

GAS Leak

Genuinely Approachable Sudoku from the CtC Discord

Volume 14:

March 2022



If you're reading this, then I hope you enjoyed our April Fools' Day joke this year! To make it up to you, here's another plus-sized edition of GAS Leak, covering all of the puzzles from March 2022 plus a few extra spicy bonus puzzles (and I *promise* that they're all sudokus.) As always, a table of time standards and dinosaur names appears on the last page of this document. Enjoy!

- *Clover*

March 1, 2022: Killer Between

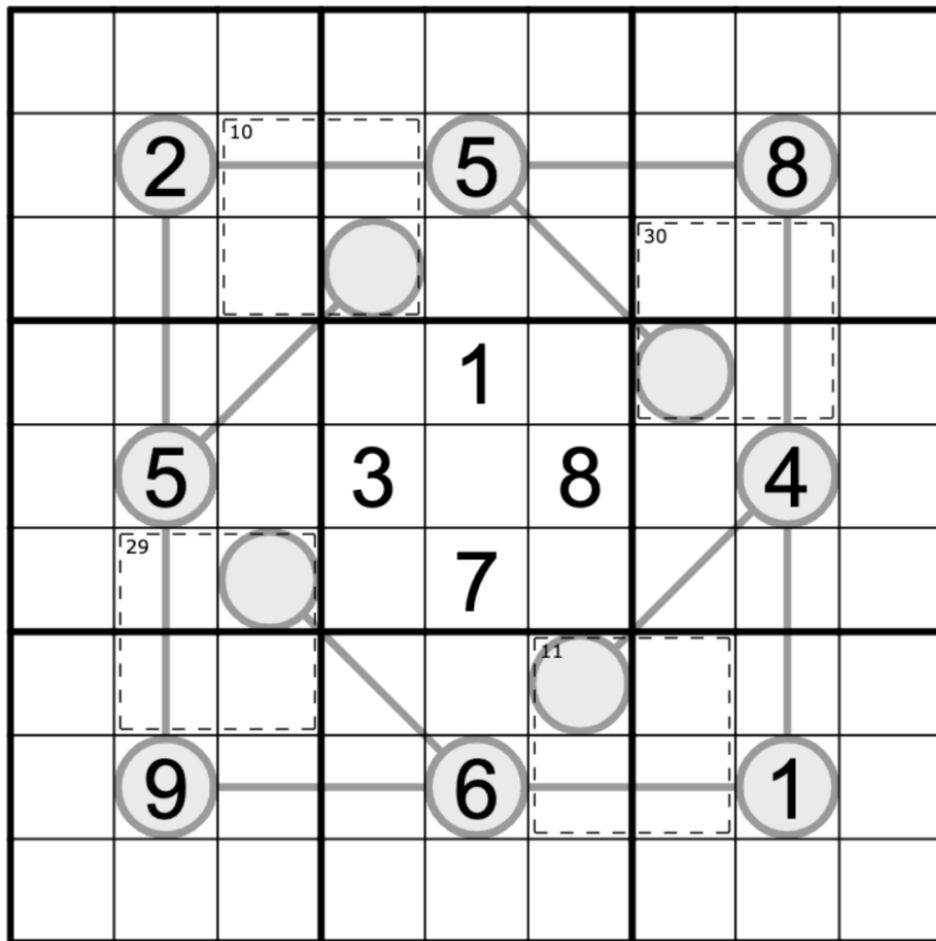
Clover

Today's GAS is a killer between sudoku! A killer between what and what, you might ask? You'll just have to solve it and find out!

Normal sudoku rules apply.

Digits in a cage may not repeat and must sum to the value indicated.

Digits along a line must have values between the values of the digits in the two circles on the ends of that line.



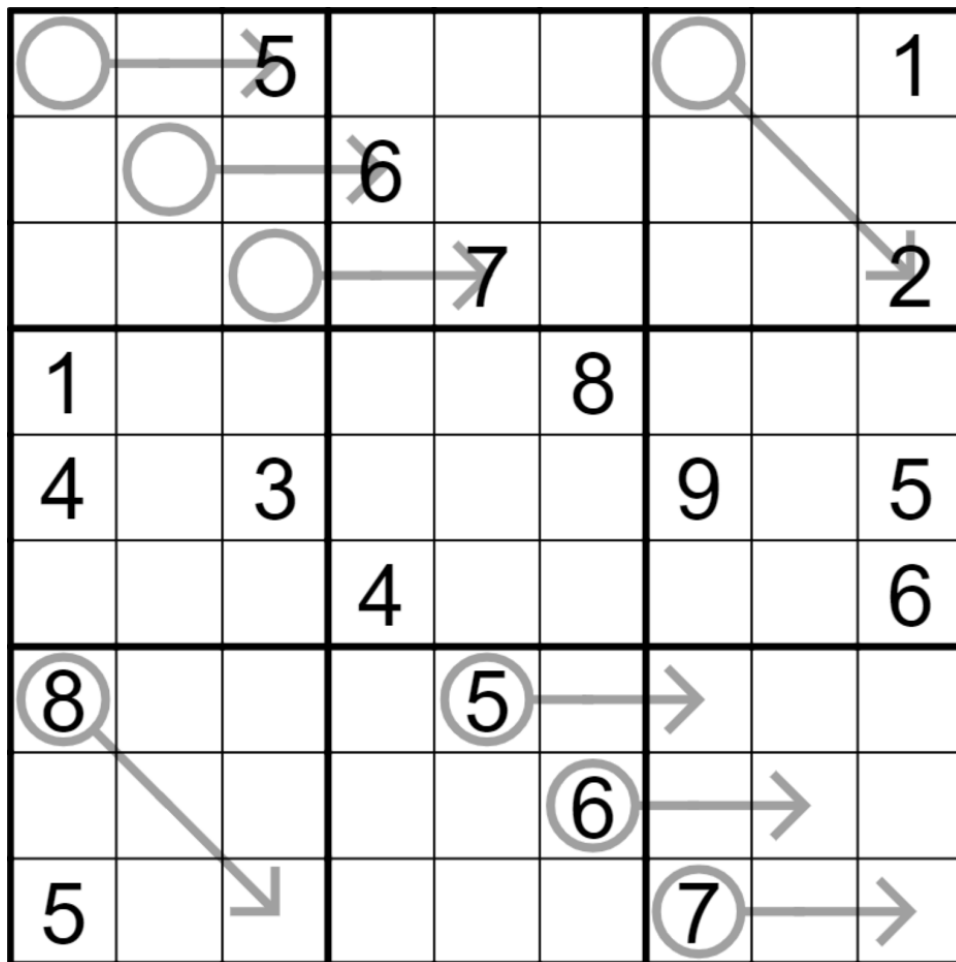
f-puzzles: <https://f-puzzles.com/?id=y86d7a64>

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

March 2, 2022: Arrow
 Sam Cappleman-Lynes

Today's puzzle marks the third time in a row that I've used arrows in a GAS 🙄 Have I forgotten how to set anything else? Have I actually been inhabited by the spirit of Nityant Agarwal ? Will Philip jump on the bandwagon and start setting exclusively Arrow Sudoku too? Only time will tell...

In this Arrow Sudoku, normal Sudoku rules apply. In addition, the numbers on an arrow must add up to the total in the arrow's circle.



f-puzzles - <https://f-puzzles.com/?id=ybtpv4uk>
 CtC - <https://tinyurl.com/mwzdupxz>
 Penpa - <https://tinyurl.com/yp8edc7n>

March 3, 2022: Sudoku Make Me A Sandwich

Philip Newman

Apologies for the late posting. Sometimes I get carried away with sudoku theory and forget what time it is.

And what time is it? Sandwich time. (Seriously, I'm ready for lunch.)

Normal sudoku rules apply. 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.

	2	3	4	5	6	7	8	9
30	1							
					4			
25						7		
		2						9
20					8			
		1						3
15				5				
					6			
								9

Play on f-puzzles: <https://f-puzzles.com/?id=y75ubox9>

Play on CTC App: <https://tinyurl.com/2p8znhx9>

March 4, 2022: Krop tween

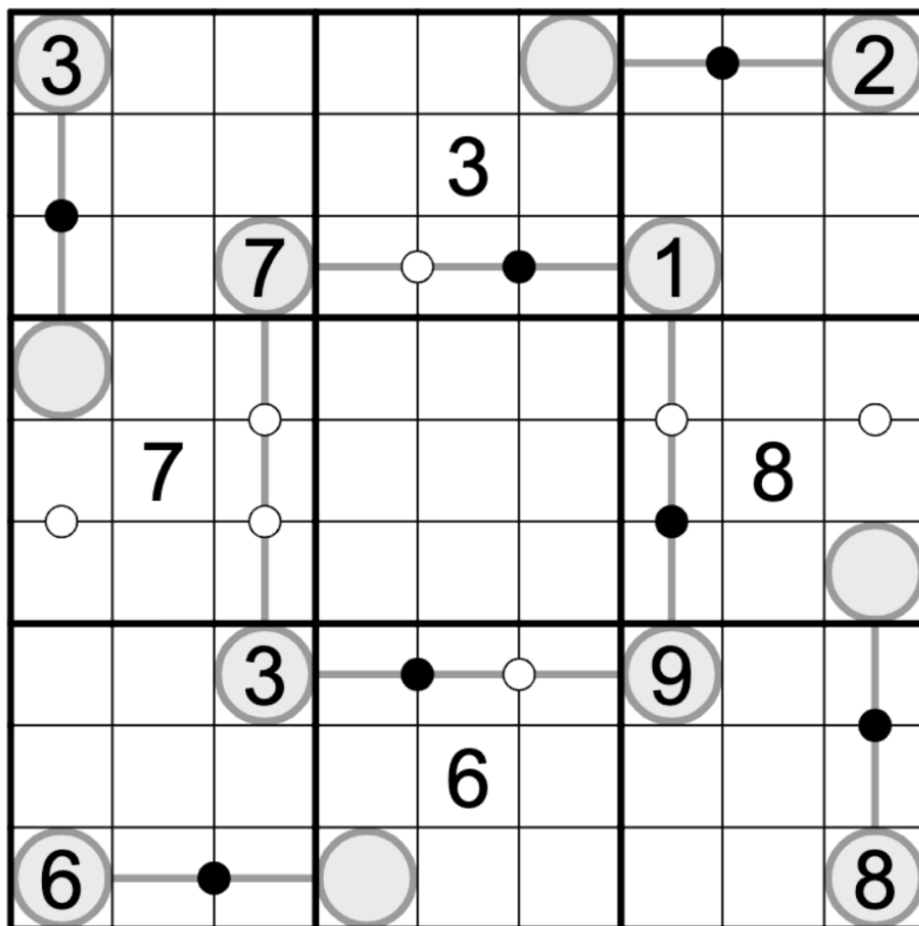
Clover

While Sam has been inducting us all into the Arrow Appreciation Association, I've been plumbing the depths of the humble between line. Ah, between lines! So linear! So... between-y! What secrets might they hide between their two circles? What mysteries of the universe might be laid bare, if one were to simply solve this kropki pairs/between lines GAS? Let's find out!

Normal sudoku rules apply.

Normal between lines rules apply: digits along a line must have values in between the values in the two circles on either end of that line.

Normal kropki pairs rules apply: Digits on either side of a black dot must be in a 1:2 ratio (for instance, 3 and 6). Digits on either side of a white dot must be consecutive. If there isn't a dot between two digits, then you don't know whether they're consecutive, in a 1:2 ratio, or neither.



f-puzzles: <https://f-puzzles.com/?id=y9db3mcg>

CtC: <https://tinyurl.com/4rz82b55>

March 5, 2022: Classic

Sam Cappleman-Lynes

The landscape of Sudoku is rich and varied, with literally hundreds, if not thousands, of variant rules and more appearing all the time. But every so often it's good to just take a step back and appreciate the simplicity of the base rules, which are, after all, the reason Sudoku ever became so popular.

Today's GAS is a Classic Sudoku. Normal Sudoku rules apply - and that's it!

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

f-puzzles - <https://f-puzzles.com/?id=yasrq6>

CtC - <https://tinyurl.com/yc4smp2y>

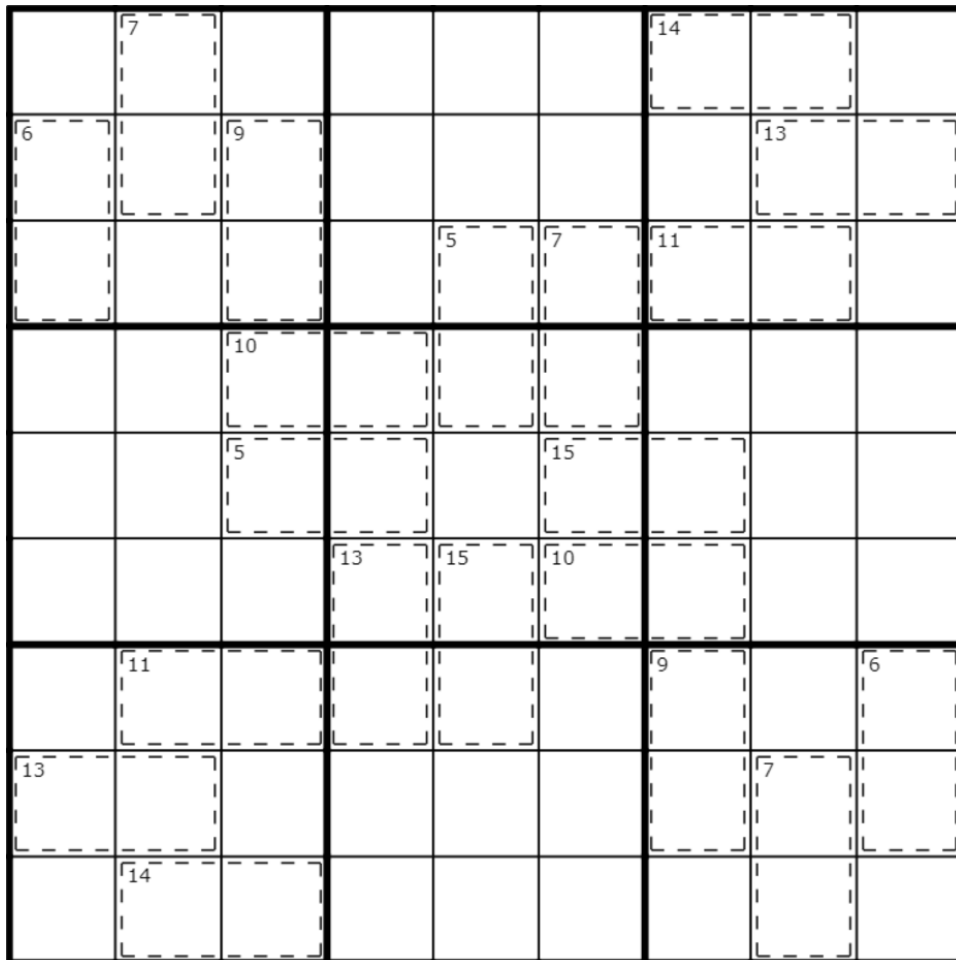
March 6, 2022: Free Bird

Philip Newman

Today's GAS is a Killer Sudoku which may be a bit spicy 🌶️ if you don't know the trick to it. So... it's GAS 101 time!

Editor's note: See the page after this one for a mini-GAS 101 lesson on working with multiple cages simultaneously in 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=yc8kkdtq>

Play on CTC App: <https://tinyurl.com/2p9ctjwy>

GAS 101: Multiple Cages

(Warning: contains spoilers for the March 6, 2022 GAS!)

It should be common knowledge that some cage sums only have one possibility - for example, the only way to make 10 in four cells is 1234, in some order.

In this puzzle, none of the cages are so restricted as this... on their own. However, when cages share a house (row, column, or box), they may restrict one another. As an example that has appeared in GAS before, two-cell 5 and 6 cages in the same row must be 23 and 15 - if the 5 were 14, the 6 would have no options, and similarly if the 6 were 24, the 5 would have no options. (Another way to look at this: together, the two cages form a virtual four-cell 11 cage - and the only possibility for 11 in four cells is 1235.) Remember, this only works if all the cells in the cages see each other (if they don't, 14 and/or 24 are perfectly fine).

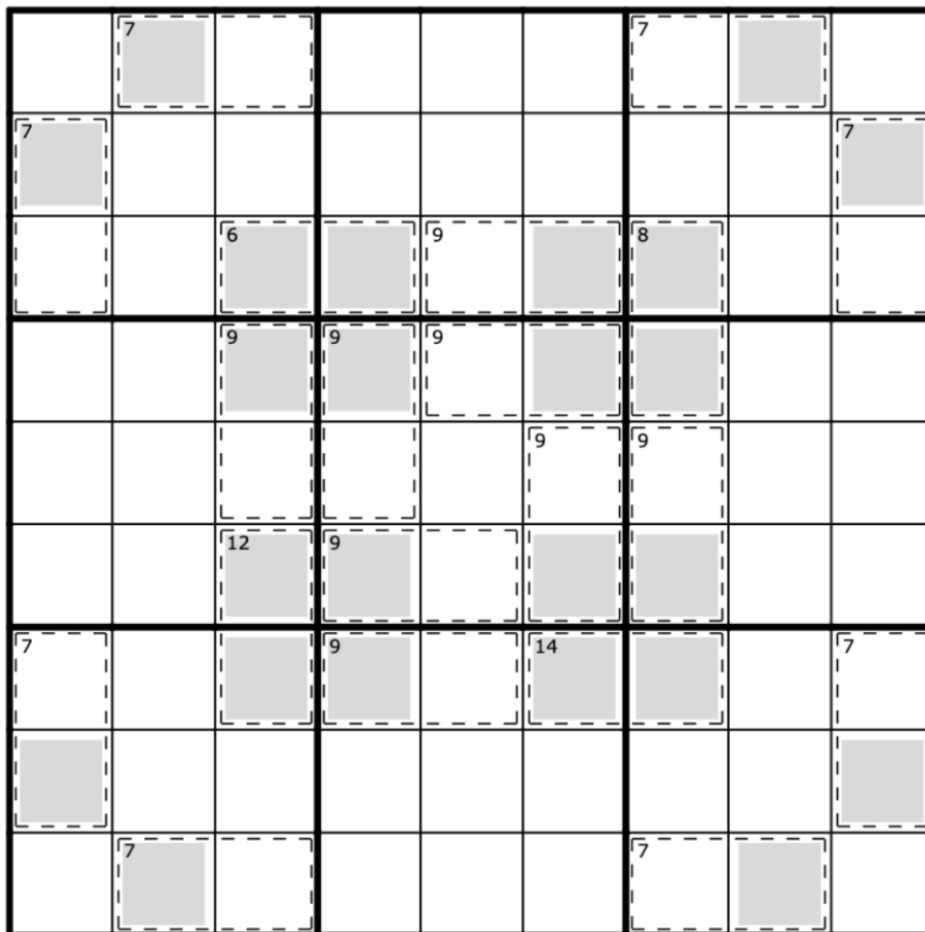
Here, there are three two-cell cages in the same box (all of the corner boxes). You can figure out the composition of each cage based on how the cages interact... but you may find it easier to consider the uncaged cells in those boxes. (Don't forget The Secret!)

March 7, 2022: Even Killer

Clover

So, we managed to find the killer between from a few days ago - turned out he was hiding between the curtains and the wall in the living room. Always make sure there isn't an unfamiliar set of shoes poking out from beneath the curtains, is what grandma Clover used to say! Anyways, he turned out to be a nice guy and, coincidentally, a fantastic puzzle setter, which brings us to another old saying: even killers can make very nice GAS puzzles!

Normal sudoku rules apply. Also, digits in gray squares must be even. Digits in a cage may not repeat and must sum to the value indicated.



f-puzzles: <https://f-puzzles.com/?id=y9qe3bbc>

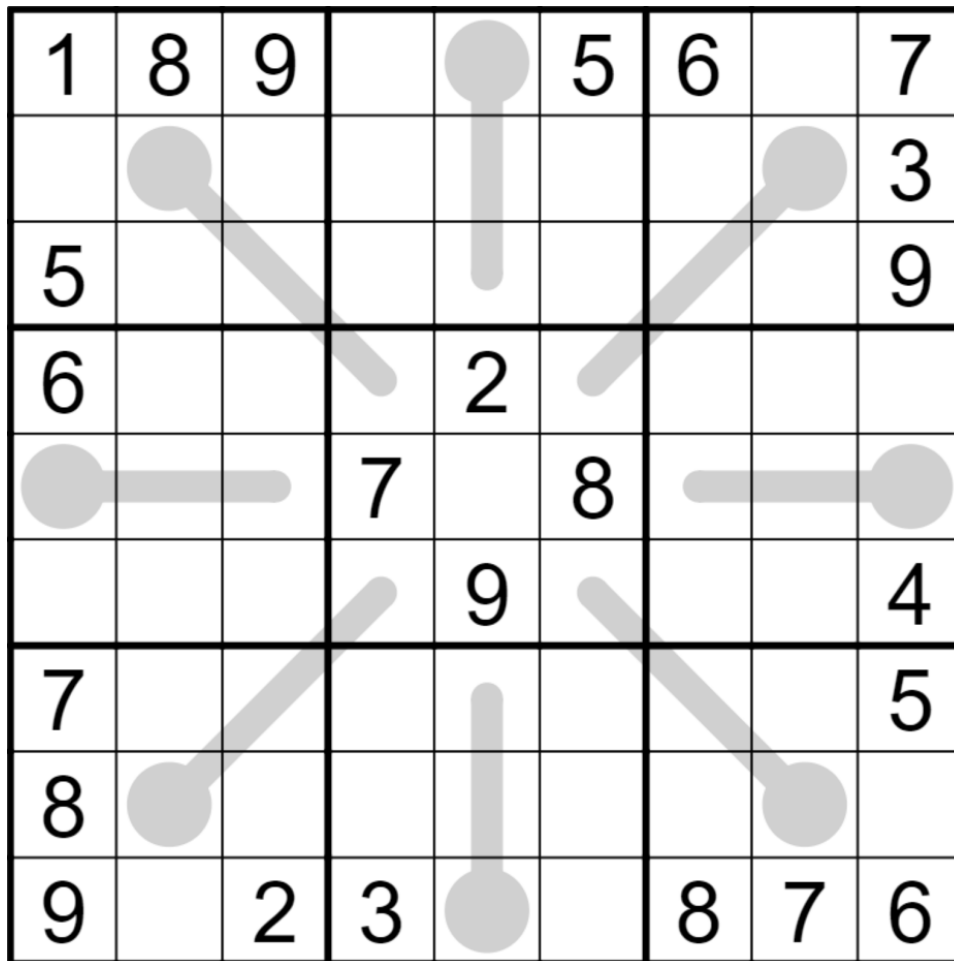
CtC: <https://tinyurl.com/3jkzbxmk>

March 8, 2022: Thermo

Sam Cappleman-Lynes

Phew! Is it getting hot in here? Unfortunately I can't answer that question because I dropped all of my thermometers and now they're stuck in this puzzle.

Today's GAS is a Thermo Sudoku. Normal Sudoku rules apply. In addition, numbers placed on each thermometer shape must strictly increase, starting from the bulb end.



f-puzzles - <https://f-puzzles.com/?id=ycg8e7q3>

CtC - <https://tinyurl.com/2p88mcv8>

Penpa - <https://tinyurl.com/2p8ne6df>

March 9, 2022: You Can Count On Us

Philip Newman

It's Spring Break here at GAS Inc., so why don't you take a break from remembering variant rules and solve this Classic Sudoku?

Normal sudoku rules apply. And that's it!

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

Play on f-puzzles: <https://f-puzzles.com/?id=yaxaqm4e>

Play on CTC App: <https://tinyurl.com/yejwx73f>

March 10, 2022: Consec Pairs / Little Killer

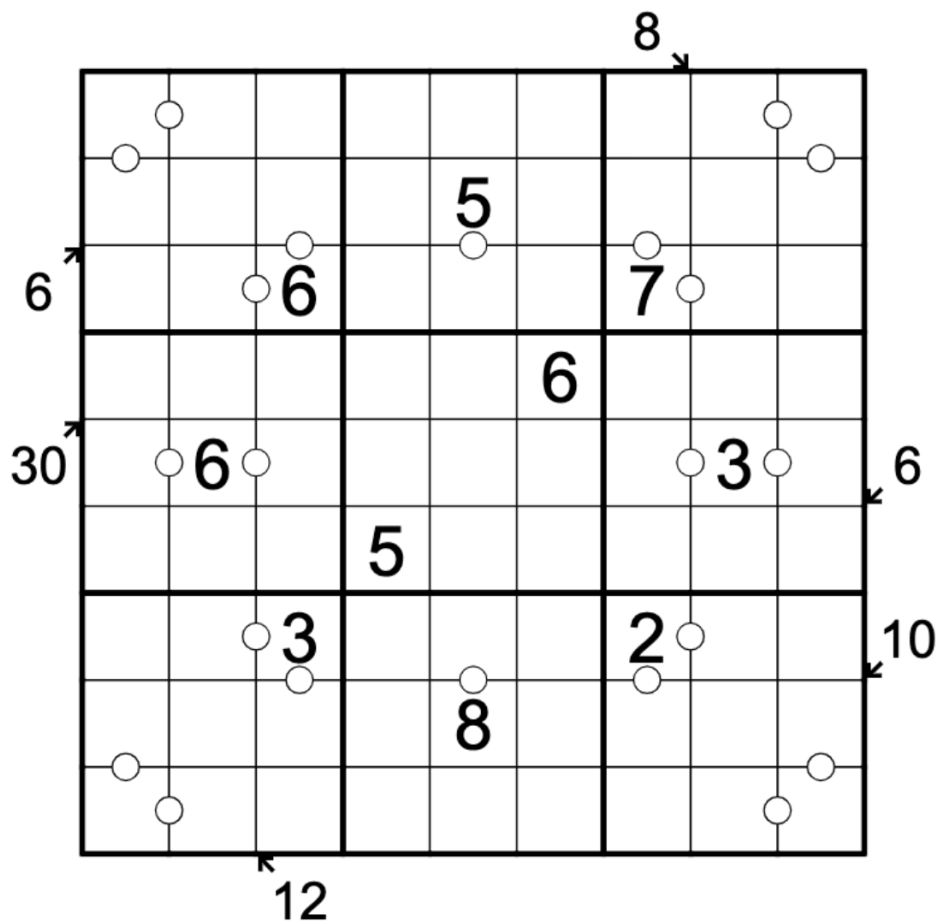
Clover

Today's GAS is a consecutive pairs / little killer sudoku that has spontaneously mutated into a virus (check out those consecutive-pair proteins!) As such, please refrain from licking today's GAS unless you've been vaccinated. It'll probably just give you the sniffles, but you really can't be too safe!

Normal sudoku rules apply.

Normal little killer rules apply: Digits along a marked diagonal must sum to the value shown. Digits may repeat along a diagonal, as long as they follow sudoku rules.

Normal consecutive pairs rules apply: Digits on either side of a white dot are consecutive. If there isn't a dot between two cells, you don't know whether their digits are consecutive or not (no negative constraint).



f-puzzles: <https://f-puzzles.com/?id=ybg9csxa>

CtC: <https://tinyurl.com/nhcee9ar>

March 11, 2022: XV

Sam Cappleman-Lynes

Today's GAS is an XV Sudoku which is completely sanitary but which you should avoid licking anyway on account of those letters' pointy appendages. I wouldn't want you to hurt yourselves.

In this puzzle, normal Sudoku rules apply. Two numbers separated by a "V" must add to 5. Two numbers separated by an "X" must add to 10. There is no negative constraint; that is, if two numbers do not have a symbol between them, they may still add to 5 or 10.

			1					
		x	v			x	v	7
			x	v			x	v
1	5			x	v			x
				7				
	v			x	v		5	8
	x	v			x	v		
7		x	v			x	v	
					1			

f-puzzles - <https://f-puzzles.com/?id=y8ufxxs5>

CtC - <https://tinyurl.com/5n8fysev>

March 12, 2022: Lickable Sudoku

Philip Newman

By popular demand, the world's first Lickable Sudoku!*

(Mark is going to be extra confused by this title.)

Normal sudoku rules apply. Digits in orthogonally adjacent cells (that is, cells sharing an edge) cannot be consecutive.

*GAS, Inc. is not responsible for tongue injuries or monitor damage. If printing a copy of Lickable Sudoku (TM), please ensure sufficient time for ink to dry, and lick the surface of the paper, not the edge. If puzzle is drawn into snow, please ensure the snow is white and not yellow before licking. Seek consent before licking someone who has tattooed this puzzle on their face.

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

Play on f-puzzles: <https://f-puzzles.com/?id=ydcl82ka>

Play on CTC App: <https://tinyurl.com/2s4an8kd>

March 13, 2022: Stacking Sudoku

Clover

SUDOKULA: What is a sudoku? A miserable little pile of secrets. But enough talk... solve at you!

Today's sudoku is a sudoku, I assure you! 🐱 In this stacking sudoku, normal sudoku rules DO NOT apply. Instead, enter the digits 1 through 6 ONLY into the grid, so that each row, column, and 3x3 region contains each digit once each. Some cells will be left blank.

Also, every time two digits touch vertically, the digit on the bottom must be greater than the digit on the top.

				4		3		1
					5		2	
1	3	5						
						2	4	6
	5		2					
6		4		1				

Penpa (🌟 strongly recommended - there is no answer check in f-puzzles or CtC! 🌟)

: <https://tinyurl.com/ydyjlpta>

f-puzzles: <https://f-puzzles.com/?id=ybm8kaey>

CtC: <https://tinyurl.com/5cxxk372>

March 14, 2022: 22/7 GAS Edition

Philip Newman

I've swapped with Sam today because it's Pi Day! Many of you may not be aware but one of the things I was known for (aside from stuffing puzzles full of swordfish) was posting a series of "Pi Mondays" puzzles in sudoku-recommendations - mostly following the form of today's puzzle, with the digits of π appearing sequentially reading left-to-right and top-to-bottom, but also arranged in a rotationally symmetric pattern. A subset of these puzzles were part of the "22/7" series - 22 givens spread over only 7 rows (or columns).

So today is a very special Pi Day edition of Pi Mondays! Also, it is my wife's birthday, as you may remember if you watched last year's Pi Day solve by Simon. She's *come on, I'm not going to reveal my wife's age on discord, made ya look years old today!* Happy birthday!

Today's GAS is a Classic Sudoku!

Normal sudoku rules apply. And that's it!

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

Play on f-puzzles: <https://f-puzzles.com/?id=y7my3x2j>

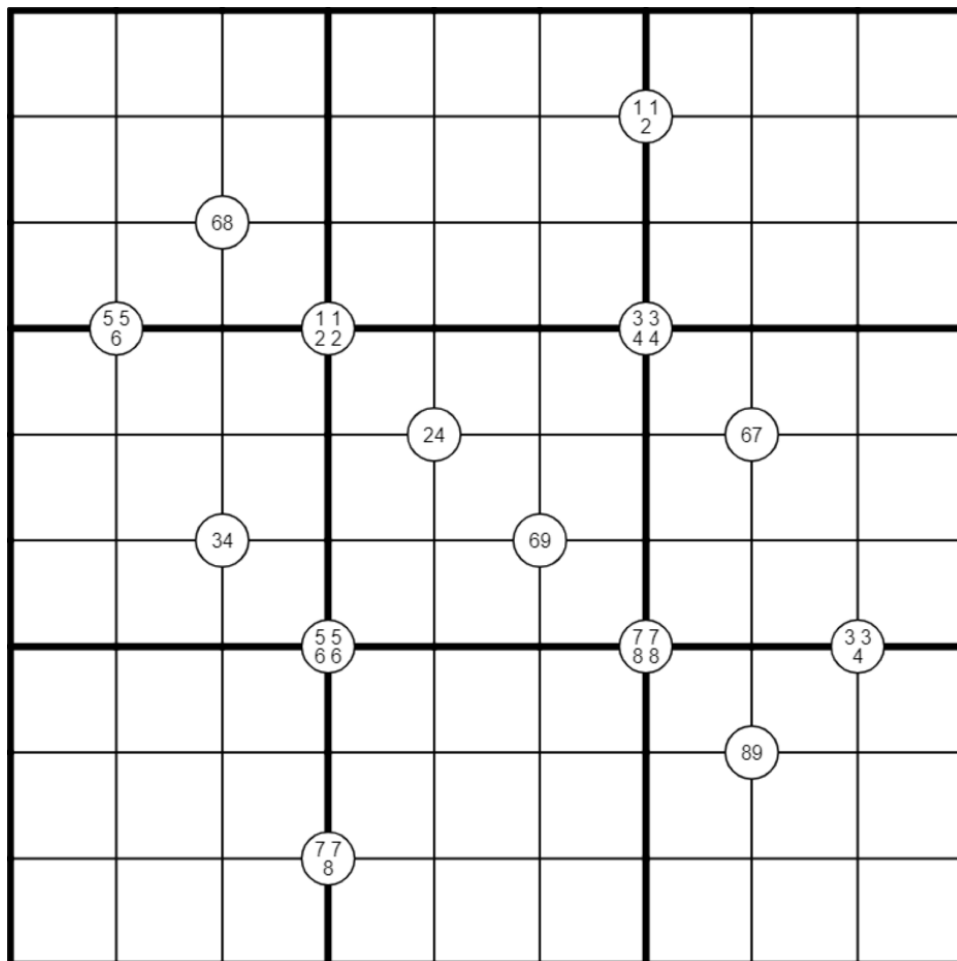
Play on CTC App: <https://tinyurl.com/ync59rbs>

March 15, 2022: Quadruples

Sam Cappleman-Lynes

In honour of yesterday's π -puzzle, today's puzzle contains a whole bunch of circles.

Today's GAS is a Quadruples Sudoku. That means that in addition to normal Sudoku rules, numbers appearing in a circle must appear somewhere in the four cells around that circle. If a number is written more than once in a circle, then it must appear at least that many times around it.



f-puzzles - <https://f-puzzles.com/?id=yayavhe3>

CtC - <https://tinyurl.com/2p8897tt>

March 16, 2022: Ordered Sums

Clover

Breakfast time! You ordered this lightly toasted sudoku with peppers and onions? No? But I could've sworn this was yours - maybe you ordered these sums instead? 🤔

Today, GAS returns to celebrating sudoku contest season with a variant that features in round 3 of the Sudoku Grand Prix: ordered sums sudoku!

Normal sudoku rules apply. Also, the cages are ranked from lowest to highest sum. Cages marked with a "1" have the lowest (not necessarily unique) total out of all of the cages in the grid, cages marked with a "2" have the second-lowest total, and so on. The totals are not necessarily consecutive. Cages with the same total may or may not contain the same set of digits. (To be clear - all cages with the same rank have the same sum.)

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

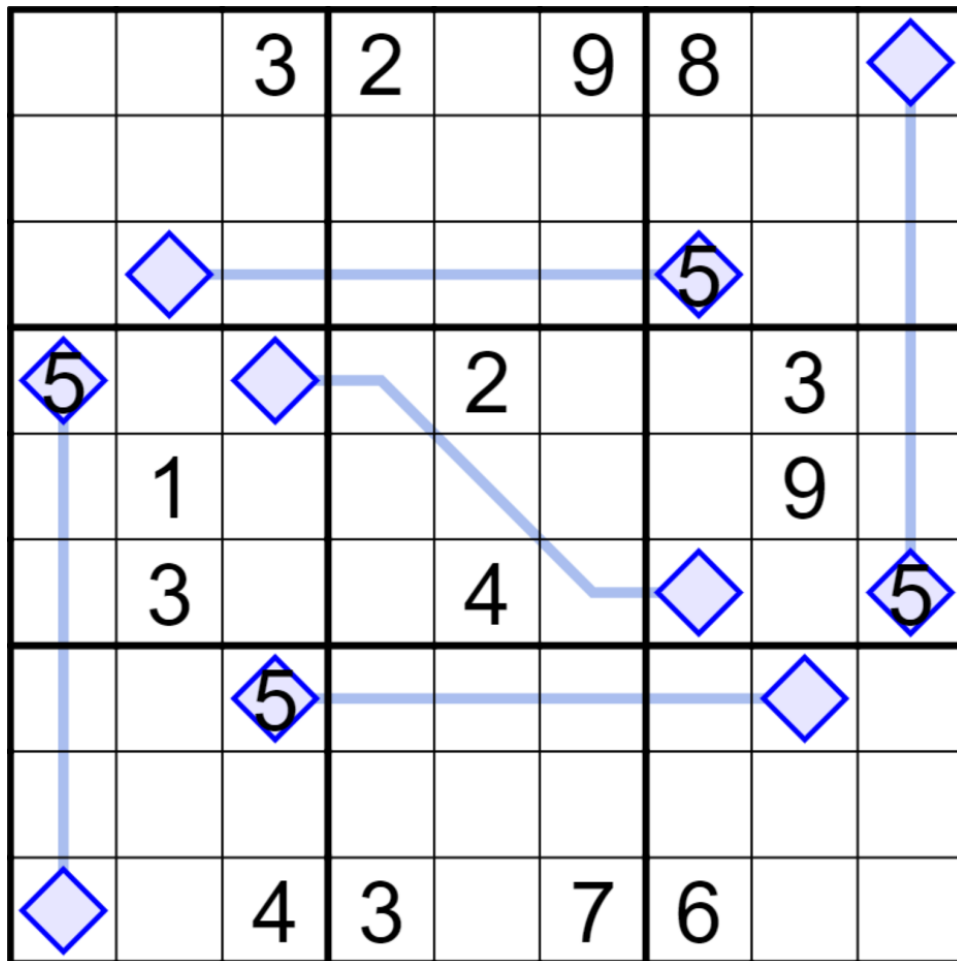
f-puzzles: <https://f-puzzles.com/?id=ycg5n5rm>

CtC: <https://tinyurl.com/32dm8cjk>

March 17, 2022: Lockout Lines

Sam Cappleman-Lynes

Today's GAS is a Lockout Lines Sudoku. In this puzzle, in addition to normal Sudoku rules, two connected diamond shapes must contain numbers with a difference of at least 4, and the line connecting them must only contain numbers that lie strictly outside the range defined by the two endpoints. For example, on a line whose diamonds contain 2 and 7, the only permissible digits are 1, 8 and 9.



f-puzzles - <https://f-puzzles.com/?id=y6ua99nn>

CtC - <https://tinyurl.com/mr24hz3n>

March 18, 2022: GAS o'clock

Philip Newman

It's that time again: GAS o'clock! Today's edition is another Classic Sudoku.

Normal sudoku rules apply. And that's it!

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

Play on f-puzzles: <https://f-puzzles.com/?id=y9kjsxgwe>

Play on CTC App: <https://tinyurl.com/2nh5etdk>

March 19, 2022: Multiplication Table

Clover

Today's GAS is another installment in our series of friendlier versions of Sudoku Grand Prix variants: a multiplication table sudoku.

Normal sudoku rules apply. Also, in each cage, read the two digits in the bottom two cells as a two-digit number from left to right. This number is the product of the two digits in the top two cells. Digits may repeat in a cage as long as they follow sudoku rules.

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

f-puzzles: <https://f-puzzles.com/?id=y8j8ev7n>

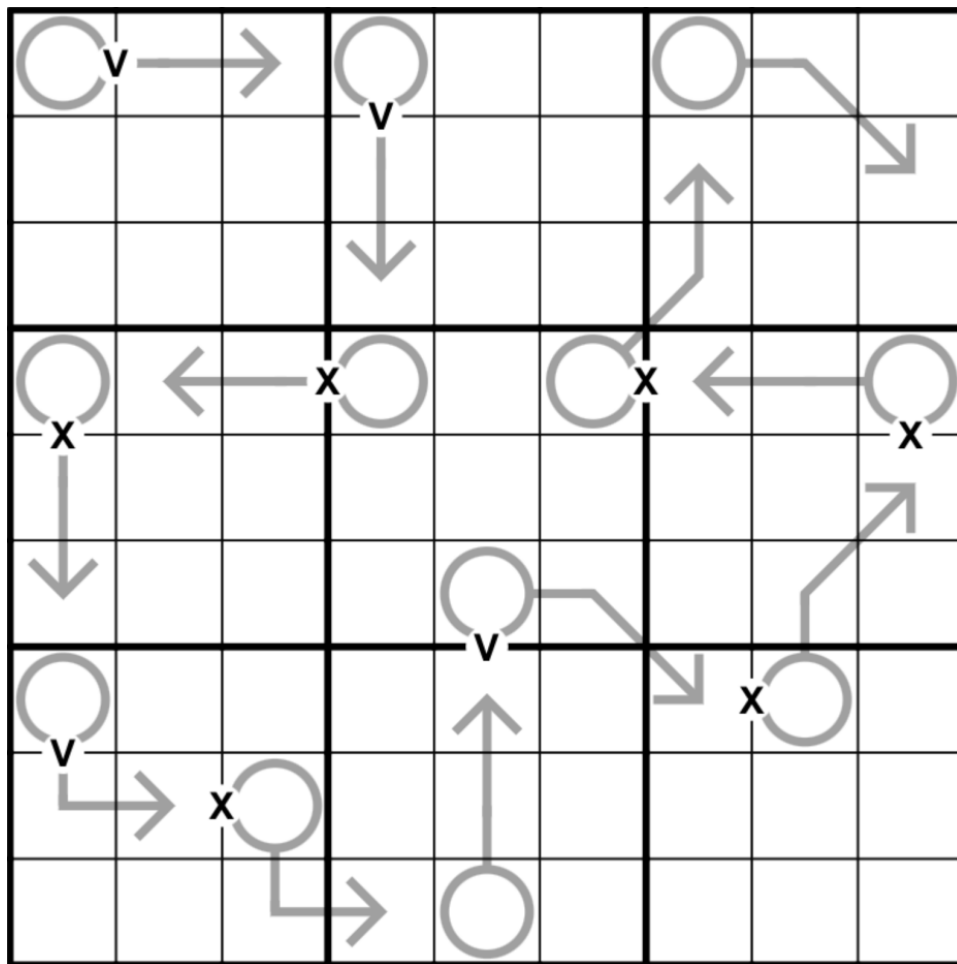
CtC: <https://tinyurl.com/3f8m36bj>

March 20, 2022: XV Arrow

Sam Cappleman-Lynes

Will you be able to find the path to complete this GAS? Hopefully the arrows in the grid will show you the way through the scattered X's and V's.

Today's GAS is an XV Arrow Sudoku. Normal Sudoku rules apply. Numbers along an arrow must add up to the number in the attached circle. Numbers separated by a V must add up to 5. Numbers separated by an X must add up to 10. Not all X's and V's are necessarily given.



f-puzzles - <https://f-puzzles.com/?id=yac18dgu>

CtC - <https://tinyurl.com/2dss6kcf>

March 21, 2022: Dotted Lines

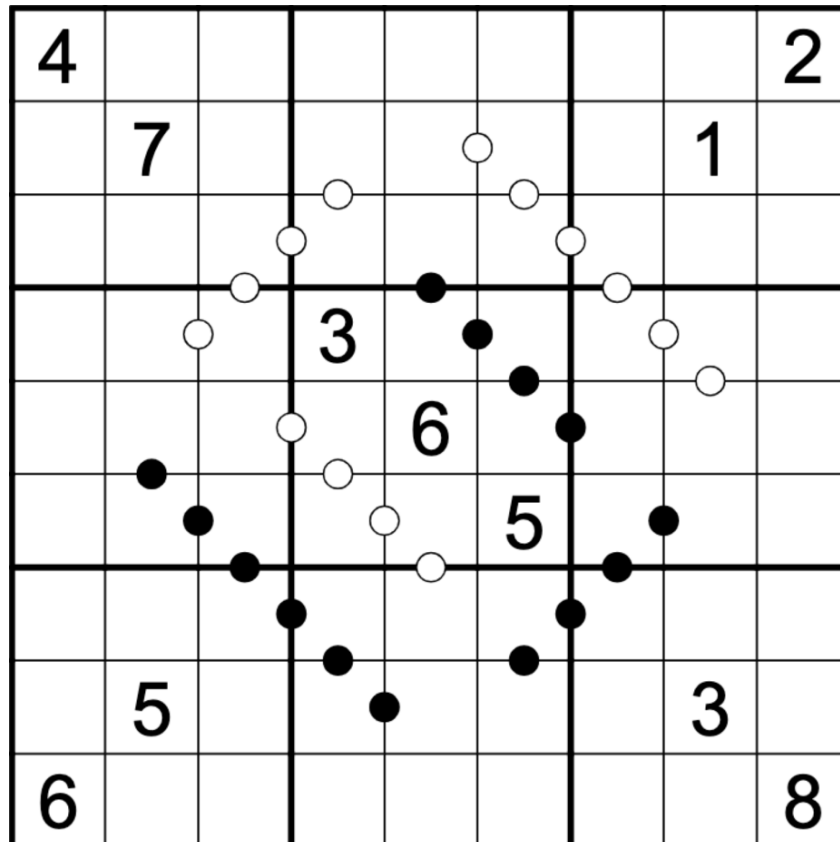
Philip Newman

Thank you for your application to Groovy Attractive Setters, Inc. As you are no doubt aware, we hold the employees of our Solutions Division to the highest standard. As you begin your career with us, please remember the following:

- ① It is strictly forbidden for employees in the same row of cubicles to have their office chairs set to the same height. Please consult your row-mates for allowed chair positions.
- ② Never whistle while you're pencil-marking.
- ③ Yes, that's three in the corner. It knows what it did.
- ④ Employees shouting "Bobbins!" will be required to leave a fiver in the swear jar.

If you agree to these terms and conditions, please accept your employment by solving on the dotted line.

Today's GAS is a Kropki Pairs Sudoku! Normal sudoku rules apply. 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 digits may also be consecutive or have a 2:1 ratio.)



Play on f-puzzles: <https://f-puzzles.com/?id=y9buz6jh>

Play on CTC App: <https://tinyurl.com/2p9fw6pn>

March 22, 2022: Treasure Hunt

Clover

Polish off your metal detectors and get your x-ray specs inspected, because today we're going on a treasure hunt sudoku!

Normal sudoku rules apply. Also, some cells in the grid are pink. The digit in a pink cell tells you how many of the (up to 8) surrounding cells contain digits higher than the one in the pink cell itself. For instance, if a pink cell contains a 5, then exactly 5 of the surrounding cells must be greater than 5.

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

f-puzzles: <https://f-puzzles.com/?id=yd4I9xq5>

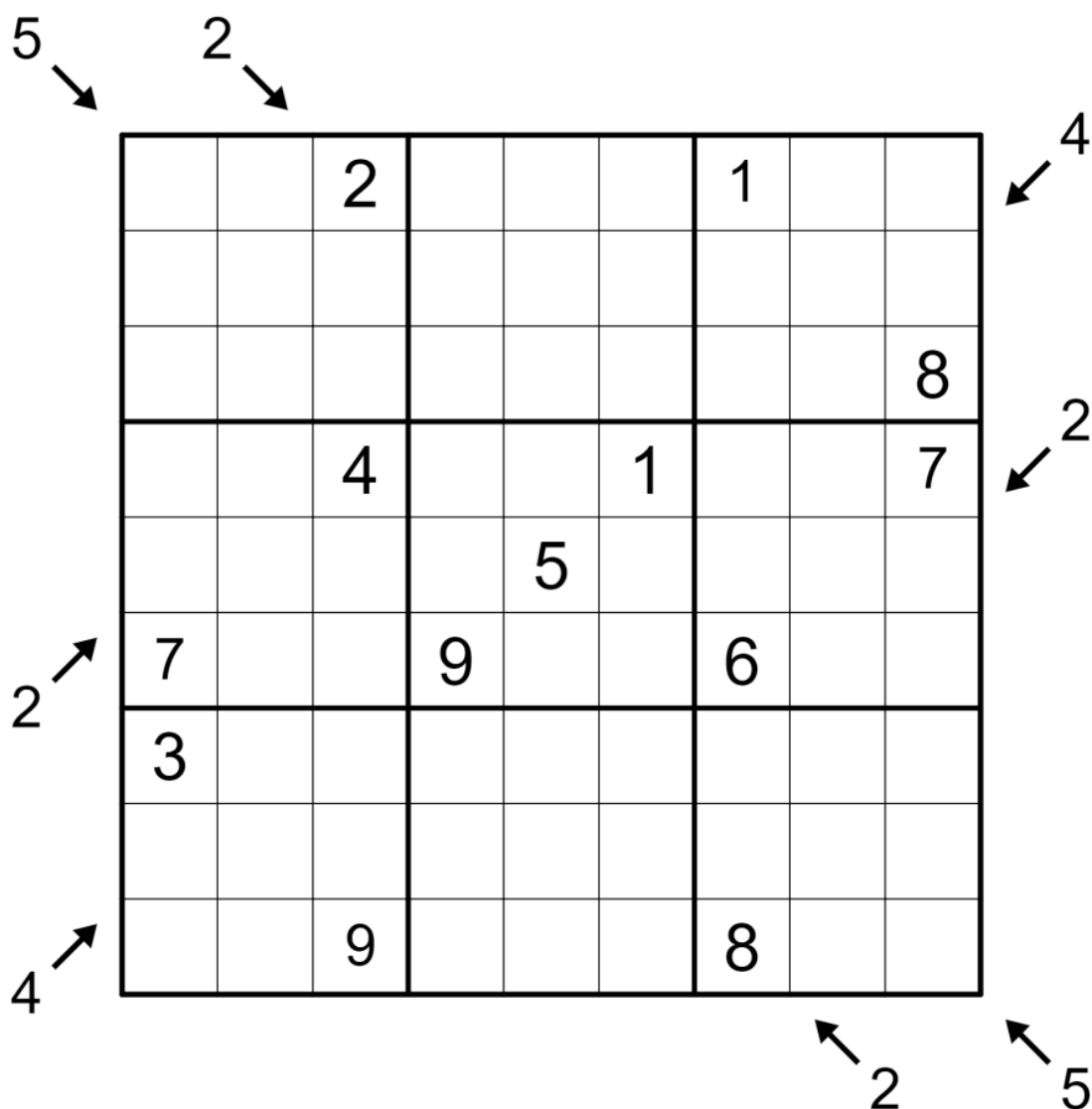
CtC: <https://tinyurl.com/3nknmtkz>

March 23, 2022: Pointing Different

Sam Cappleman-Lynes

Today's GAS is a Pointing Different Sudoku!

Normal Sudoku rules apply. In addition, there are some arrows outside the grid pointing along diagonals. A number next to one of these arrows tells you how many different numbers appear on that diagonal.



CtC - <https://tinyurl.com/svvz52bv>
Penpa - <https://tinyurl.com/ydgjrwel>

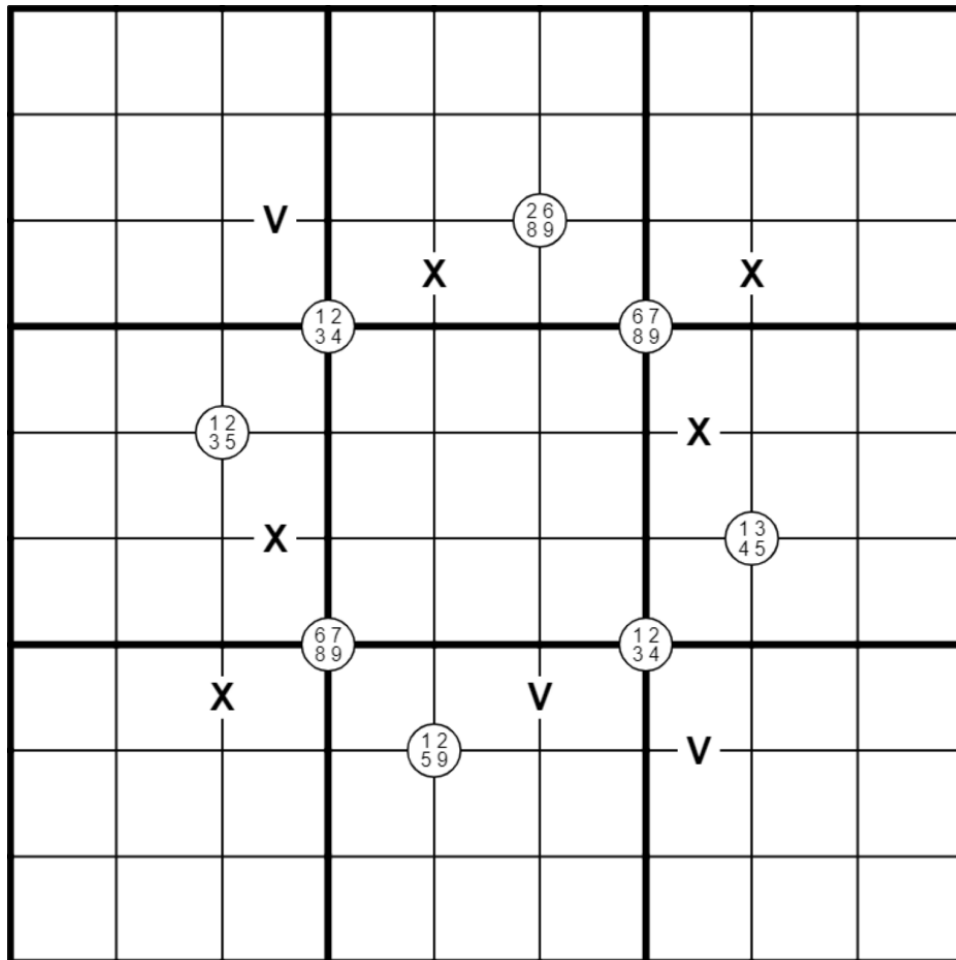
March 24, 2022: Hi, Mark!

Philip Newman

Howdy, folks, and welcome back for today's edition of "Please Philip be generous with the times you monster!" (PPBGWTTYM for short) - an XV Quadruples Sudoku!

I believe in you, though! You can solve this! (No individual step in this is super difficult or anything, but it may be on the longer side. And if you get stuck, remember: coloring/pencilmarking low/high digits is your friend!)

Normal sudoku rules apply. Digits in corner circles must appear in the surrounding four cells, in some order. Digits in cells separated by a V must sum to 5; digits in cells separated by an X must sum to 10. (No negative constraint - adjacent digits not separated by a letter can still sum to 5 or 10.)



Play on f-puzzles: <https://f-puzzles.com/?id=y86q2eqs>

Play on CTC App: <https://tinyurl.com/3dj8r73y>

March 25, 2022: Star Product

Clover

When the floodwaters receded, Noah turned to all of the animals and said: "go forth and multiply!" - and every sort of animal ran and slithered and galloped off of the ark to go repopulate the planet. When the dust cleared, Noah looked around and saw that the only critters left were two little snakes. "What are you waiting for?" he said. "Go multiply!"

"We can't!" replied the snakes. "We're adders." 🥁

Today's GAS is a star product sudoku. Normal sudoku rules apply. Also, there are some pink cells in the grid. A clue outside of the grid tells you the product (i.e., result of multiplication) of the digits in pink cells in its row or column.

	3	4		24		12	12	
2								
8				7		8		
			5				8	
		6				3		7
24								
		9		5				8
			9				5	
6				2		5		
6								

f-puzzles: <https://f-puzzles.com/?id=y843m9fh>

CtC: <https://tinyurl.com/y2nvjdj2>

March 26, 2022: Classic

Sam Cappleman-Lynes

Today's GAS is a Classic Sudoku **TM** ! Despite being commonly associated with Japan, the name Sudoku **TM** is actually a Japanese trademark owned by Nikoli, and so if I were publishing this puzzle in Japan I would have to call it Nanpure or Number Place.

As you might expect, for this puzzle, normal ~~Sudoku **TM**~~ Number Place rules apply, and that's it!

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

f-puzzles - <https://tinyurl.com/2cjaa4nh>

CtC - <https://tinyurl.com/mr2hu5ur>

March 27, 2022: How I Set GAS

Philip Newman

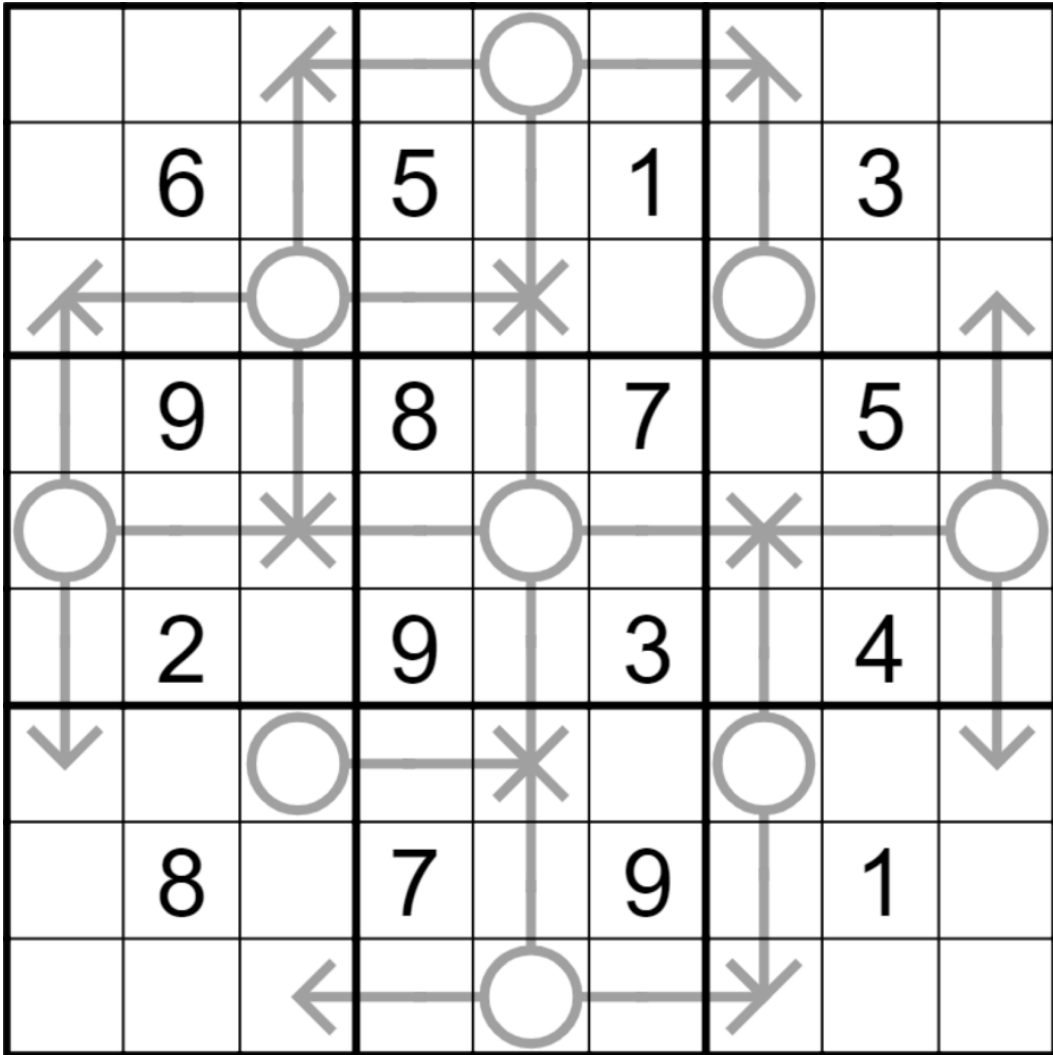
Have you ever wondered how a GAS gets made? Please follow this simple choose-your-own-adventure to find out:

- ① Which Setter are you?
 - * clover - go to ②
 - * Sam - go to ③
 - * Philip - go to ④
 - * None of the above - go to ⑤
- ② You put some clever logic in your puzzle and carried it through to a unique solution!
- ③ You put some clever logic in your puzzle and carried it through to a unique solution!
- ④ What's your mood?
 - * Silly - go to ⑥
 - * Artistic - go to ⑦
 - * Monstrous - go to ⑧
 - * All of the above - go to ⑨
- ⑤ Get back to the testing mines, bakpao!
- ⑥ You made a Lemon Sudoku again, didn't you.
- ⑦ You drew something with Thermos again, didn't you.
- ⑧ You made something minimal that is impossibly difficult. Add some givens until it is just barely "approachable" and call it good.
- ⑨ You restricted yourself considerably and made a cool pattern that ended up having a unique solution but is totally monstrous, add a whole lot of givens and hope clover finds it fun!

Today's GAS is an Arrow Sudoku!

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=y864v7xm>

Play on CTC App: <https://tinyurl.com/c6k2pefw>

March 28, 2022: Outside

Clover

The sun is chirping, the grass is shining, and it's a beautiful sudoku outside!

In this outside sudoku, normal sudoku rules apply. Also, there are some clues outside of the grid. These clues tell you some digits that must appear in the first three cells (nearest the clue) in their row or column. For instance, the 4/5 clue to the right of row 2 tells you that row 2, columns 7-9 must contain a 4 and a 5.

f-puzzles: <https://f-puzzles.com/?id=y7tnxsh6>

CtC: <https://tinyurl.com/4rbbh3h6>

March 29, 2022: Palindrome

Sam Cappleman-Lynes

Do you want to learn an infuriating fact? (()) is not a palindrome but ())(is! You're welcome 😊

Relatedly, today's GAS is a Palindrome Sudoku! Normal Sudoku rules apply, and the grey lines must each form a palindromic sequence; that is, the numbers placed on them read the same in both directions.

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

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

CtC - <https://tinyurl.com/3zrs2h6h>

Penpa - <https://tinyurl.com/ydzxk6wl>

March 30, 2022: Chamber of Secrets

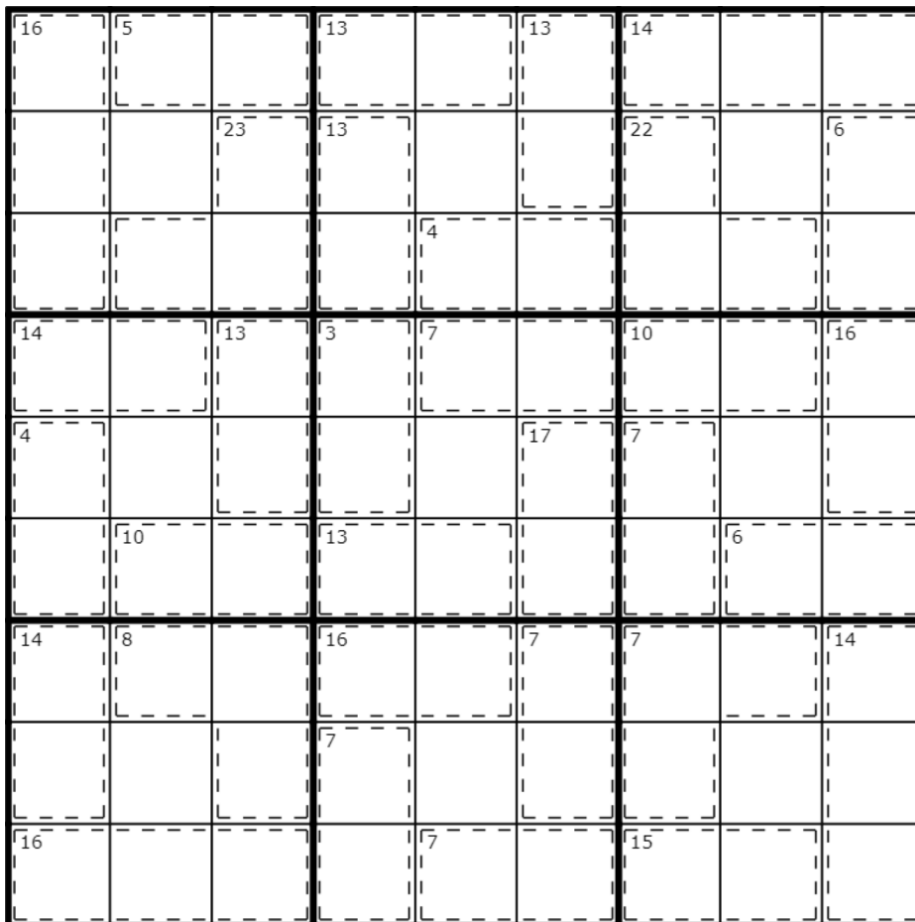
Philip Newman

Last time, I was able to give you some insight into the inner workings of GAS, Inc., but don't think you know everything about what we do here. Security is a top priority - we can't have thousands of solvers just wandering in stealing all our secrets.

That's why I have designed a completely secure vault. Not only are our secrets locked in boxes, those boxes are made out of killer cages! Is it the most efficient use of space? No. Is it going to stop someone who can do basic arithmetic? ...ok, maybe it isn't completely secure.

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=y9zmzaan>

Play on CTC App: <https://tinyurl.com/2p93mftm>

March 31, 2022: Over 20

Clover

Today, I have an ancient sudoku for you. An elderly, decrepit, moldering sudoku with one foot in the grave and the other foot over the hill. What I'm trying to say here is this thing is *old*. It's **over 20**.

In this over 20 sudoku, normal sudoku rules apply. Also, each of the 9 3x3 boxes contains three horizontally adjacent cells that sum to 20 or more, and three vertically adjacent cells that sum to 20 or more. It's your job to figure out where those sets of 3 cells are in each region!

Note for new solvers: there was some confusion about the rules when this puzzle was originally posted. Here's an example 3x3 region that would be valid:

4	8	9
2	3	5
1	6	7

The top row and the third column both sum to at least 20, so this is one valid way of filling a region.

Also, note that despite the name of the variant, rows and columns may **equal** 20 (or be greater than 20).

The puzzle appears on the following page.

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

f-puzzles: <https://f-puzzles.com/?id=y98r6dmp>

CtC: <https://tinyurl.com/msc5ua8t>

Bonus 1: Extra Regions

Sam Cappleman-Lynes

Normal sudoku rules apply. Also, each shaded region contains the digits 1 through 9 once each.

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

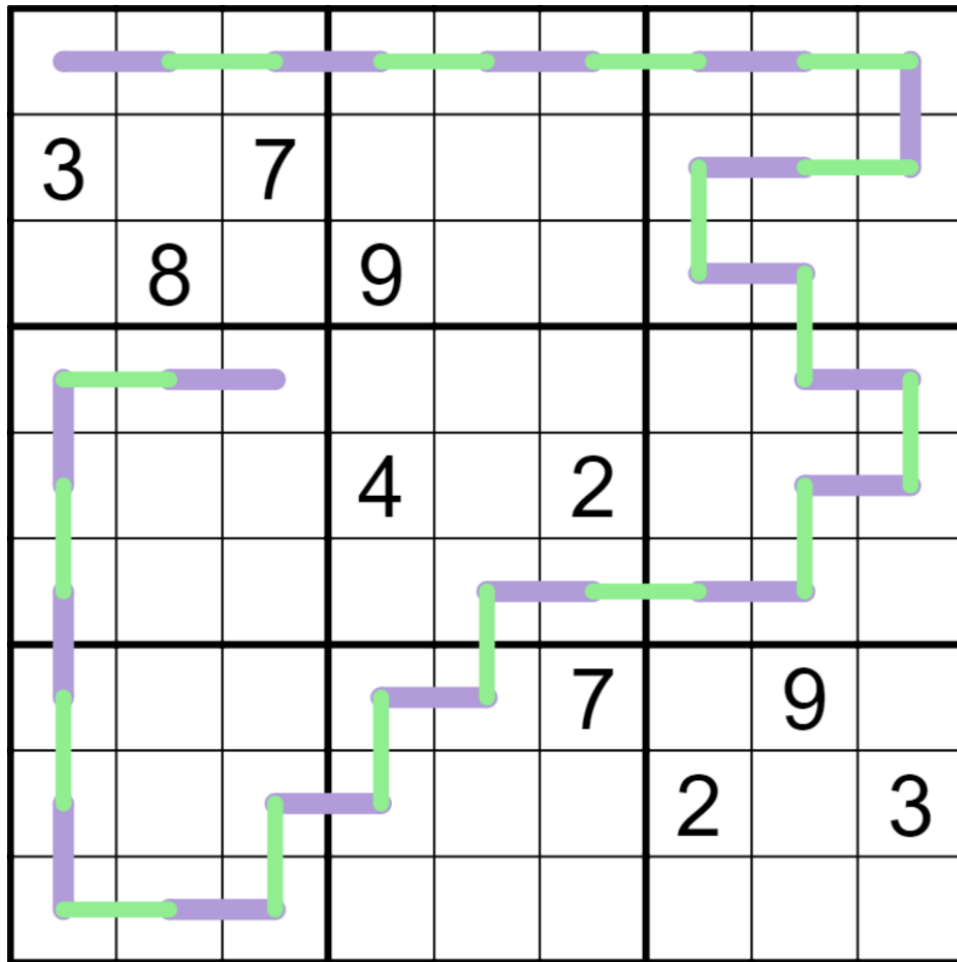
f-puzzles: <https://f-puzzles.com/?id=ydhmzqug>

CtC: <https://tinyurl.com/yc6m48uj>

Bonus 2: Renban Whispers

Philip Newman

Normal sudoku rules apply. Digits along purple renban lines must form a consecutive set, in any order - for example, a 4-cell renban line could be 4352, but not 5679. Digits in cells directly connected by a green german whispers line must differ by at least 5.



f-puzzles: <https://f-puzzles.com/?id=yav3jdmc>

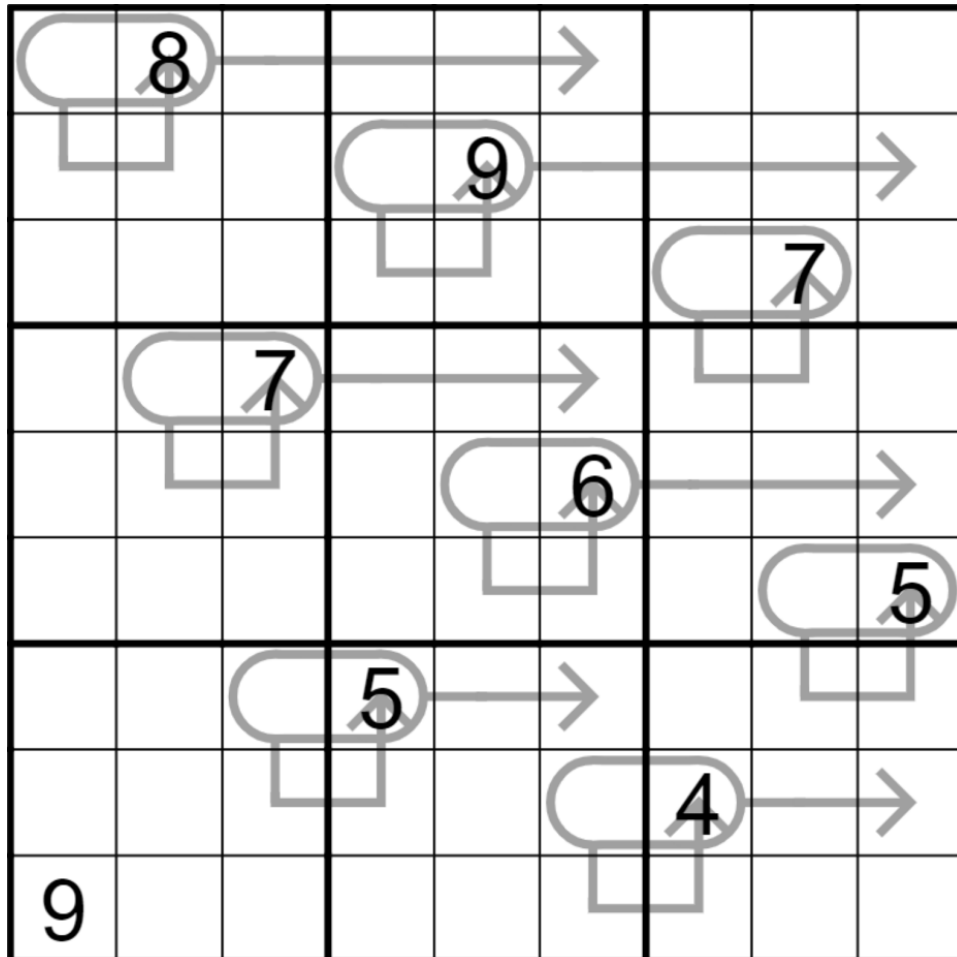
CtC: <https://tinyurl.com/2p94h2he>

Bonus 3: Arrow
Philip Newman

Bonus 4: Arrow

Philip Newman

Normal sudoku rules apply. Digits along arrows must sum to the circled two-digit total (read left to right). Note that some circled digits are also on the arrow!



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

CtC: <https://tinyurl.com/2p8kncd5>

Bonus 4: Adjacent Sums

Clover

Normal sudoku rules apply. A digit in a cage is equal to the sum of the (up to 4) digits orthogonally adjacent to it.

4		7						
				3				
8								
7							4	
								9
				6		8		5

f-puzzles: <https://f-puzzles.com/?id=y9uzzdxm>

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

Bonus 5: Japanese Sums

Normal sudoku rules apply.

Normal Japanese Sums Sudoku rules apply: shade some cells in the grid in different colors. The values outside of the grid give the sum of the digits in each contiguous “run” of shaded cells of the given color in that row or column, in order from top to bottom or left to right. If two runs of shaded cells are the same color, there must be at least one unshaded cell between them. If two runs of shaded cells are different colors, there may or may not be an unshaded cell(s) between them.

The grid is a 10x10 grid with the following pre-filled numbers and sum values:

Sum values and shaded cells are as follows:

- Row 1: Column 4 (15, yellow), Column 5 (7, purple), Column 6 (15, yellow)
- Row 2: Column 3 (1, yellow), Column 4 (1, pink), Column 5 (2, yellow)
- Row 3: Column 2 (19, purple), Column 3 (8, purple), Column 4 (19, purple), Column 5 (4, purple), Column 6 (21, purple), Column 7 (8, purple), Column 8 (20, purple)
- Row 4: Column 1 (17, purple), Column 2 (9, purple), Column 3 (14, purple), Column 4 (2, purple), Column 5 (6, purple), Column 6 (3, purple), Column 7 (13, purple), Column 8 (16, purple), Column 9 (18, purple)
- Row 5: Column 2 (2, purple), Column 3 (1, purple), Column 4 (2, black), Column 8 (1, black)
- Row 6: Column 2 (8, purple), Column 3 (11, purple), Column 4 (6, black), Column 5 (8, black)
- Row 7: Column 3 (29, purple), Column 4 (9, black), Column 9 (7, black)
- Row 8: Column 1 (10, purple), Column 2 (1, yellow), Column 3 (22, purple), Column 4 (2, yellow), Column 5 (10, purple), Column 6 (3, black), Column 9 (4, black)
- Row 9: Column 3 (14, purple), Column 4 (1, pink), Column 5 (30, purple), Column 7 (2, black), Column 8 (7, black)
- Row 10: Column 2 (8, purple), Column 3 (20, purple), Column 4 (3, purple), Column 5 (5, black), Column 6 (7, black)
- Row 11: Column 2 (7, purple), Column 3 (11, purple), Column 4 (5, black), Column 5 (7, black)
- Row 12: Column 2 (8, purple), Column 3 (15, purple)
- Row 13: Column 3 (25, purple)

Penpa: <https://tinyurl.com/y75eamws> (sorry, no answer check this time!)

Time Benchmarks

	One party hat	Two party hats	Today's dinosaur:
March 1, 2022	12:30	7:00	intermediate incisivosaurus
March 2, 2022	11:00	6:30	unimaginative utahraptor
March 3, 2022	13:00	7:00	hungry hungry huanghetitan
March 4, 2022	12:00	6:30	gnostic noasaurus
March 5, 2022	11:00	6:00	grateful giganotosaurus
March 6, 2022	15:00	8:00	gryponyx groupie
March 7, 2022	12:00	6:30	covert coelurus
March 8, 2022	11:00	6:30	sweaty spinosaurus
March 9, 2022	11:00	6:00	beached bothriospondylus
March 10, 2022	12:00	6:30	immune isisaurus
March 11, 2022	10:00	5:30	impaled iguanodon
March 12, 2022	17:00	9:00	tasty tongue-tied tastavinsaurus
March 13, 2022	12:30	7:00	questionable qiaowanlong
March 14, 2022	12:57	6:28	transcendental tendaguria
March 15, 2022	12:00	6:30	rounded rahiolisaurus
March 16, 2022	15:00	8:00	consecutive kotasaurus
March 17, 2022	11:00	6:00	excluded europasaurus
March 18, 2022	12:00	7:00	punctual panamericansaurus
March 19, 2022	15:00	8:00	commutative carnotaurus
March 20, 2022	16:00	9:30	pointing parasaurolophus
March 21, 2022	15:00	7:30	unemployed unaysaurus
March 22, 2022	12:30	7:00	valuable velociraptor
March 23, 2022	15:00	8:00	distinct daspletosaurus
March 24, 2022	20:00	10:00	:blobsweat: bruhathkayosaurus
March 25, 2022	12:30	7:00	fruitful falcarius
March 26, 2022	9:00	5:00	illegal indosuchus

March 27, 2022	12:00	6:30	all-of-the-above austrosaurus
March 28, 2022	12:30	7:00	blossoming brachytrachelopan
March 29, 2022	11:00	6:30	backwards blasisaurus
March 30, 2022	12:00	6:30	vaulting vahiny
March 31, 2022	14:00	8:00	elderly leaellynasaura