## GAS Leak

Genuinely Approachable Sudoku from the CtC Discord Volume 25:
January 31 - February 28, 2023


Good morning, friends! We had a big month here at GAS. It started off with a GAS/GAPP crossover event featuring a week of sudoku puzzles from the GAPP team. (And if you want to see what Philip, Bill, and I were up to in the meantime, go check out Mind the GAPP 16.) Mid-month, we had a round of puzzles and intros reaffirming our commitment to supporting our LGBTQ+ puzzle friends. And finally, we capped off the month with a few of the spiciest puzzles in recent GAS history, including the second-longest double-hat time ever. The highs and lows are all memorialized right here in GAS Leak 25. And if you want even more puzzles, they're waiting at the end of this document, along with time standards and dinosaur names.

Y'all brighten my day every day of the week. Thank you for being you! Happy solving!
Clover

## January 31, 2023: Online Sudoku

Bill Murphy

You know, sometimes in life, you just screw up. That's ok. As long as you're always online like me, you can fix it. So here's an Online Sudoku to fix me accidentally posting a broken sudoku.

Normal Sudoku Rules Apply. Digits in the top left of cells containing lines must appear on those lines, but not necessarily in the order presented.

f-puzzles: https://f-puzzles.com/?id=2ar7srzh
CTC: https://tinyurl.com/5n8jcnun

## February 1, 2023: Tortilla Chips II

Philip Newman
Today's edition of Linguistics 101 is brought to you by the letter II... or at least it would have been pre-2010, when it was still considered a separate letter in Spanish!

In some dialects of Spanish, <|l> represents the same sound as <y>: the voiced palatal approximant, $\langle\mathrm{j}\rangle$. This is the case for most of Latin America (and thus also for me, having learned Spanish in Texas). The term for this is Yeísmo (literally "Y-ism"). Other dialects of Spanish retain a distinct pronunciation for <ll> as the palatal lateral approximant, $\langle\Lambda\rangle$. I don't think I could pronounce that in a way that is distinct from $\langle j\rangle . .$. but fortunately I'm not the one who will be reading this! (Wikipedia suggests this sound may appear in Mark's pronunciation of "million", though other places l've checked disagree. We'll see!)

In Rioplatense Spanish (Argentina and Uruguay) there is also "Zheísmo" or even "Sheísmo", which I was unaware of until writing this intro!

Now, how would a Latin speaker pronounce "tortilla"... :thinkies:
Today's GAS is an XV Pairs Sudoku!
Normal sudoku rules apply.
XV Pairs: 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 - other pairs of cells may sum to 5 or 10.)


Play on f-puzzles: https://f-puzzles.com/?id=2xun4rzg Play on CTC App: https://tinyurl.com/5n86d2wx

February 2, 2023: 159 Sudoku
shye
Well well well Mr. Goodliffe, we meet again... Surprised to see me? I have taken great pleasure in watching you miss the two hat time for my puzzles in our previous GAS/GAPP swap-overs :3aybe this time you'll be victorious? Don't worry, I made one of your favorites, it's a good old 159 Sudoku, have fun!

In addition to normal Sudoku rules, there are some highlighted columns. Each digit in column 1 indicates which column the 1 appears in its respective row (for instance, if r3c1 was a 6 , then r3c6 would be a 1). Likewise, each digit in column 5 indicates where 5 appears in the row, and each digit in column 9 indicates the 9 in the row.


Solve on F-Puzzles: https://f-puzzles.com/?id=2024mj96 Solve on CTC App: https://tinyurl.com/2v726m49

February 3, 2023: Classic Sudoku
jovi_al
Well well well Mr. Goodliffe, we meet again... Surprised to see me? I have taken great pleasure watching you solve my Classic Sudoku GAS puzzles in our previous GAS/GAPP swap-overs This puzzle has only nineteen given digits, so you better get started!

Rules: Place a digit from 1-9 in every cell such that every digit appears in every row, column, and thickly outlined $3 \times 3$ region.

f-puzzles: https://f-puzzles.com/?id=2465kfr9 ctc: https://tinyurl.com/4rye48nj

## February 4, 2023: Renthermo Sudoku

Tyrgannus

Well well well Mr. Goodliffe, we meet again... Surprised to see me? I have taken great pleasure in watching your confused expressions when seeing my name pop up in our previous GAS/GAPP swap-overs I I have no doubts you'll be tempted to, oh what's the term..., Goodliffe these Renthermos!

Rules: In addition to normal sudoku rules, digits along a thermometer must strictly increase from the bulb to the tip. All thermos are a string of consecutive digits (such as $1-2-3$ or 5-6-7-8)


F-Puzzles: https://f-puzzles.com/?id=22donmw2 $\mathrm{CtC}:$ https://tinyurl.com/ysbr8tyd

## February 5, 2023: Quadruples Sudoku

Freddie Hand

Well well well Mr. Goodliffe, we meet again... Surprised to see me? I have taken great pleasure in watching you solve my GAS puzzles in just over 4 minutes in our previous GAS/GAPP swap-overs ${ }^{3}$. Will be able to solve this puzzle faster, or will you solve it in Quadruple(s) the time?

Rules: Normal sudoku rules apply. Digits in white circles must appear in the four cells surrounding it (if a digit appears twice in a white circle, it must appear at least twice in four surrounding cells).


F-Puzzles: https://f-puzzles.com/?id=28eouvxb CTC: https://tinyurl.com/2sxez4x7

## February 6, 2023: TomTom Sudoku

Eric Fox

Well well well Mr. Goodliffe, we meet again... Surprised to see me? I have taken great pleasure in this opportunity for the GAPP team to contribute to GAS one again, and will now be sharing the last puzzle before things go back to normal here: A TomTom Sudoku!

Rules: Normal sudoku rules apply. A clue represents the value obtained by applying an operation iteratively on the numbers in the region the clue is in. If no operation is given, it may be any of,,$+- \times$, or $\div$. Subtraction and division in regions with more than two numbers are handled by taking the largest number and subtracting/dividing all the others.

f-puzzles: https://f-puzzles.com/?id=29rjkluo
CTC: https://tinyurl.com/2p8j8evm

February 7, 2023: Waking Up Is Hard To Do
Philip Newman

Note: This intro is a continuation of the February 6 GAPP intro, reproduced here:

Howdy, folks! Today is a perfectly ordinary Groundhog Day here at GAPP HQ. The temperature is a crisp 26 degrees Celsius with prevailing winds out of the southwest, and it's looking like the blizzard on the horizon is going to miss us entirely. Of course, if Punxsutawney Philip...
...wait, is that Punxsutawney Philip over there playing Mozart's Piano Sonata 16*?? When did he learn to play the piano? And... carving ice sculptures of sloths with his tail?? I could have sworn he was scared of his own shadow, but here he is confidently entertaining a foreign channel.

NO. No way. He made a pencil puzzle too?? Where did he find the time to do all this?!

The clock on the bedside table flips over to 6:00, and the alarm goes off.
Babe, I got you babe, I got you babe...

Punxsutawney Philip sighs and begins mentally preparing to live out yet another version of this same day. Before he even has a chance to start going through his mental list of pencil puzzle genres a loooooong neck reaches over him and nudges the alarm clock of the table. Punxsutawney Philip blinks up in surprise at the friendly sauropod who has come to fetch him for today's GAS.

Philip's eyes slowly open and he glances at the clock on his phone. It's February 7, 9:59am. As his brain catches up, the completely bizarre and unrealistic dreams he's been having start to fade. I mean, really. Waking up at 6:00 to post a puzzle? Had to be a dream. (Turning into a groundhog could definitely happen though.)

Today's GAS is a No Even Neighbo(u)rs Sudoku!
Normal sudoku rules apply. No two cells containing even digits can share an edge.


Play on f-puzzles: https://f-puzzles.com/?id=2b24bgi3 Play on CTC App: https://tinyurl.com/yyahfx6r

## February 8, 2023: Either/Or Sudoku

Clover

Today's GAS is dedicated to my partner of nearly 15 years, Whirlpion. This intro is a story about love. But it's also a story about a couch.

A couple years back, we went shopping for our first nice couch. All I wanted was a couch that I could sit down on and sink deeply into, like the loving embrace of a pool of quicksand. All they wanted was a couch that looked sleek and cute in our beautiful house. In this mid-century-modern world, these two goals were, it turns out, at odds.

But when we had reached the point of total despair, I spotted the ugliest couch l'd ever seen in my life. This thing was an absolute unit of brown faux leather and costume-jewelry trim. As a joke, I dramatically collapsed onto it. And...

Sank right in.

It was perfect.
"Dang," I said. "Of course the only comfy couch in Kansas is the one that time traveled here from 1987." I didn't even have to ask my spouse to know that they hated it. There was no chance. We agreed to call it a day, get some dinner, and resume the search tomorrow.

I rode my bicycle home from the store while Whirlpion drove our truck. And when I got home an hour later, the truck was parked right next to the house with the tailgate open.
"That's weird," I said. So I got off my bike, walked up to the house, and opened the door. And there was my beautiful, brilliant, hilarious, charming spouse with a s**t-eating grin on their face, looking more than a little out of breath, standing next to the ugliest couch in the world.

And if that ain't love, I don't know what is.

Normal sudoku rules apply. Digits in white circles must appear in one of the two adjacent cells.

f-puzzles: https://f-puzzles.com/?id=26ed79b6 CtC: https://tinyurl.com/ym6ntucw

February 9, 2023: Three In A Row Sudoku
Bill Murphy

Sometimes in life, you either have to show up or shut up. Funnily enough, my last performance review did say "you don't know how to shut up" so here I am.

Editor's note: This intro text refers to an attachment to the original message, which shows that Bill had made a donation to the Trevor Project.

Today’s Sudoku is a Three In A Row Sudoku. Normal Sudoku Rules Apply. Digits in a row or column cannot have three or more consecutive odd or even numbers in a row.

| 1 | 3 |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 5 | 7 |  |  |  |  | 8 | 6 |  |
|  |  |  | 3 |  |  |  | 4 |  |
|  |  | 3 | 1 | 6 |  | 5 |  |  |
|  |  |  | 8 | 9 |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  | 6 |  | 7 |  |  | 3 | 5 |  |
|  | 8 | 2 |  |  |  | 7 | 1 |  |
|  |  |  |  |  |  |  |  |  |

F-puzzles: https://f-puzzles.com/?id=25I3fkuo CTC: https://tinyurl.com/y6n986a2

## February 10, 2023: Love Numbers

Philip Newman

I am not the best with serious and sentimental. I'm much more comfortable making terrible jokes. So, rather than fumble over words today, I hope you will accept today's puzzle as a love letter to the community. Keep being awesome, keep being supportive, and keep making this a safe place for so many.

And since I love you all, I've written a GAS 101 document to help you get through today's slightly tricksy Gamma and Epsilon Sudoku; feel free to use as much or as little of it as you want to get started!

Normal sudoku rules apply.
Gamma and Epsilon: Digits in cells separated by a white dot must have a difference of 5. Digits in cells separated by a black dot must have a ratio of $3: 1$. (No negative constraint - adjacent cells separated by no dot may have a difference of 5 or ratio of $3: 1$.)


Play on f-puzzles: https://f-puzzles.com/?id=2y4kyzf7 Play on CTC App: https://tinyurl.com/yckpfevx

## February 11, 2023: Semikiller Sudoku

Clover

Before we get started: there are two sudoku contests for you to enjoy this weekend! Round 2 of Sudoku Mahabharat and round 2 of the Sudoku Grand Prix are both open. Usual bonus hat offers apply. Check out event-announcements for details!

Now put on your semiformal attire, get yourself some semisweet chocolate, pull your semitrailer off to the side of the road, and prepare to solve this semikiller sudoku.

Normal sudoku rules apply. Digits must not repeat in cages. In each cage, the indicated clue is the total of all but one of the digits in the cage. Which digit is left out must be determined by the solver.

f-puzzles: https://f-puzzles.com/?id=2k2bhkee CtC: https://tinyurl.com/rmhvsb6r

February 12, 2023: Ceci n'est pas un cliche.
Bill Murphy

A reminder as Clover said yesterday: there are two sudoku contests for you to enjoy this weekend! Round 2 of Sudoku Mahabharat and round 2 of the Sudoku Grand Prix are both open. Usual bonus hat offers apply. Check out event-announcements for details! Have fun, tell em I sent ya! (it won't affect your results, but it'd be weird if they get a lot of "Bill sent me!" outta nowhere.

Also my episode of Mastermind airs this week, $15 / 02$ on SBS Australia! No spoilers in the chat when it comes out, I think Clover wants a discord watch party.

Today marks a GAS first for me, I sent this Classic Sudoku to my dad for testing. He absolutely loved it and was very proud of me. He did not make a hat time, but the dinosaur is named after him today.

Normal Sudoku Rules Apply.

| 7 |  |  |  | 5 |  |  |  | 4 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  | 6 | 7 | 3 |  |  |  |
|  |  | 1 |  |  |  | 2 |  |  |
|  | 2 |  |  |  |  |  | 7 |  |
| 5 | 3 |  |  |  |  |  | 8 | 9 |
|  | 6 |  |  |  |  |  | 4 |  |
|  |  | 4 |  |  |  | 3 |  |  |
|  |  |  | 1 | 2 | 9 |  |  |  |
| 6 |  |  |  | 8 |  |  |  | 1 |

f-puzzles: https://f-puzzles.com/?id=2xomagyd CTC: https://tinyurl.com/ytuarbaf

## February 13, 2023: Koffing

Philip Newman

Today's GAS is a Killer Quadruples Sudoku. The title has nothing to do with the puzzle itself; instead, it is named after the entry level GAS type Pokémon (as suggested by @threequid), after my 4-year-old suggested it should be called "A Puzzle Pokémon". Also, because I'm still coughing! Don't worry, it's not long until it will be March and I'll be sneezing instead.

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


Play on f-puzzles: https://f-puzzles.com/?id=2ppkp88j
Play on CTC App: https://tinyurl.com/yzkts6ae (note: I used cosmetics rather than the usual quad circles to avoid covering up the 22 total for the cage in r6c2; however, it is still partially covered in the CTC version!)

February 14, 2023: XY-Difference Pairs Sudoku
Clover

Will you be my valentine? Even though we sometimes have our xy-differences, I think we make a great pair.

Today's GAS is an xy-difference pairs sudoku!

Normal sudoku rules apply.

If there's a diamond between two horizontally adjacent cells, then their difference is the same as the leftmost digit in that row. (For instance, if the leftmost digit in a row is 3, then all pairs separated by a diamond in that row have a difference of 3). If there's a diamond between two vertically adjacent cells, then their difference is the same as the topmost digit in that column. Not all possible diamonds are necessarily given.

f-puzzles: https://f-puzzles.com/?id=2lzzkns2 CtC: https://tinyurl.com/3t4kkxb6

## February 15, 2023: Diagonal Outside Sudoku

Bill Murphy

As solvers, we all have our favourite constraints and for us setters, too, we all have our favourites. Nobody would deny Clover a killer sudoku and you all are lucky I deny Philip a German Whispers puzzle on the regular. I'm very fond of Quadruples (a GAS friendly constraint) and Little Killers (less so). Similarly, setters tend to have things they find less pleasant.

That absolutely has nothing to do with today's Diagonal Outside sudoku. Absolutely nothing at all. : ) (:

Normal Sudoku Rules Apply. Clues outside the grid give digits that must appear in the first three cells in the direction of the arrow.

Solvers please note that the f-puzzles denotes the arrows in a different way to the diagram shown. However, all arrows point the same way as the diagram shown. For that, today CTC software is recommended.


## February 16, 2023: Law and Order 66

Philip Newman

A few weeks ago I participated in a speed setting competition hosted by @Memeristor, the theme of which was to tell a joke. I made several terrible jokes, but I thought of the punchline for the following (also terrible) joke a few hours later.

Did you know that the Star Wars prequel trilogy was almost a legal drama? In the absence of the Clone Wars, what was Palpatine's nefarious plan for initiating a conflict with the Separatists?

Sue Dooku.
GROAN.

Today's GAS is a Clone Sudoku! Normal sudoku rules apply.
Clone: Grey regions of the same shape are clones, and must contain the same digits in the same relative positions.


Play on f-puzzles: https://f-puzzles.com/?id=206fyf8t
Play on CTC App: https://tinyurl.com/5n94jnhx

## February 17, 2023: Odd/Even/Big/Small Sudoku

Clover

In lieu of an intro today, I'd like to invite you all over to voice-chat-1 this afternoon to have a cup of coffee (or tea, or Monster energy) and watch Bill's recent appearance on Mastermind! Watch party begins at 1pm GAS Standard Time (also known as CST, or UTC -6), or 1:00 PM in your local time. I hope you can come by!

Today's GAS is an odd/even/big/small sudoku. Fill the grid with the digits 1-8 so that each row, column, and $2 \times 4$ region contains each digit exactly once. Letter clues outside of the grid tell you about the first two digits (closest to the clue) in their row/column, as follows.
$O=$ odd $=1 / 3 / 5 / 7$
$E=$ even $=2 / 4 / 6 / 8$
$B=$ big $=5 / 6 / 7 / 8$
$S=$ small $=1 / 2 / 3 / 4$

f-puzzles: https://f-puzzles.com/?id=2fn6p9wk CtC: https://tinyurl.com/mfymaz3w

## February 18, 2023: Prime Sudoku

Bill Murphy

I feel very blessed today for everyone who showed up to the watch-along on the discord voice chat. I wasn't intending to be awake for it and it was purely by coincidence. If I'm being completely honest, going on three gameshows in the last 18 months is a thing that's purely motivated out of grief. (We did shoot these episodes four days after the second anniversary.)

When you lose someone you're forced to make a choice about how you go forward and it's absolutely different for everyone. I chose very early on to just try and continue to be try and keep being the person that she loved, which is hard, because some days you can't. You just can't. That's ok too. Things happen, you acknowledge it and you just promise to do better the next day.

So yeah, I won the first episode and didn't make it past the weekly final. Two things you should know about Lisa; she was an ornithologist by degree, with a major in Australian birds and she politely tolerated my love of quiz shows. The part where nobody on this earth would've found it funnier than she did that I took a huge $L$ on a question about Australian magpies? I find that pretty beautiful.

Today's GAS is a Prime Dot Sudoku. I set this the day after shooting, there's a thing about this constraint that might not be apparent at first glance, so l've done my best to beat you over the head with it.

Normal Sudoku Rules Apply. Digits connected by a black dot must sum to a prime number.
The list of primes that's relevant are $3,5,7,11,13,17$

f-puzzles: https://f-puzzles.com/?id=2em35ack CTC: https://tinyurl.com/4nrf33us

## February 19, 2023: Good Title

Philip Newman

I was going to let Microsoft's Bing AI write today's intro, but it declared that it was in love with today's puzzle, threatened to block me if I didn't let them be together, and called me a mumpsimus. Hopefully "Sydney" doesn't take over my computer and start posting love letters to this puzzle.

Today's GAS is a Thermo Nonconsecutive Sudoku!

Normal sudoku rules apply.
Thermo: Digits along thermometers must strictly increase from bulb to tip.
Nonconsecutive: Digits in orthogonally adjacent cells cannot be consecutive (have a difference of 1).
Note: The Nonconsecutive rule applies to the whole grid, not just the thermos!


Play on f-puzzles: https://f-puzzles.com/?id=2nus9mb7
Play on CTC App: https://tinyurl.com/bdf5ftsj

## February 20, 2023: Position Sudoku

Clover

Welcome to the Great Annual Digit Race, where the digits 1 through 9 compete in a knock-down, drag-out competition for the honor of being first, second, and third. Will 1 be number one once again? We're on the edge of our solving seats.

In this position sudoku, normal sudoku rules apply. Clues tell you the relative position of the largest digit out of the three digits nearest that clue in that row/column. The position is counted inwards from the direction of the clue.

For instance, if a " 3 " appears to the left of a row, then the first three digits in that row could be 5 49 from left to right (since 9, the largest digit, is in the 3rd position from the left).

If a " 3 " appears below a column, then the bottom three digits in that column could be 723 from top to bottom (since 7, the largest, digit, is in the 3rd position from the bottom.)


## February 21, 2023: High Tea

Bill Murphy

Today marks an important goal for me. Ever since day 4 or so on the GAS team, l've been trying to make a GAS Sandwich Sudoku. This sounds like an elaborate set-up to a joke or commitment to a bit and l've definitely set a precedent at this point where I wouldn't blame you, but gosh dang it, I have made SO MANY sandwich puzzles trying to thread the gap between approachable and still a little math-y. You'll have to let me know whether I cracked it or whether it cracked me.

Normal Sudoku Rules Apply. Clues outside the grid give the sum of digits between 1 and 9 in that row or column.

f-puzzles: https://f-puzzles.com/?id=2mofsotk
CTC: https://tinyurl.com/26ubx8nr

February 22, 2023: Boa
Philip Newman

Today's GAS is a Killer Sudoku based on an old nerd snipe I gave myself. The cages in this puzzle are all 2-cell, and placed such that adjacent cages have consecutive totals (except the extremes of 3 and 17, which are touching to close the loop). For GAS, I've given you all the digits inside the loop! (This version is not unique without givens.)

But, if you want to check out the (significantly harder) puzzle of this type with no given digits, it's in the archive!

## Editor's note: Here's a link to the harder puzzle!

Normal sudoku rules apply.
Killer: Digits in cages cannot repeat and must sum to the total given.


Play on f-puzzles: https://f-puzzles.com/?id=2q97afal Play on CTC App: https://tinyurl.com/bdcwj8py

## February 23, 2023: Battleship Sums Sudoku

Clover
A little excerpt from the ideas file:
Uno Sudoku: you have to shout 'uno' when you have only one empty cell remaining in a region. Failure to do so results in five digits being randomly removed from your grid.

Connect-four Sudoku: a competitive variant for two players, in which the first to enter four contiguous digits in a row wins.

And for today, let's go with Battleship Sums Sudoku: Normal sudoku rules apply. Also, place the eight given length-3 ships into the grid so that no ships touch each other, not even diagonally. (Ships can be oriented horizontally or vertically). Some ship segments are already provided. Clues adjacent to a row or column tell you the sum of all of the digits that are on ship segments in that row or column.

For answer check, you only need to enter the correct digits into the grid! I recommend using shading to keep track of where the ships are.


Sudokupad: https://tinyurl.com/2dui274x

## February 24, 2023: The Goblin King

Bill Murphy

Today's Anti-King Sudoku puzzle is dedicated to the goblins, demons, elves, fairies, pixies, sprites, gremlins, munchkins, rascals, rapscallions and everybody else who's a fan of David Bowie in Labyrinth.

Normal Sudoku Rules Apply. Cells connected diagonally cannot contain the same number.

f-puzzles: https://f-puzzles.com/?id=2jdzr2wi
CTC: https://tinyurl.com/3uckpzcd

## February 25, 2023: Don't Nock It

Philip Newman

Sometimes I have a good (for some value of "good") idea for an intro. Today is not one of those days. So instead, I am going to enlist you to help me write it...

Post your best arrow-related joke. I'll edit in my favorites and we'll let Mark judge which one is the absolute best! Is there a prize for the winner? Maybe a future intro task will involve suggesting a prize?

Today's GAS is an Arrow Sudoku.

Normal sudoku rules apply.
Arrow: Digits along arrows must sum to the circled total. (Digits may repeat if allowed by other rules.)


Play on f-puzzles: https://f-puzzles.com/?id=2mka9sds
Play on CTC App: https://tinyurl.com/26cd5u3t

## February 26, 2023: Block Sum Relations Sudoku

## Clover

The noble game of sudoku has a terrible secret - a secret that, for (fractions of) centuries, has only been passed along to a few (hundred thousand) of sudoku YouTuber Simon Anthony's very favorite people. $\because:$ But with today's GAS, we drag that secret kicking and screaming into the light! We shout it from the rooftops! That's right - THE SUM OF THE DIGITS FROM 1 TO 9 IS 45 ! Drag me to the guillotine if you must - but the people deserve to know!
... So that they can solve this GAS!

Normal sudoku rules apply. Also, equals signs in the grid tell you that the three digits above the clue have the same sum as the three digits below, or the three digits to the left of the clue have the same sum as the three digits to the right. For example, $\mathrm{r} 2 \mathrm{c} 1+\mathrm{r} 2 \mathrm{c} 2+\mathrm{r} 2 \mathrm{c} 3=\mathrm{r} 2 \mathrm{c} 4+\mathrm{r} 2 \mathrm{c} 5+\mathrm{r} 2 \mathrm{c} 6$, and $\mathrm{r} 4 \mathrm{c} 8+\mathrm{r} 5 \mathrm{c} 8+\mathrm{r} 6 \mathrm{c} 8=\mathrm{r} 7 \mathrm{c} 8+\mathrm{r} 8 \mathrm{c} 8+\mathrm{r} 9 \mathrm{c} 8$.

f-puzzles: https://f-puzzles.com/?id=2j957etf CtC: https://tinyurl.com/4ate22s7

## February 27, 2023: For Granted

Bill Murphy

Ingredients:

- Equal Parts Macaroni, Cheese of your choice, Evaporated Milk

Steps:

1. Cook the Macaroni according to the packet instructions, then drain the pasta.
2. Return the pasta to the pot, cover with the evaporated milk, return to the heat.
3. Put the pot back on the heat, then once the evaporated milk has boiled, take it off the heat, stir through the cheese.
4. Serve.

Today's GAS is like this Mac and Cheese recipe. It's a Little Killer. (Also, goes really well with bacon, mustard and jalapenos.)

Normal sudoku rules apply. Digits along an indicated diagonal must sum to the given total.

f-puzzles: https://f-puzzles.com/?id=2gfvalra
CTC: https://tinyurl.com/2894ke9t

February 28, 2023: No Leaping!
Philip Newman

Today we say farewell to February. Apologies to Matt Damon, we ran out of time. (I would be shocked if Mark gets this reference.)

See you in 366 days when we make up for three years without leap days with four slightly overcooked puzzles with a total two hat time of one hour.

Today's GAS is a Classic Sudoku!
Normal sudoku rules apply. And that's it!


Play on f-puzzles: https://f-puzzles.com/?id=2lcw52ce Play on CTC App: https://tinyurl.com/bp5hervx

## Bonus 1: Battleship Sums Sudoku

Clover

Normal sudoku rules apply. Also, place the given ships into the grid so that no ships touch each other, not even diagonally. (Ships can be oriented horizontally or vertically). Some ship segments are already provided. Clues adjacent to a row or column tell you the sum of all of the digits that are on ship segments in that row or column.

https://tinyurl.com/4t5jfddt

Bonus 2: Average Line Sudoku
Bill Murphy
Normal Sudoku Rules Apply. The digit in the circle along each line is the average of the other digits along that line.


## Bonus 3: Odd/Even Sudoku

Philip Newman

Normal sudoku rules apply. Odd/Even: digits in grey circles must be odd; digits in grey squares must be even.

https://f-puzzles.com/?id=2znqngnn https://tinyurl.com/2mj44zpt

## Bonus 4: Arrow Sequence Sudoku

Clover

Normal sudoku rules apply. For each arrow, the digit at the (pointy) end of the arrow is 1 greater than the digit in the circle. Also, all of the digits along the arrow (not counting the bulb) form a sequence of consecutive numbers in order with no repeats. Sequences may be either increasing or decreasing.

https://tinyurl.com/343ph6n5

Bonus 5: A Little Extra Regions
Bill Murphy
Normal Sudoku Rules Apply. Digits along grey lines must read as a complete set of the digits 1-9 with the same digits repeated at both ends.


## Time Benchmarks

|  | Two party hats | One party hat | Today's dinosaur: |
| :---: | :---: | :---: | :---: |
| January 31, 2023 | 6:00 | 11:00 | borked barsboldia |
| February 1, 2023 | XV/II minutes | XV minutes | Tongue-Tied Tonganosaurus |
| February 2, 2023 | 7:30 | 15:00 | villainous vouivria |
| February 3, 2023 | 5:00 | 9:00 | sick (affectionate) (radical) sauropod |
| February 4, 2023 | 7:30 | 12:00 | Renthermic Rebbachisaurus |
| February 5, 2023 | 7:30 | 13:00 | Tetranumeric Tianzhenosaurus |
| February 6, 2023 | 10:00 | 18:00 | Logical Linhenykus |
| February 7, 2023 | 7:30 | 14:00 | Still Sleepy Sauroposeidon |
| February 8, 2023 | 7:30 | 14:00 | trans rights turiasaurus |
| February 9, 2023 | 8:00 | 15:00 | LGBTQIAletopelta |
| February 10, 2023 | 3+5 minutes | 3*5 minutes | Loving Lohuecotitan |
| February 11, 2023 | 6:00 | 12:00 | semiseismosaurus |
| February 12, 2023 | 5:30 | 10:00 | thoughtful Timothy |
| February 13, 2023 | 4 minutes per hat | 4*4 minutes | Galarian Galveosaurus |
| February 14, 2023 | 7:30 | 15:00 | platonic pawpawsaurus |
| February 15, 2023 | 8:30 | 15:00 | Furious Fulgurotherium |
| February 16, 2023 | 5:55 | 11:11 | Barrister Barrosasaurus |
| February 17, 2023 | 6:00 | 11:30 | OEBSessed oohkotokia |
| February 18, 2023 | 7:30 | 13:30 | Magnificent Magnapaulia |
| February 19, 2023 | 6:42 | 13:57 | Mumpsimus Mansourasaurus |
| February 20, 2023 | 8:00 | 15:00 | first-place falcarius |
| February 21, 2023 | 8:00 | 15:00 | obsessive Oryctodromeus |
| February 22, 2023 | 6:30 | 13:00 | Hugging Hudiesaurus |
| February 23, 2023 | 11:00 | 20:00 | playful proa |
| February 24, 2023 | 7:30 | 15:00 | Jareth's Janenschia |


| February 25,2023 | $8: 00$ | $15: 00$ | Bow-na fide Borealosaurus |
| :--- | :--- | :--- | :--- |
| February 26, 2023 | $7: 00$ | $13: 00$ | revolutionary raptorex |
| February 27,2023 | $6: 30$ | $14: 00$ | Delicious Delapparentia |
| February 28,2023 | $6: 30$ | $12: 00$ | Shortened Shingopana |

