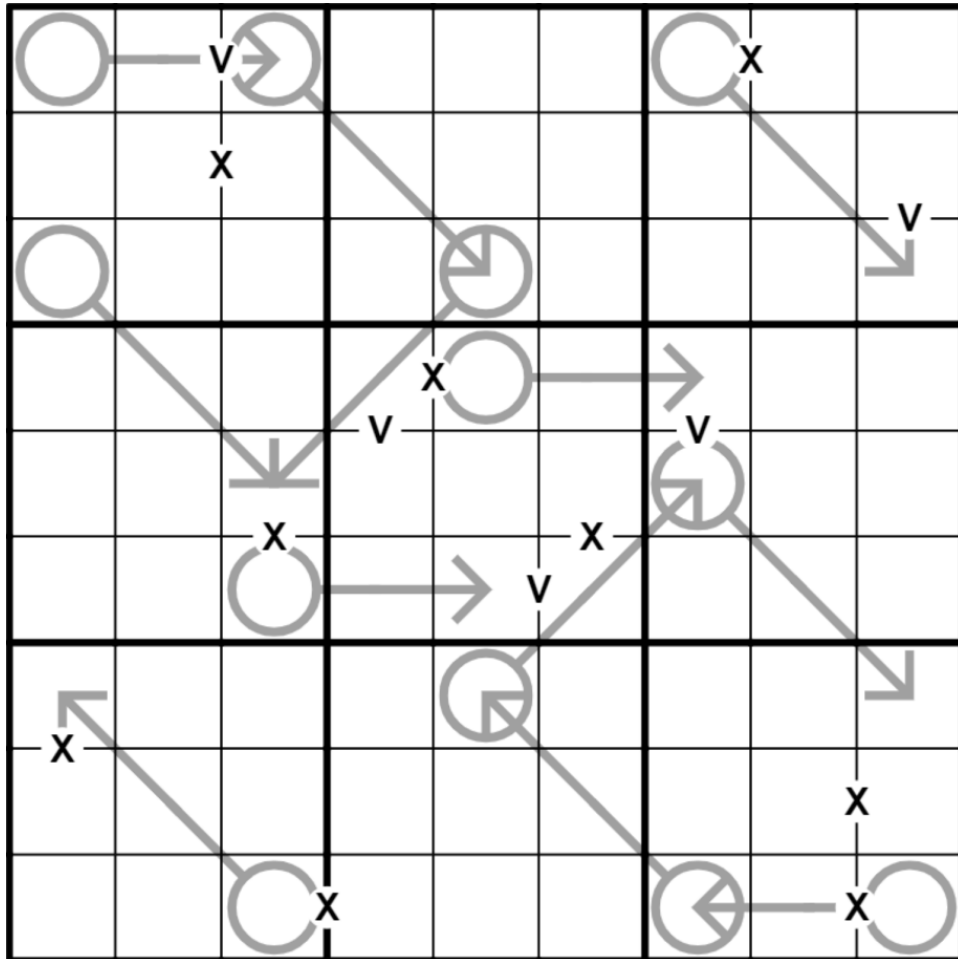
October 3, 2021: Sagittarius II

Philip Newman

Due to staff shortages, we have been unable to localise this puzzle to use Arabic numerals. For the best solving experience, non-Roman speakers advised to install patch file XXIXIII--MI.DI, known colloquially as the "NO V" update.

Today's GAS is an XV Pairs Arrow Sudoku:

Normal sudoku rules apply. Digits along arrows must sum to the circled total. Digits separated by a V must sum to 5; digits separated by an X must sum to 10. (No negative constraint.)



Play on f-puzzles: <https://f-puzzles.com/?id=yjw9fx8v>

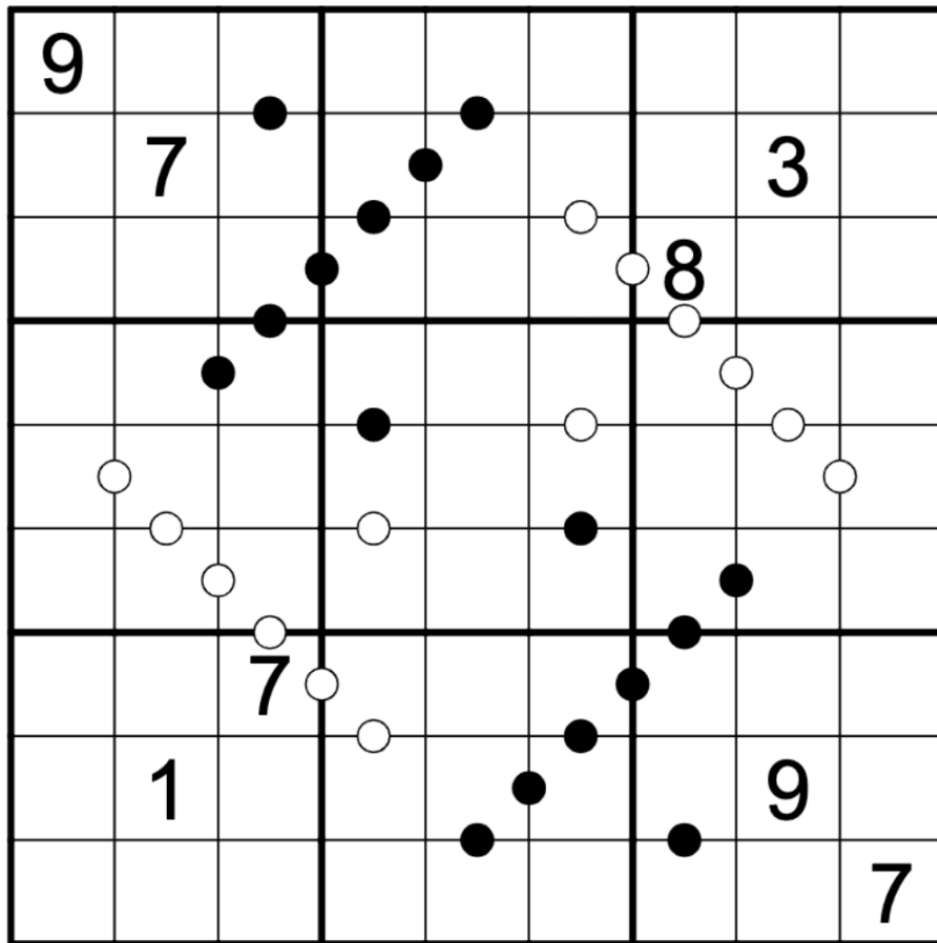
Play on CTC App: <https://tinyurl.com/5xvujcb9>

October 4, 2021: Consecutive Pairs / Ratio

This consecutive pairs / ratio sudoku is a tribute to [a remarkable \(also, as it turns out, completely fake\) bicycle chaining that Riffclown showed me the other day.](#)

Mechanic's disclaimer: Do not install sudoku on your bicycle without professional guidance. You risk losing a digit.

Normal sudoku rules apply. Digits on either side of a white dot must be consecutive. Digits on either side of a black dot must be in a 1:2 ratio. Not all dots are necessarily given.



f-puzzles: <https://f-puzzles.com/?id=yegy3x9t>

CtC: <https://tinyurl.com/9exrn29n>

Bonus 1: Maximin Sudoku

Sam Cappleman-Lynes

Normal sudoku rules apply. Clues outside the grid show the difference between the largest and smallest digits in the nearest three cells in the corresponding row/column.

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

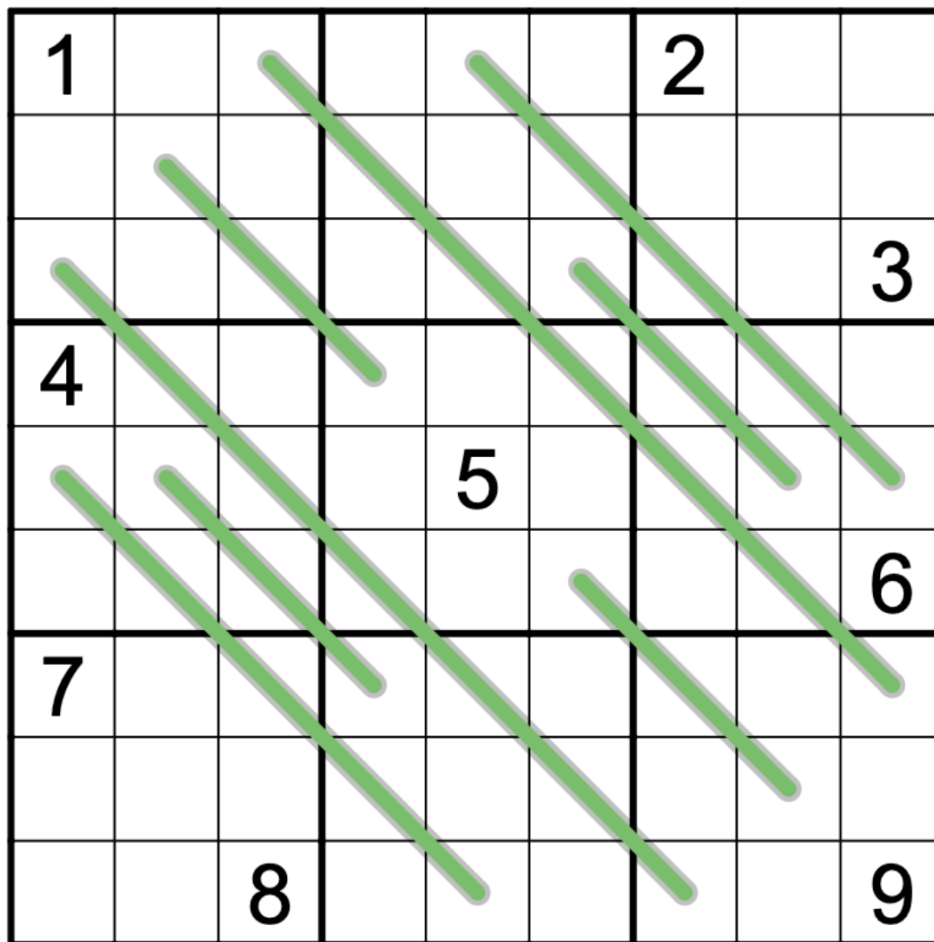
f-puzzles: <https://f-puzzles.com/?id=yge8notw>

CtC: <https://tinyurl.com/7vufvav4>

Bonus 2: Palindrome/German Whispers Sudoku

Philip Newman

Normal sudoku rules apply. Digits next to each other along a green line must differ by at least 5. Digits along a green line must form a palindrome (the sequence of digits must read the same forwards and backwards.)



f-puzzles: <https://f-puzzles.com/?id=yeodef9>

CtC: <https://tinyurl.com/2xfh3zh6>

Bonus 3: Tight Fit Sudoku

Clover

Fill the grid with the digits 1 through 9, so that each digit appears exactly one time in each row, column, and 2x3 box. If a cell contains a slash, that cell will contain two different digits. The digit above the slash must be lower than the digit below the slash.

Editor's note: To trigger answer checking in Penpa, fill the cells as follows:

- Use sudoku mode to fill **two** digits into each cell containing a slash, with one digit placed above the slash and one below.
- To fill the cells without slashes, use sudoku mode to place the digit in the top left corner of the cell.
- Example of a correctly filled-in (partial) solution:

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

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

Penpa: <https://git.io/Jo45O>

Time Benchmarks

	One party hat	Two party hats	Today's dinosaur:
September 15, 2021	12:30	7:30	princely patagosaurus
September 16, 2021	13:00	7:30	vertical vulcanodon
September 17, 2021	14:00	8:30	sweltering scelidosaurus
September 18, 2021	12:00	6:30	exclamatory erketu
September 19, 2021	11:00	6:30	hypertrophied hypsilophodon
September 20, 2021	16:00	10:00	loaded lambeosaurus
September 21, 2021	16:00	10:00	galvesaurus guitarist
September 22, 2021	9:00	5:00	chimaeric chinshakiangosaurus
September 23, 2021	9:30	6:00	musical megalosaurus
September 24, 2021	15:00	5:00	blue-period barapasaurus
September 25, 2021	16:00	10:00	overwhelmed oryctodromeus
September 26, 2021	11:00	7:00	odd oviraptor
September 27, 2021	15:00	9:00	all-weather alamosaurus
September 28, 2021	14:00	9:00	denominated dubreuillosaurus
September 29, 2021	11:00	7:00	even elasmosaurus
September 30, 2021	11:00	7:00	lil' leinkupal laticauda
October 1, 2021	14:00	8:30	scratch-and-dent saltopus
October 2, 2021	13:00	8:00	adjacent ankylosaurus
October 3, 2021	12:30	7:30	bilingual brontosaurus
October 4, 2021	11:00	6:00	four-cornered futalognkosaurus