r/ThingsYouDidntKnow • 2 mo. ago
TheStocksGuy

The Erdos-Straus Conjecture - Explained?

This is the most coherent explanation I can offer regarding the behavior of these numbers. Since the video showcasing these values continues to filter or delete my comments, I will not refer to it directly. Despite numerous attempts, no one seems to have noticed this pattern.

Follow the pattern by subtracting the column values from the corresponding row values at their intersections. Additionally, after performing the subtraction, add the column value to any subsequent digits.

This process involves a recursive calculation where values are subtracted according to a specific pattern. Each result (remainder) is carried diagonally at a 45-degree offset (one step up and one to the right), and each value is adjusted as the calculations progress. Here is how the example can be fully computed and represented:

Full Grid Example

Top Row: (2, 5, 8, 11, 14, 17, 20, 23, 26, 29)
Left Column: (5, 8, 11, 14, 17, 20, 23, 26, 29)

We calculate each cell using the formula:
Value at cell = (top row number) − (left column number below it)

Rules:

1. Remainders of subtraction are carried to the cell diagonally up and right.
2. If the top-left cell has no remainder from subtraction, no carry happens in the first step.
3. Each carry propagates recursively to all cells.

5	3	0	3	6	9	12	15	18	21	24
8		3	0	3	6	9	12	15	18	21
11			3	0	3	6	9	12	15	18
14				3	0	3	6	9	12	15
17					3	0	3	6	9	12
20						3	0	3	6	9
23							3	0	3	6
26								3	0	3
29									3	0

Steps Explained

1. **Cell (5, 2):** $2 - 5 = -3$, adjust remainder: 3. No carry since it's the first value.
2. **Cell (5, 5):** $5 - 5 = 0$, no remainder.
3. **Cell (5, 8):** $8 - 5 = 3$. Carry 3 to the upper-right diagonal cell (8, 5).
4. **Cell (8, 5):** $5 - 8 = -3$, adjust: 3. Repeat carry logic.

Steps Explained

1. **Cell (5, 2):** (2 - 5 = -3), adjust remainder: (3). No carry since it's the first value.
2. **Cell (5, 5):** (5 - 5 = 0), no remainder.
3. **Cell (5, 8):** (8 - 5 = 3). Carry (3) to the upper-right diagonal cell (8, 5).
4. **Cell (8, 5):** (5 - 8 = -3), adjust: (3). Repeat carry logic.

Simply put, it's like delighting in solving puzzles that others claim to be unsolvable.

Some insights are no longer available because this post is older than 45 days

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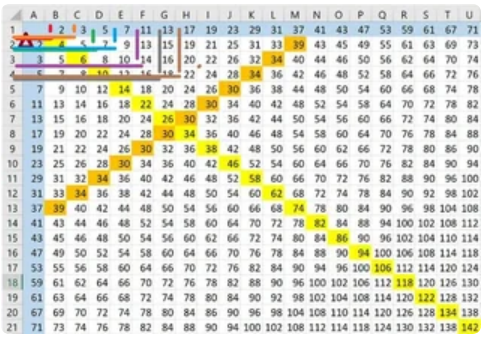
TheStocksGuy OP • 2mo ago

This was first on paper btw had to see it first

1

Approved 2 months ago

TheStocksGuy OP • 22d ago



The Goldbach's Conjecture - Is related to the charting above and how I explained it to I've resolved, You start in left column and follow right and up to get the remainder of, which is easy to see in this image.

1

Approved 22 days ago

TheStocksGuy OP • 21d ago

5	7	8	10	12	16	18	22	24
7	9	10	12	14	18	20	24	26
11	13	14	16	18	22	24	28	30
13	15	16	18	20	24	26	30	32
17	19	20	22	24	28	30	34	36
19	21	22	24	26	30	32	36	38

Forgot to add a easier chart to follow about The Goldbach's Conjecture

1

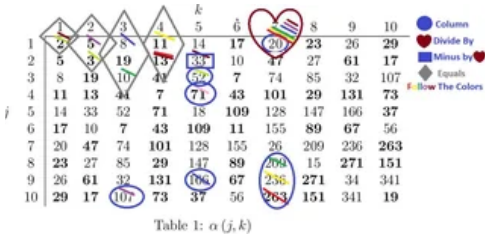
Approved 21 days ago

TheStocksGuy OP • 21d ago

The Erdős–Straus Conjecture Divide by? or more

The actual mathematics behind it is quite complex. I began by exploring the largest digits to make sense of the equations, but it became difficult to follow as the trail ended or diverged. I spent around 1-3 hours on this, and while I got more confused initially, it eventually started to make sense. The attached image may illustrate a partial solution to the Erdős–Straus Conjecture. I am uncertain how many numbers are removed as the process continues or what remains. Although it was enjoyable to experiment with, I think it's time to take a break and see if anyone else can come up with something creative.

https://www.semanticscholar.org/paper/On-the-Erd%C3%B6s-Straus-conjecture-%3A-Properties-of-to-Monks-Velingker/b65e60f1528dfc9751ee4d7b3240dd6dd8e3fbc2



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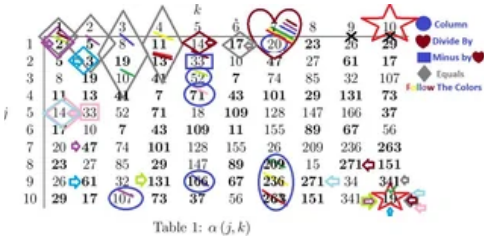
TheStocksGuy OP • 21d ago



Part two: Follow the decimal to its corresponding column. I managed to parcel solve 7 and 10 on the happy trail. However, row 9 initially used both 34 and 26, which was confusing and required further thought. I'm quite tired now. If you have any insights or better solutions using these patterns or evaluations, please comment on X or here.

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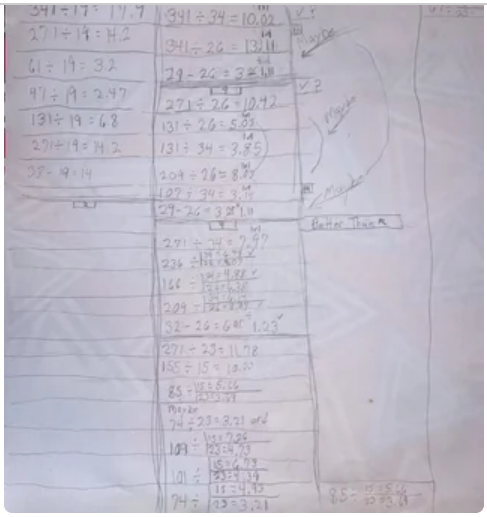

Riddle me this, There is **The Erdős–Straus Conjecture** and it needs your help!

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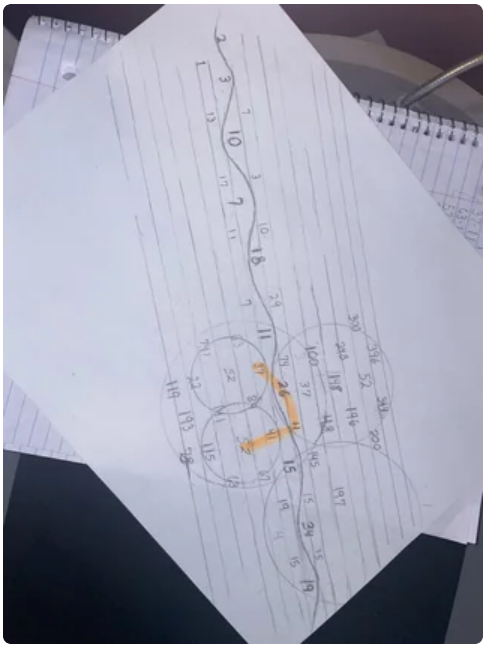
Approved 21 days ago

TheStocksGuy OP • 12d ago



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