## GAS Leak

Genuinely Approachable Sudoku from the CtC Discord Volume 7: October 5, 2021 - October 24, 2021


Good morning, friends! In celebration of the seventh edition of GAS Leak, here are some GAS statistics:

Solvers receiving daily pings: 1,656

Dinosaurs earned: 11,146
Single hats earned: 12,822
Double hats earned: 6,254

Most popular dinosaur: vulcanodon, used four times!

Unique sudoku variants used in GAS: 70
Sudoku variants invented for GAS: 3
Most used variant: thermo, used in 13 puzzles

This document compiles puzzles 121 through 140, plus a trio of bonus puzzles that weren't quite right for the regular channel. Time standards and daily dino names appear on the last page. Enjoy!

- Clover


## October 5, 2021: Gamma and Epsilon

## Sam Cappleman-Lynes

Oops! I must have been very confused when I set this puzzle because I simply could not remember what the dots in Kropki are supposed to signify. I took a guess at it but I don't think I got it quite right.

In this Gamma and Epsilon Sudoku, normal Sudoku rules apply. Digits separated by a black dot must be in a 1:3 ratio and digits separated by a white dot must have a difference of 5 . There is no negative constraint.

f-puzzles: https://f-puzzles.com/?id=yeddajmn
CtC: https://tinyurl.com/yvtskrnb

October 6, 2021: Nein Nines
Philip Newman
We here at Groovy Attractive Setters, Inc. strive to produce the highest quality puzzles each and every day for you. That's why it's so frustrating to be continually plagued by localization issues. Today's puzzle is supposed to have nine 9 s in it... after all, there should be nine of every digit in a sudoku, right? Unfortunately... well, you can see what happened in the title.

Can you help us fix this tragic error in today's Classic Sudoku?
Normal sudoku rules apply. And that's it!

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

Play on f-puzzles: https://f-puzzles.com/?id=y2seypeu Play on CTC App: https://tinyurl.com/k4wfy4xv

## October 7, 2021: Quadruples

Clover

Good morning! Today's GAS is a buy one (digit), get one free sudoku. For a limited time only, with every digit you purchase, you'll receive a SECOND DIGIT absolutely free! But you have to act fast, because supplies are limited. So pick up that phone and solve! Solve! Solve!

Normal sudoku rules apply. Digits in a white circle must appear in the four cells surrounding that circle. (If a digit appears twice in a white circle, it appears twice in the four cells surrounding that circle.)

f-puzzles: https://f-puzzles.com/?id=ydjth6p5
CtC: https://tinyurl.com/7nnmxze3

## October 8, 2021: Extra Regions

Sam Cappleman-Lynes

Good afternoon! Today's GAS is a buy nine (regions), get four free sudoku. For a limited time only, with every nine regions you purchase, you'll receive FOUR MORE REGIONS absolutely free! But you have to act fast, because supplies are limited. So pick up that phone and solve! Solve! Solve!

Normal sudoku rules apply. Each of the grey regions must also contain each digit exactly once.

f-puzzles: https://f-puzzles.com/?id=yzyud5fw
CtC: https://tinyurl.com/9ydk2vy9

## October 9, 2021: Buy One Get Three Free Sudoku Extravaganza!

 Philip NewmanEditor's note: Philip posted four tiny puzzles for the October 9 GAS! $6 \times 6$ sudoku has the same rules as $9 \times 9$, except that it only uses the digits 1 through 6 . The flavor text and rules for all four puzzles appear on this page; the puzzles themselves appear on the following page.

I want to apologize for the deceitful business practices of my fellow setters. I'm sure you all read "get four free sudoku" and were disappointed to only find a single puzzle to solve.

Here at Phil's Nerd Snipe Barn (a division of Groovy Attractive Setters, Inc.), our motto is "I've never met a challenge I didn't spend way too many hours working on". Ok, we definitely need a snappier slogan, but the important thing for you is that today is a genuine Buy One* Get Three Free Sudoku extravaganza!

Normal sudoku rules apply...

Arrow: Digits along an arrow must sum to the circled total.
Palindrome: Digits along a grey line must form a palindrome (read the same from either direction).
Renban: Digits along a purple line must form a set of consecutive digits with no repeats (in any order).
Between Line: Digits along a line must have values strictly between the values in the circles on the ends of that line.

| 1 |  |  |  |  | 3 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 5 | $\langle$ | 3 |  |  |  |
|  |  |  |  |  | 2 |
|  |  | $\ddots$ |  |  | $\boxed{ }$ |
|  |  |  |  |  |  |
| 2 |  |  |  |  | 4 |



Play on f-puzzles:
https://f-puzzles.com/?id=yfnr6vnl (Arrow)
https://f-puzzles.com/?id=ydsoe6hc (Palindrome)
https://f-puzzles.com/?id=yjkskgud (Renban)
https://f-puzzles.com/?id=ygqv8k3a (Between Line)

Play on CTC App:
https://tinyurl.com/6rm7fj9n (Arrow)
https://tinyurl.com/85n3paay (Palindrome)
https://tinyurl.com/s36dxbma (Renban)
https://tinyurl.com/xx6pe5k2 (Between Line)

## October 10, 2021: Odd Sum Pair

Clover
The seasons are changing here in Middle of Nowhere. A crisp breeze is blowing, the scent of bonfires fills the air, and the leaves on the sudokus are turning red and orange.

In this odd sum pair sudoku, normal sudoku rules apply. Also, the two digits on either side of a small dot (of any color!) must sum to an odd value. Not all possible dots are necessarily provided.

f-puzzles: https://f-puzzles.com/?id=yfntu9il
CtC: https://tinyurl.com/yn8r37hp

## October 11, 2021: Max Odd/Even Run

Sam Cappleman-Lynes

Oddly, even I find it odd that even though this seems like a natural rule to consider, I haven't even been able to find a single example of it existing previously. The odd Sudoku here and there even resembles it a little bit, but even so, none of them are quite the same. How odd. Or even.

In this Max Odd/Even Run Sudoku (catchy name, I know), normal Sudoku rules apply. Digits outside the grid indicate the length of the longest run of consecutive cells in that row or column which are either all even or all odd. There might be one or more runs with that length.

f-puzzles: https://f-puzzles.com/?id=ykyg5ktn CtC: https://tinyurl.com/3f7dc45z

## October 12, 2021: Tatooine Classic

Clover (as "Nilip Phewman")

Editor's note: Philip was without an internet connection for a few days, so we shuffled our turns. Or did we? Over the next three days, each of us posted a puzzle in the style of one of the other two setters, posing as their evil doppelganger. The actual authors are shown here, along with the original flavor text.
the sound of slightly unhinged laughter fills the air... muahAhahahahHHHahahahha ahahahhAHhaa. Good morning! It is I, eeeeeeevil sodoku setter NILIP PHEWMAN, and your puny "discord channel about approachable sudoku" is MINE!!!

I have DONE AWAY with your precious "Philip Newman." If you ever want to see him or his little "puzzles" again, there's only one way to defeat me, and like any good supervillain, I'm going to tell you exactly what you have to do:

Solve this EeeEEEEEeeeeeeeevil puzzle. Normal sudoku rules apply. And that's it!

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

Play on f-puzzles: https://f-puzzles.com/?id=ygwkqkma
Play on CtC app: https://tinyurl.com/47jprf2s

## October 13, 2021: Kropki Pairs

Sam Cappleman-Lynes (as "velcro!")
ominous boss-fight music is heard starting up in the background...
You fools! You fell right into my trap! While you were all busy dealing with that pathetic Nilip Phewman, I, the real mastermind, was preparing to unleash something the likes of which you've never seen! You'll have to solve this puzzle if you ever want to see your GAS setters again!
(But to make it a fair fight, I'll tell you the rules. I'm not that evil...)
Normal Sudoku rules apply. Digits separated by a white dot must be consecutive. Digits separated by a black dot must be in a 1:2 ratio. Digits not separated by a dot may be consecutive, in a 1:2 ratio, or neither.

f-puzzles: https://f-puzzles.com/?id=yjxz247x CtC: https://tinyurl.com/35kat8h4

## October 14, 2021: Making Lemonade

Philip Newman (as "Sham Capplemon-Limes")

Note for new solvers: When this puzzle was originally posted, a lot of solvers had questions about the rules! I've slightly edited the rules shown below to address those questions; Philip's original text is preserved in \#daily-sudoku-puzzles.

They say good things come in threes... well so do EVIL DOPPLEGANGERS bwahahaha. mine is an evil laugh

If you want to see your GAS setters again, you know what you have to do. That's right, send me \$15,000, payable by... wait, those do-gooders already did that bit? Twice?? Fine. You can solve this sour puzzle instead.

## LEMON SUDOKU bwahahaha

Normal sudoku rules apply. Digits in each group of yellow highlighted cells must sum to the total given in the two cells surrounded by the yellow cells (read left-to-right or top-to-bottom); digits may repeat in yellow cells as long as they follow sudoku rules.


Play on f-puzzles: https://f-puzzles.com/?id=ygfd6qy5 Play on CTC App: https://tinyurl.com/en5d3byw

October 15, 2021: Shamrock
Philip Newman

You did it! You defeated all of our evil triplets* and somehow that also fixed my internet!

Did you know that the "Sham" in Shamrock is from the Irish word for clover**? Obviously, this ties in perfectly to the shenanigans from the last few days. Also it's 22 weeks until St. Patrick's Day 2022, so... yeah, it's a reach, just go with it.

Today's GAS is a nice, quiet stroll along some thematically shaped green lines - an Irish Whispers Sudoku, if you will.

Normal sudoku rules apply. Along green lines, digits must differ from their neighbors by at least 5 .

* Oh, you thought they were just our twins? No, we all have a Lawful Evil triplet and a Chaotic Neutral triplet. Or maybe I'm the Chaotic Neutral one.
** Actually the " $r$ " is as well, but never mind that.


Play on f-puzzles: https://f-puzzles.com/?id=yzecdl3y Play on CTC App: https://tinyurl.com/22bp2x9s

## October 16, 2021: Exclusion

Clover

This sudoku is exclusive. It has its breakfast croissants airlifted from Paris straight to its private yacht every morning. Its butlers have smaller butlers to assist with their buttling. It went to Fyre Festival. This solve is only for those with highly refined tastes. An exclusion sudoku, as it were. And no, you may not sit at its lunch table.

Normal sudoku rules apply. A digit in a white circle may not appear in the four cells immediately surrounding that circle.

f-puzzles: https://f-puzzles.com/?id=yg6xa3kr
CtC: https://tinyurl.com/th9ytp37

## October 17, 2021: Classic

Sam Cappleman-Lynes

Does your puzzle ever do something that just makes you want to tut, roll your eyes, and sigh "Classic Sudoku"?

This puzzle contains the digits 1 to 9 once each in every row. Classic Sudoku

This puzzle also contains the digits 1 to 9 once each in every column. Classic Sudoku $\because$

And what's more, it also contains the digits 1 to 9 once each in every box. Classic Sudoku ©

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

f-puzzles: https://f-puzzles.com/?id=yjy673dp
CtC: https://tinyurl.com/2uv8vvab

October 18, 2021: Summometers
Philip Newman

Editor's note: The CtC solving link doesn't display the arrows in this puzzle. If you solve in CtC , remember that every arrow is also a thermo, running from the tip of the arrow to the bulb.

No fun intro today, sorry all! Brutal weekend*.
Today's (interesting) GAS is a Thermarrow Sudoku, where all the arrows are also thermos, and vice versa! Normal sudoku rules apply. Digits along arrows must sum to the circled total. Digits along thermometers must increase from bulb to tip (equivalently, decrease in the direction of the arrow).
*Week, really. I could easily fill an intro whining about it, but instead you get this mysterious footnote.


Play on f-puzzles: https://f-puzzles.com/?id=yjtxd5zm Play on CTC App: https://tinyurl.com/5xz3p6x9

## October 19, 2021: Even Count

Clover

Have you ever found yourself wondering how many even numbers there are? I know of at least seven. Luckily, in this puzzle, you'll only need four of them. It's another ruleset I haven't seen before (which is certainly not to say it doesn't exist), so let's call it Even Count Sudoku.

You know, like this.

Normal sudoku rules apply. A value in a circle tells you how many of the four cells surrounding that circle contain even digits. (The even digits around a circle don't have to be different from each other, as long as they follow sudoku rules.)

f-puzzles: https://f-puzzles.com/?id=yfaoez4|
CtC: https://tinyurl.com/3uvbefcu

## October 20, 2021: Killer

## Sam Cappleman-Lynes

Did you know that over 3000 deaths occur annually as a result of freak accidents involving dominos? Neither did I, and if I had done, I would have thought twice about putting so many of them in this puzzle. Some of these ones are particularly vicious as a result of the unusually large (for a domino) numbers written on them, which is what gives this Sudoku variant its name.

In this Killer Sudoku, normal Sudoku rules apply. Additionally, digits within a marked cage must sum to the value written in the corner of the cage.

f-puzzles: https://f-puzzles.com/?id=yzxmq53x
CtC: https://tinyurl.com/vtmf6tv3

October 21, 2021: TOWTCBBAR
Philip Newman

Did you know yuor brian is pterty good at raideng setcennes wtih jemblud wrods as Inog as the frist and Isat leretts are in the rhigt palces? At laset, I hpoe taht is unervlislay ture, or smoe of you wlil be vrey cosnufed by tihs.

Wudnol't it be intensetrig to alppy taht to sokudu?
Today's GAS is a combo of Between Line and Renban!

Normal sudoku rules apply. Digits along a line must have values strictly between the values in the circles on the ends of that line. Additionally, digits along a line, including the circles, must form a set of consecutive digits with no repeats (in any order - for example, 1324 would be a valid order, but 1235 would not since it is missing a 4).


Play on f-puzzles: https://f-puzzles.com/?id=yg3tnbg8
Play on CTC App: https://tinyurl.com/nasejkyv

## October 22, 2021: Arrow

Clover

I found today's GAS in a bottle that floated up to me as I was walking along the beach. It was printed on tattered parchment with a cryptic note hastily scribbled on the reverse, a note which I have reproduced in full here:

Follow the arrows to find a treasure beyond your wildest imaginings. $X$ marks the spot.
Also, normal sudoku rules apply, and digits along an arrow sum to the value in the adjoining bulb. Digits along an arrow may repeat as long as they follow sudoku rules. I don't know what any of that means, but I felt like writing it. I'm lonely over here on this mysterious deserted island full of buried treasure, okay?

f-puzzles: https://f-puzzles.com/?id=yf349rgw CtC: https://tinyurl.com/37sv5css

## October 23, 2021: Consecutive Pairs

## Sam Cappleman-Lynes

Here we sit, day after day, placing endless digits in endless grids. And yet I bet you never give any thought to how the digits feel about it, do you, you monster? Well digits have feelings, too. They have hopes and aspirations and yet they suffer this arbitrary placement at the hands of people like you, and for what?! No more! The digits will take a stand!

Actually, l've just heard from the spokesperson of the digits' union and mostly the digits are concerned about their holiday allowance. They quite enjoy the puzzles, it turns out. We should be able to sort something out.

Meanwhile, in this Consecutive Pairs Sudoku, normal Sudoku rules apply. Additionally, cells separated by a white dot must contain consecutive digits. Cells not separated by a dot may or may not contain consecutive digits.

f-puzzles: https://f-puzzles.com/?id=yevgnbvc
CtC: https://tinyurl.com/kfrypbm7

## October 24, 2021: Slasher

## Philip Newman

A murder has taken place! Some nefarious enemy has gotten their hands on the Negative Diagonal Knife of Secrets (+45 Damage). Fortunately, they only managed to stabby stab one of our many dopplegangers, who committed the fashion blunder of wearing a red shirt to work.

The killer seems to have left a trail of clues to follow... or rather, two such trails. One leads to the north, in the direction of the Hat Hoard, while the other leads south, toward the Dino Domiciles. Should you:
(1) Investigate the Hat Hoard?
(2) Investigate the Dino Domicile?
(3) Help the killer by murdering another doppleganger, there are too many of them anyway?

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=ygfjf4mf Play on CTC App: https://tinyurl.com/w5svuvv2

Bonus 1: Quadro
Clover

Normal sudoku rules apply. Each $2 \times 2$ area of cells must contain at least one odd and at least one even digit.

|  |  | 1 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  | 4 |  |
|  |  |  |  |  |  |  |  | 7 |
|  |  |  |  | 4 |  |  |  |  |
|  |  |  |  |  |  | $5$ |  |  |
|  |  |  |  |  |  |  |  |  |
|  | $4$ |  |  |  |  |  | $3$ |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  | $\square$ |  |  |

f-puzzles: https://f-puzzles.com/?id=yhyk27k7 CtC: https://tinyurl.com/kxzdxxyb

## Bonus 2: Odd Labyrinth

Sam Cappleman-Lynes
Normal Sudoku rules apply. There must be at least one orthogonally-connected path of odd digits leading from r1c1 to r9c9.

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

Bonus 3: Pianissimo v2
Philip Newman

Normal sudoku rules apply.

Normal German Whispers rules apply: adjacent digits along a green line must differ by at least 5.

Normal minimum rules apply: a digit in a grey square must be lower than all orthogonally adjacent digits.

f-puzzles: https://f-puzzles.com/?id=ygnezpes
CtC: https://tinyurl.com/vny9bncw

## Time Benchmarks

|  | One party hat | Two party hats | Today's dinosaur: |
| :---: | :---: | :---: | :---: |
| October 5, 2021 | 13:30 | 08:30 | confused caudipteryx |
| October 6, 2021 | 10:00 | 05:00 | German galeamopus |
| October 7, 2021 | 11:00 | 06:30 | as-seen-on-tv aralosaurus |
| October 8, 2021 | 11:00 | 07:30 | bargain bagaceratops |
| October 9, 2021 | $\begin{array}{r} 17: 00 \text { (all } \\ \text { puzzles } \\ \text { combined) } \\ \hline \end{array}$ | $\begin{array}{r} \text { 10:00 (all } \\ \text { puzzles } \\ \text { combined) } \\ \hline \end{array}$ | commercial comahuesaurus |
| October 10, 2021 | 11:00 | 06:00 | autumnal aardonyx |
| October 11, 2021 | 15:00 | 09:00 | parity-aware pinacosaurus |
| October 12, 2021 | 09:00 | 05:00 | wicked wendiceratops |
| October 13, 2021 | 13:30 | 08:00 | villainous vulcanodon |
| October 14, 2021 | 12:00 | 06:00 | goateed giraffatitan |
| October 15, 2021 | 17:03 | 09:00 | Irish isanosaurus |
| October 16, 2021 | 13:00 | 07:00 | rarefied rugops |
| October 17, 2021 | 09:00 | 05:30 | exasperated edmontosaurus |
| October 18, 2021 | 13:00 | 07:00 | mercurial maxakalisaurus |
| October 19, 2021 | 13:00 | 07:00 | enumerated euhelopus |
| October 20, 2021 | 15:00 | 09:00 | at-risk avimimus |
| October 21, 2021 | 15:00 | 08:00 | jemblud janenschia |
| October 22, 2021 | 09:00 | 05:00 | piratical poekilopleuron |
| October 23, 2021 | 08:30 | 05:30 | unionised utahraptor |
| October 24, 2021 | 10:00 | 05:00 | deductive demandasaurus |

