

Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
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-
- Options for publications (per UC Berkeley library): UC Berkeley Scientific Journal, Math Association of America (journals more undergrad focused), Search MathSciNet (most journals you can publish for free) -> open access journals DOJA -> can pick one of good quality; Transformative agreements (library will cover most of the expense to all of it and they have it with major publishers) -> don't have to pay to publish it but would be made open access ; open access agreement -> could put in scholarship as a post print that would be openly available -> for open access may have to be under Branden
 - Corresponding author - UCB author person (affiliation -> where you did the research -> even if you graduated still list UCB as affiliation)
 - Arxiv - could put it up here - place where people share math and computer science research before it gets published - allows you to put a version that people can see right away - open access (wouldn't be published article but would be out there -> set providence on it -> wouldn't preclude you from submitting to journals) -> finding one with no fee to publish or where the library would cover the publishing -> would need to look for journals and see if it falls in publishers (google search UC scholarly communications); search IEEE for keywords around the topic and see if anyone has published anything on it in their journals and where they've published it ; once you've identified the journal - go to the journal webpage and read the aims and scope of the journal to confirm the article fits within the aims and scope of the journal -> write in latech (can use overleaf and they have lots of latech templates for different journals to help format in style of journal)
 - Data Journals - main publication is the dataset and it's a short article that goes with it to explain the dataset (Nature has one, but there are other); dryad is for dataset and if you want data publishing reach out to librarydataservices[at]berkeley.edu -> publishing here is free(do curation there as well - will make sure it's like properly formed and well described); the other option is Zenodo (archiving service - run out of CERN) -> archiving data where people can put things -> can archive github repos in Zenodo -> don't have to do anything else (Zenodo is free); template for Arxiv -> don't submit to more than one journal at a time -> don't be discouraged if you get rejected -> take the feedback, revise and resubmit elsewhere
 - No matter what go for Zenodo and maybe Arxiv

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[Fall 2022](#)

[Meeting 12/2/2022](#)

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[Meeting 8 \(11/04/2022\)](#)

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[Meeting 7 \(10/21/2022\)](#)

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[First One Hundred Odd Numbers Numbers:](#)

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Spring 2023

Meeting 3/13/2023:

- Articles - we have begun outlining research articles and plans to release our database (see hypothesis doc for these areas)
- Tao's paper - please begin to read Terry Tao's paper up to Theorem 1.3 we will be discussing this section over the next few weeks and into the upcoming semester while we are working on finalizing the paper
- Next steps - please read Tao's paper (linked in 3/9/2023 notes) and also feel free to begin looking at our outlines and designs

Meeting with Professor Paulin 3/9/2023:

- Article - write this up and see if we can find a space to put it online as a publication along with the database -> nice work and observations but a professional journal would be hard - an undergraduate journal or a place to upload it - for other groups of undergraduates ; Github Database and a Report/Cite documenting our process and what we've accomplished; documenting the number of folks have been involved - putting something together and a template for other projects ; Three projects/publications: 1. Article/writeup 2. Education survey/template 3. Github Database
- Continuing the examination of the Collatz Conjecture - we've reached an impasse, but we may not find anything too profound -> if you were to take Tao's paper and look at his result and understanding the result - totally worth trying to understand ; to prove a conjecture requires much more broad thought - involves thinking about what being logarithmically dense
- Algorithms - coming up with different algorithms could be valuable but looking at Tao's paper could be beneficial ; coming up with algorithms to test different things about it
- Terry Tao Paper: <https://arxiv.org/pdf/1909.03562.pdf> (Theorem 1.3 will tell us how strong the result has gotten); will talk to team about this (you should know that by the end of the project)
- Plans for Meeting Monday - discuss and begin outlines for papers (Math and Education); Look into infrastructure for publishing database and get MIT Creative Commons License; Assign paper reading and structure meetings with a 40 10 split/30 20 split (ie 40 minutes on research and outlining, 10 minutes discussion)

Meeting 3/6/2023:

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-
- Code - we updated our code so now we can access and gather our data more effectively - please feel free to check this out on the google colab - it should be titled check5() as the function name
 - Data - so far we were expecting our powers of 1 to take about 50% of the values occurring (ideally half the time), but instead we are seeing deviations of anywhere from 5-10% in some of our numbers; we will follow up with professor Paulin to see what he says on this
 - Next Steps - for those who couldn't make the meeting today, please review the code and process some more numbers; feel free to add on to the doc where we haven't already

Meeting 2/27/2023

- Update new members
- Main goals for this semester
 - Continue making progress on researching Collatz Conjecture
 - Algorithm Project
 - Modular Code Project
 - Publishing or releasing algorithm from last semester
- Timeline
 - Algorithm Project - Traverse more patterns (Weeks 8-12); Speak with Professor Paulin about the possibility of releasing a research article (Weeks 8 -12); Finalizations and Continued work (Weeks 12 - 15; Description: Finalizing any patterns, jotting down additional notes, and making sure we're on the right track through our meetings with professor Paulin)
 - Database Project: Modular Code Project - Weeks 8 -12 (Share our current code base with everybody, and process data, and analysis of data) ; Weeks 8 -12 (Creating data for us to traverse - at least a 100-300 data points); Weeks 12 - 15 (Analysis and a possible prepping for releasing our data should we get an okay from Professor Paulin)
 - **Note:** No Meeting during week 11 due to Spring Break
- Set-Up of Collatz Conjecture Presentation by Terrence Tao
 - <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- Code Shortcut
 - [Hailstone Colab](#)
 - Modular Loop Code is the new portion at top
- Teams
 - **Visualization Team** - This team would focus on optimizing the algorithm, running the algorithm, and placing the images of each of the set classifications into our

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database (which would be a google doc, google slides, or some other image storage software).

- **Classification Team** - This team would think carefully about what numbers we would want to classify, and would work towards trying to figure out what classifications we would need. We would most likely need thousands of different classifications and this team would be in charge of figuring out what we would call each classification, and what numbers we needed to check. (Wen, Henry)
- **Math and Research Analysis Team** - This team would analyze the literature on the Collatz conjecture to help guide our findings, and would design literature reviews. They would also write up analysis on the classifications that we provided, which we would add to our database when we publish our results. ; (Pooneh and Shraya)

Meeting 2/17/2023

- Meeting Time - has been moved to Mondays 9-10am (will not be next week due to the holiday, but we will start meeting the week after)
- Recruitment - we will send out an announcement next week to all the adjuncts to gather additional lab members
- Semester Goals - 1. Continue researching the $4n+1$ pattern and looking into our algorithm as we try to find a unique way to prove the Collatz Conjecture 2. Look into possibly publishing our algorithm this semester in either an undergraduate journal or preferably a professional research journal with Dr. Paulin and Branden both being on the paper
- Happy 1 year anniversary - happy 1 year anniversary to the Hailstone Project

Fall 2022

Meeting 12/2/2022

- Further Updates from Prof. Paulin
 - We have a way of trying to classify some of the numbers based on the $4n+1$ pattern we found.
 - We have some other things to investigate and ways to try to find other patterns.
 - We may be able to record some of what we have found into an article.

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- Jatin's Code to check for which powers of 2 a number hits:
 - [Hailstone Colab](#)
 - Modular Loop Code is the new portion
 - Numbers tested:
 - Starting value: 31 (# 1 -> 57.5%, 2-> 25%, 3-> 7.5%, 4 -> 7.5%, 5 -> 2.5%, 6 -> 0)
 - Starting value: 301 (1 -> 0%, 2 -> 50%, 3 -> 25%, 8 -> 25%)
 - Starting value: 207 (1 -> 56.25%, 2 -> 18.75%, 3 -> 12.5%, 4 -> 9.375%, 5 -> 3.125%)

Meeting 11/18/2022

Present:

- **Update from Professor Paulin/Jatin:**
 -  Hailstone Project Hypothesis
 - Photos of work on Slack
 - [Hailstone Project](#)

Meeting 8 (11/04/2022)

- [Hailstone Hypothesis](#)
- Team Descriptions:
 - Visualization Team - this team would focus on optimizing the algorithm, running the algorithm, and placing the images of each of the set classifications into our database (which would be a google doc, google slides, or some other image storage software). **Maddy, Pooneh, Ashley, Hanjo**
 - Classification Team - this team would think carefully about what numbers we would want to classify, and would work towards trying to figure out what classifications we would need. We would most likely need thousands of different classifications and this team would be in charge of figuring out what we would call each classification, and what numbers we needed to check. **Henry, Wendy, Heroda, Brian**
 - Math and Research Analysis Team - this team would analyze the literature on the Collatz conjecture to help guide our findings, and would design literature reviews.

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They would also write up analysis on the classifications that we provided, which we would add to our database when we publish our results. **Cailee, Riddhi**

Meeting 7 (10/21/2022)

Present: Branden, Hanjo, Henry, Iris, Jatin, Pooneh, Riddhi, Maddy, Brian, Wendy, Heroda

- Team Descriptions:
 - Visualization Team - this team would focus on optimizing the algorithm, running the algorithm, and placing the images of each of the set classifications into our database (which would be a google doc, google slides, or some other image storage software). **Maddy, Pooneh, Ashley, Hanjo**
 - Classification Team - this team would think carefully about what numbers we would want to classify, and would work towards trying to figure out what classifications we would need. We would most likely need thousands of different classifications and this team would be in charge of figuring out what we would call each classification, and what numbers we needed to check. **Henry, Wendy, Heroda, Brian**
 - Math and Research Analysis Team - this team would analyze the literature on the Collatz conjecture to help guide our findings, and would design literature reviews. They would also write up analysis on the classifications that we provided, which we would add to our database when we publish our results. **Cailee, Riddhi**

Meeting 6 (10/14/2022)

Present: Ashley, Branden, Cailee, Hanjo, Henry, Jatin, Maddy, Pooneh, Wendy

- Slack was shared with everybody whose emails are on the google doc, please let us know if you were not added to the slack
- Team Descriptions:
 - Visualization Team - this team would focus on optimizing the algorithm, running the algorithm, and placing the images of each of the set classifications into our database (which would be a google doc, google slides, or some other image storage software). **Maddy, Pooneh, Ashley, Hanjo**

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- Classification Team - this team would think carefully about what numbers we would want to classify, and would work towards trying to figure out what classifications we would need. We would most likely need thousands of different classifications and this team would be in charge of figuring out what we would call each classification, and what numbers we needed to check. **Henry, Wendy**
- Math and Research Analysis Team - this team would analyze the literature on the Collatz conjecture to help guide our findings, and would design literature reviews. They would also write up analysis on the classifications that we provided, which we would add to our database when we publish our results. **Cailee**
- **Next Steps**
 - Make a table of all the trigger numbers (trigger number, and numbers) and continue developing visualizations

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Spring 2022

Meeting 5 (4/29/22)

- Numbers - odd numbers were generated up to the number 400 and data was cleaned to improve lookup times for the mathematical analysis team
- Mathematical Analysis - the mathematical analysis team begin looking into hypotheses generated on the document; trigger numbers were identified for hypothesis 1 - see work on hypothesis document
- Artificial Intelligence - designs began on the artificial intelligence with table designs being made to generate and analyze which numbers occurred in the Collatz Conjecture sequence per each number
- Organization - documents were organized and moved to a google drive and Slack was updated
- Next Semester - we will begin again next semester and will continue working on our research as well as designing and implementing a nonprofit organization for Data Science Education - if you would like to continue working over the summer, please just make sure to keep us posted through email and the slack so we can keep working with you, otherwise please take a break for the summer

Meeting 4 (4/22/22)

- Consider using Heath's Updated code to generate batches of Hailstones
 - [Updated Hailstone Batches](#)
- Our database for the first 1-200 odd numbers was completed - analysis has begun and plans to write an AI to properly classify the data are being put in place using a PCA structure
- A hypothesis document was created and shared with everybody in the lab to put down potential hypothesis that we will try to validate throughout this and next semester
- We plan to place our data into a github upon patent/publication or for future data holding
- Consider using Eduardo's code (on slack) that uses R code to generate tables of data for the number and the number of steps
 - Outputs
- Our final semester meeting will take place next Friday on April 29th - meeting location TBD (most likely Evans, but tune in to slack - if nothing is posted we're in Evans, if

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something is posted please go there) - we will continue next semester and will also begin designing a data science nonprofit as well as gathering new members to help us in our projects

- Next Lab meeting - we will begin doing more analysis, generating more numbers and data, and also designing our AI - we will compile all of our code into a repo as well which we may consider publishing per Dr. Paulin and Branden's recommendations

Meeting 3 (4/15/22)

- [Hailstone Code](#) (Branden)
 - Feel free to make a copy and adapt this
 - Adapted from Jatin's code in last meeting
 - Done in google colab (works in Jupyter and this interface)
 - Does not require using Data 8 packages, instead uses numpy and pandas
 - Allows for easier update of input to generate graphs
 - Code chunk to generate peaks, mins and counts of applications of hailstone
 - Prime factorization of number code
- Visualizations - store the odd number and the length of time, store the list of odd numbers that turn up (that sequence and that can be done - look at the length of time it takes to hit one)

Meeting 2 (4/8/2022)

- Agenda - Intro, discussion of collatz conjecture, and providing overview from previous meeting, discussion of currently written code (emailed to be sent out), discussion of current research method and goals of lab, conclusion
- Overview: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- Data Science Library Reference: <http://data8.org/sp21/python-reference.html>
- Outline: Outlined our desires to build a dataset using prime factors and visualizations to find unique trends. Please go ahead and set up jupyter notebooks and input the code into jupyter notebooks to begin running visualizations
- Code - the code is as follows: Hailstone (to generate a hailstone sequence), storage1 and storage2 (to get the values of x and y), and finally we display our chart; our goal is to integrate in prime factors to this data sets using tables and charts to generate our dataset

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-
- Other avenues of research - what happens if we change numbers in the overall algorithm (our main focus will be on the actual Collatz Conjecture, but these are other areas to look into)

Code:

```
import numpy as np
from datascience import *
import matplotlib
%matplotlib inline
import matplotlib.pyplot as plt
x = []
def hailstone(n):
    count = 1
    tracker = 0
    assert n > 0
    #print(n)
    x.append(n)
    if n > 1:
        if n % 2 == 0:
            count += hailstone(n/2)
            tracker += 1
        else:
            count += hailstone((n*3) + 1)
            tracker += 1
    return count
"""
```

Make two arrays

count on x-axis

value on y-axis

Track both linear trends and see if we can predict whether a number is on the hailstone trajectory/ see if we can notice a valuable trend, pattern, or categorization.

"""

"""

Get me the y axis data

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```
"""
```

```
def storage(n):
    result = hailstone(n)
    y = []
    for i in range(result):
        y.append(i)
    return y
```

```
"""
```

Transform x to an array.

```
"""
```

```
def storage2(x):
    res = make_array()
    for i in range(len(x)):
        res = np.append(res, x[i])
    return res
```

```
y_axis = storage(14)
x_axis = storage2(x)
new_table = Table().with_columns("x", y_axis, "y", x_axis)
new_table.plot("x", "y")
```

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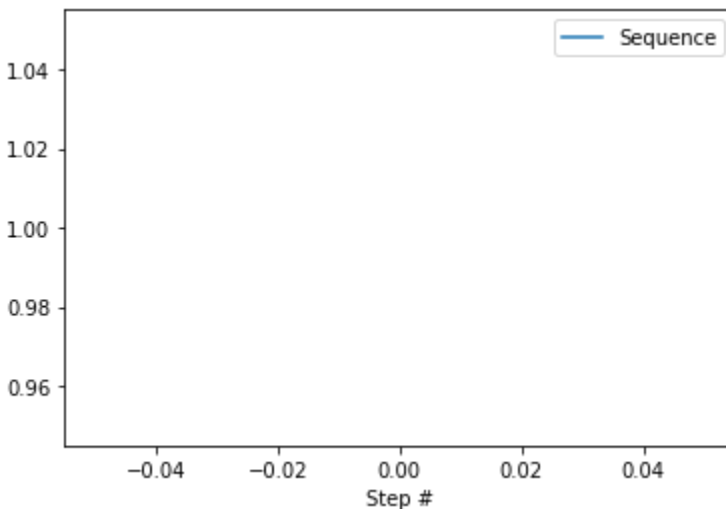
Database

Notes: This database displays the first one hundred odd numbers, along with the graph, length of numbers and odd numbers that occurred in the sequence. Please feel free to use for any mathematical analysis.

Graph, Length of Numbers, Odd Numbers that Occurred

First One Hundred Odd Numbers Numbers:

Starting Value: 1



Odds: [1]

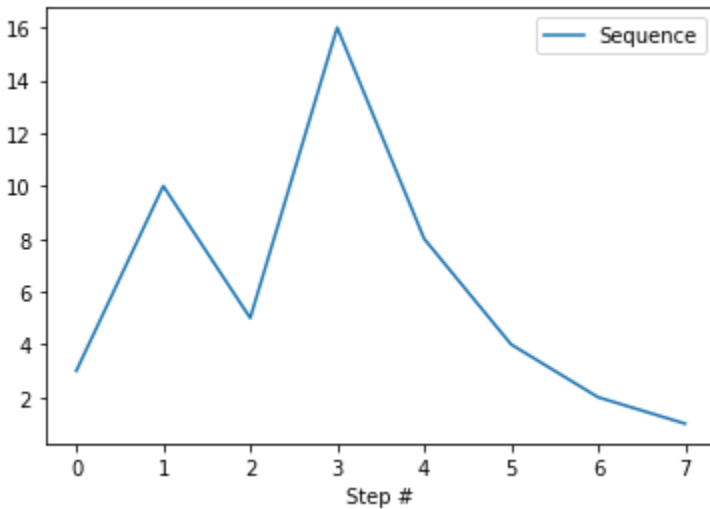
Length of this sequence: 1

Starting Value: 3

Hailstone Project Meeting Notes

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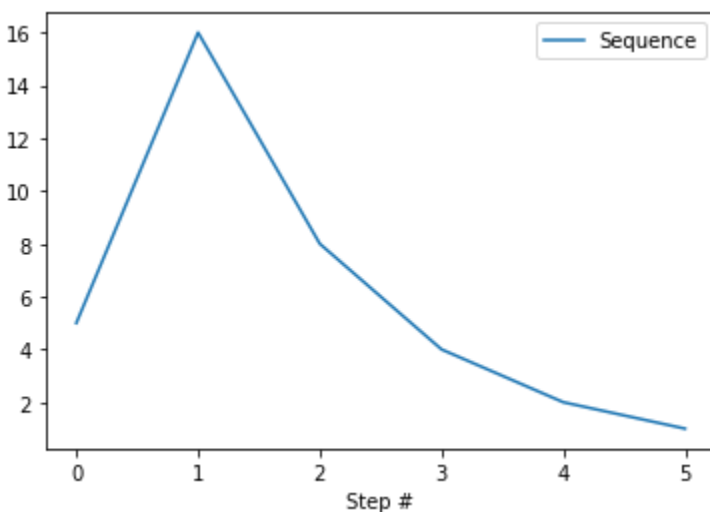
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Odds: [3 5 1]

Length of this sequence: 8

Starting Value: 5



Odds: [5 1]

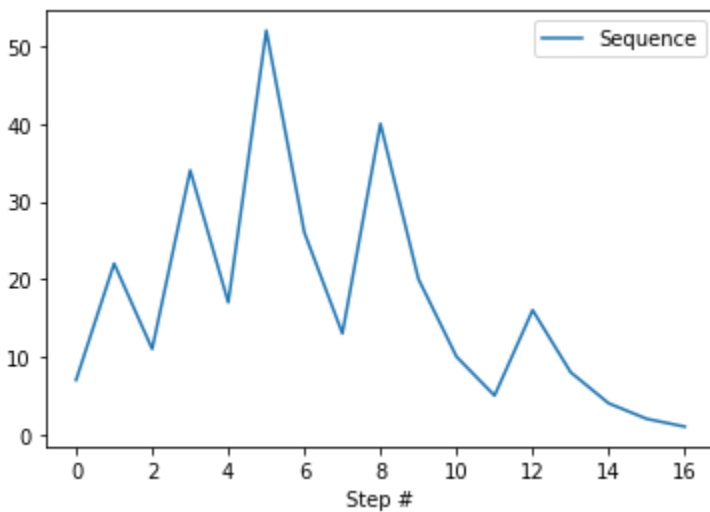
Length of this sequence: 6

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Starting Value: 7



Odds: [7 11 17 13 5 1]

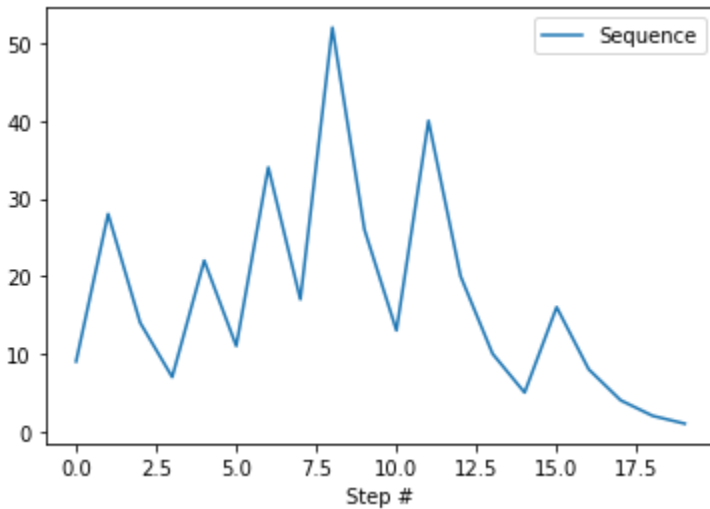
Length of this sequence: 17

Starting Value: 9

Hailstone Project Meeting Notes

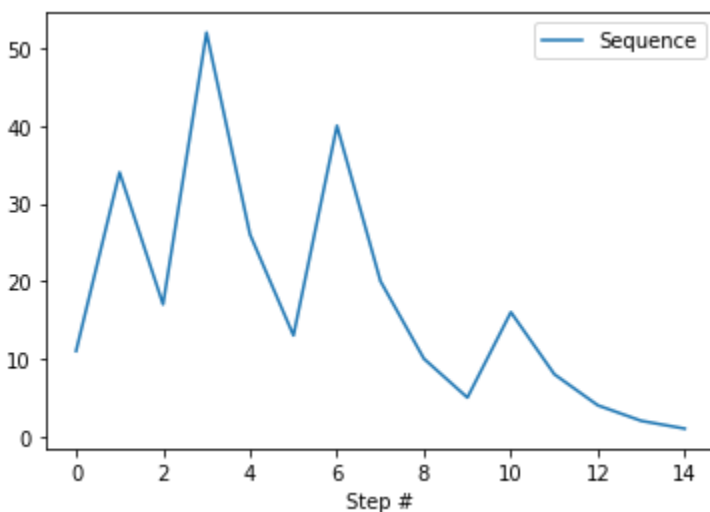
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Odds: [9 7 11 17 13 5 1]
Length of this sequence: 20

Starting Value: 11



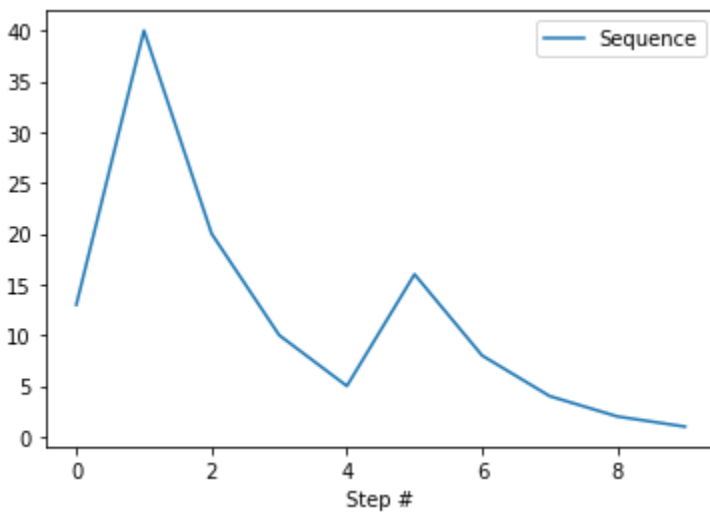
Odds: [11 17 13 5 1]
Length of this sequence: 15

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Starting Value: 13



Odds: [13 5 1]

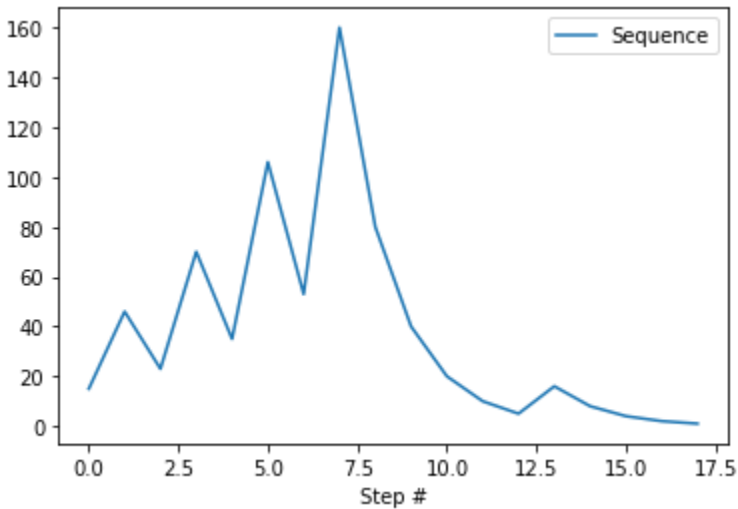
Length of this sequence: 10

Starting Value: 15

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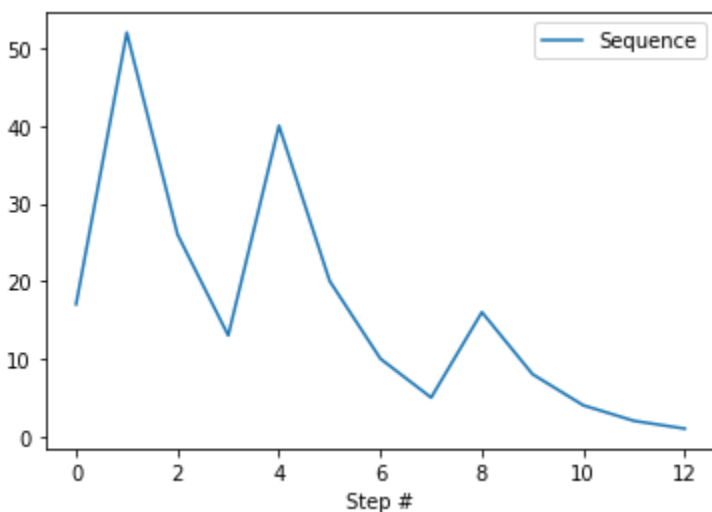
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Odds: [15 23 35 53 5 1]

Length of this sequence: 18

Starting Value: 17



Odds: [17 13 5 1]

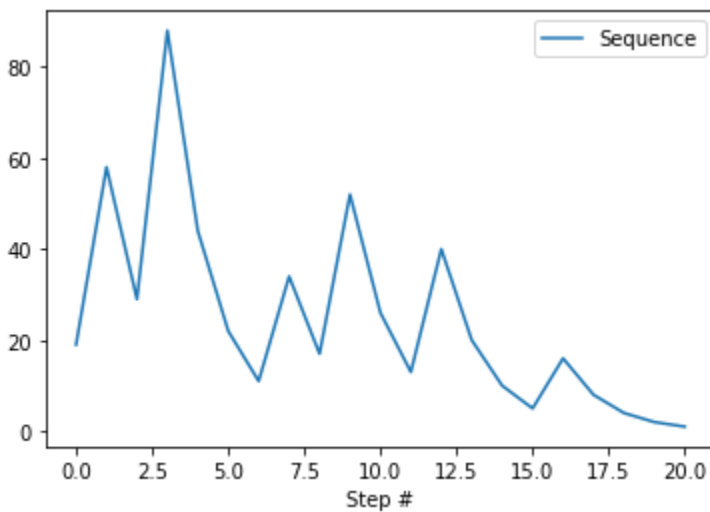
Length of this sequence: 13

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Starting Value: 19



Odds: [19 29 11 17 13 5 1]

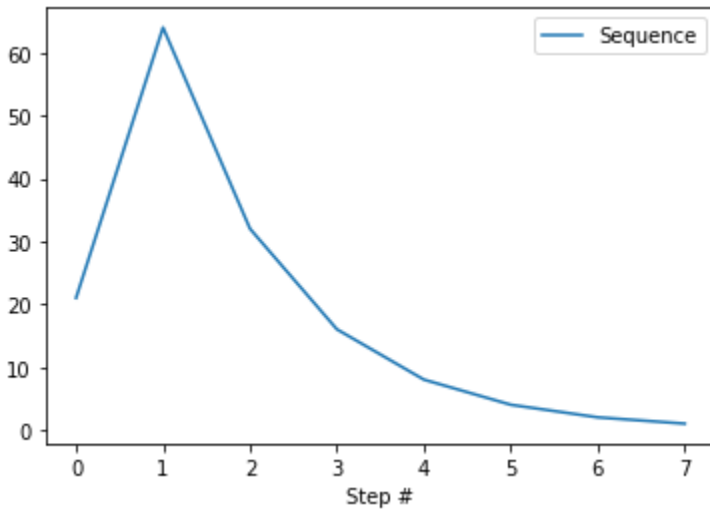
Length of this sequence: 21

Starting Value: 21

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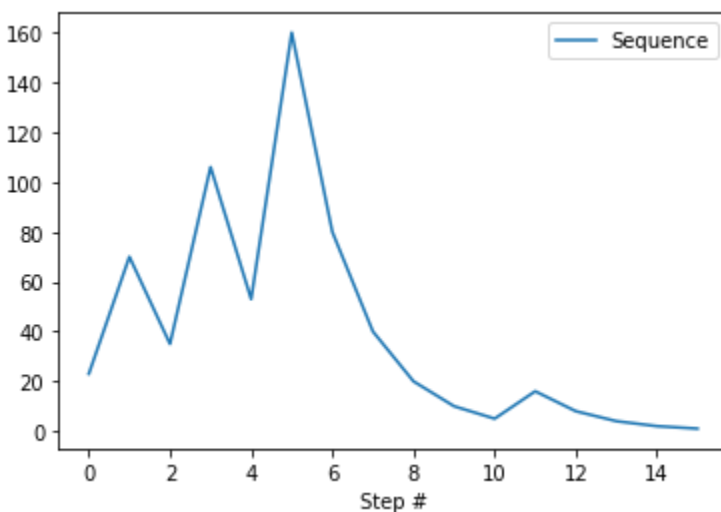
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Odds: [21 1]

Length of this sequence: 8

Starting Value: 23



Odds: [23 35 53 5 1]

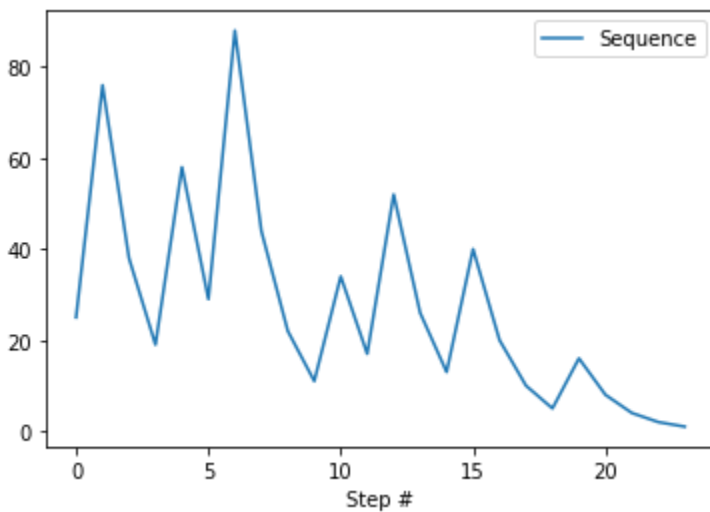
Length of this sequence: 16

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Starting Value: 25



Odds: [25 19 29 11 17 13 5 1]

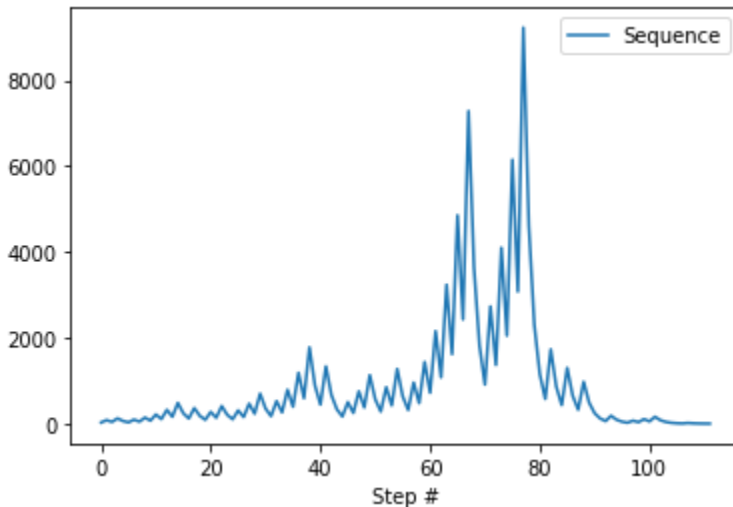
Length of this sequence: 24

Starting Value: 27

Hailstone Project Meeting Notes

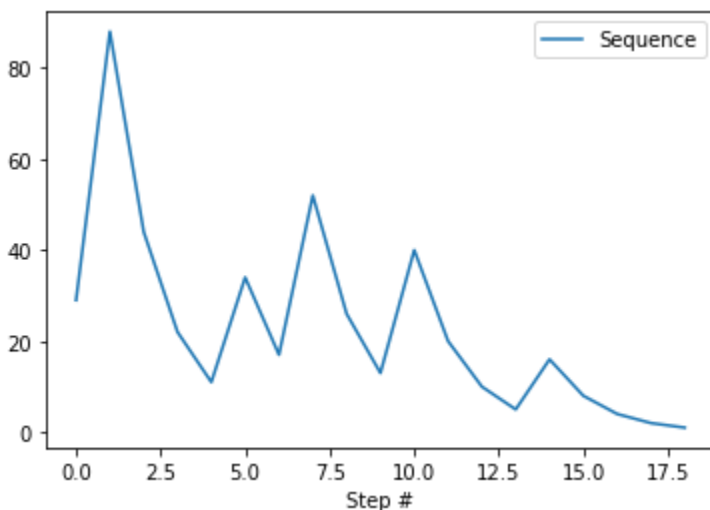
Resources

- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)



Odds: [27 41 31 47 71 107 161 121 91 137 **103** 155 233 175
263 395 593 445 167 251 377 283 425 319 479 719 1079 1619
2429 911 1367 2051 3077 577 433 325 61 23 35 53 5 1]
Length of this sequence: 112

Starting Value: 29



Hailstone Project Meeting Notes

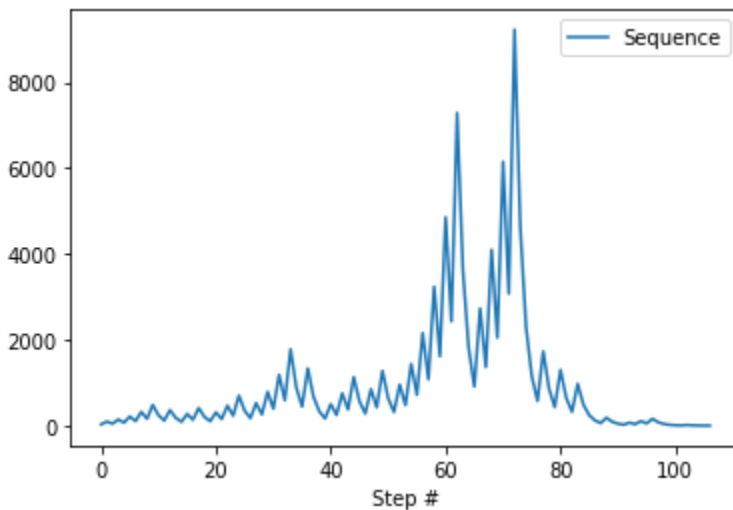
Resources

- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-

Odds: [29 11 17 13 5 1]

Length of this sequence: 19

Starting Value: 31



Odds: [31 47 71 107 161 121 91 137 103 155 233 175 263 395
593 445 167 251 377 283 425 319 479 719 1079 1619 2429 911
a 1367 2051 3077 577 433 325 61 23 35 53 5 1]

Length of this sequence: 107

Percentages Breakdown:

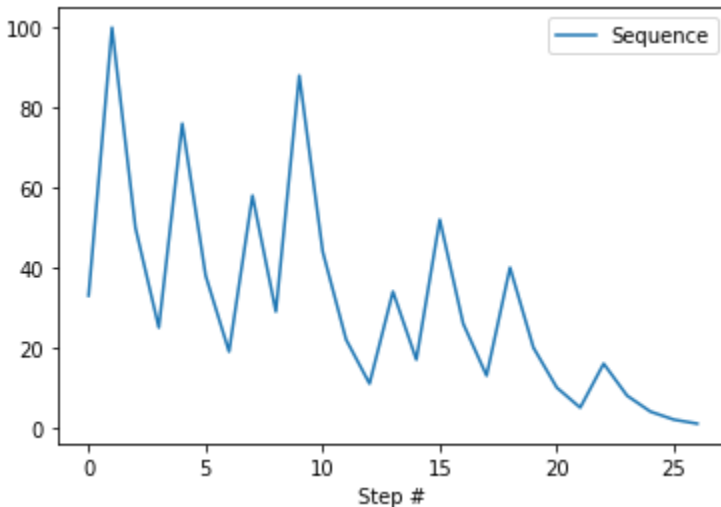
1 -> 56.4% , 2 -> 25.6%, 3->7.7%, 4->7.7% , 5->2.56%, 6-> 0.0%

Starting Value: 33

Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)

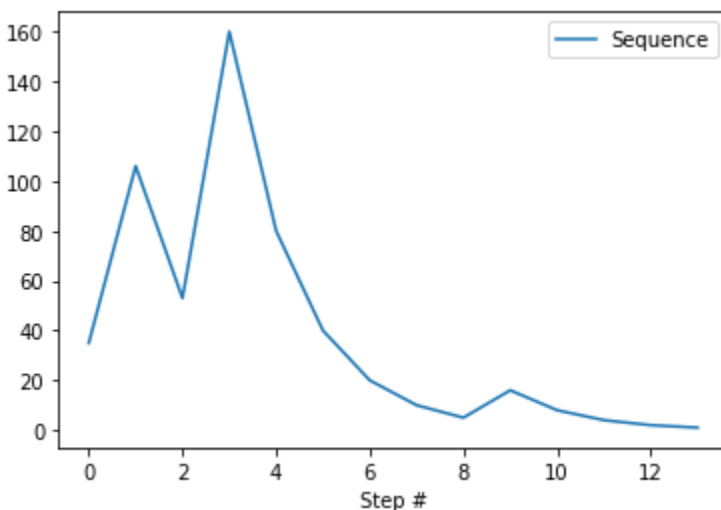


Odds: [33 25 19 29 11 17 13 5 1]

Length of this sequence: 27

Percentages Breakdown: 1-> 25%, 2-> 37.5%, 3-> 25% 4-> 12.5%, 5-> 0, 6->0

Starting Value: 35



Odds: [35 53 5 1]

Hailstone Project Meeting Notes

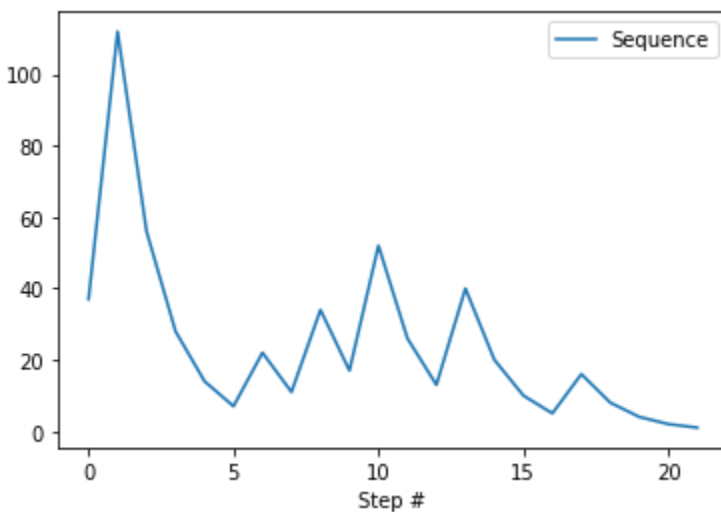
Resources

- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)

Percentages Breakdown: 1: 0.25, 2: 0.25, 3: 0.0, 4: 0.25, 5: 0.25, 6: 0.0

Length of this sequence: 14

Starting Value: 37



Odds: [37 7 11 17 13 5 1]

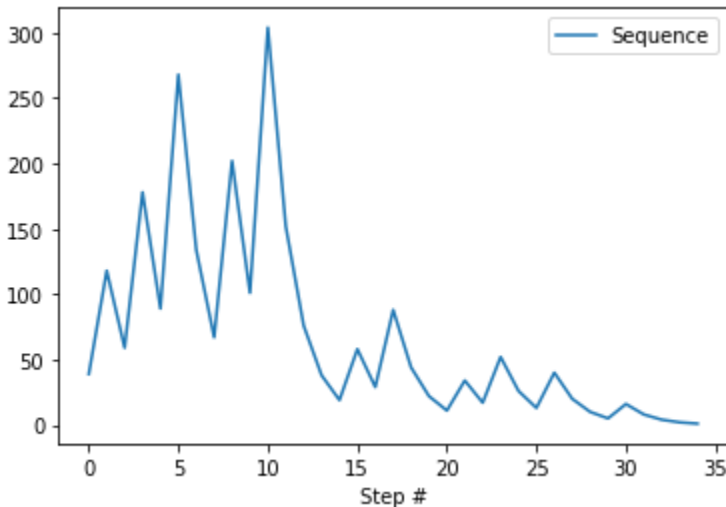
Length of this sequence: 22

Starting Value: 39

Hailstone Project Meeting Notes

Resources

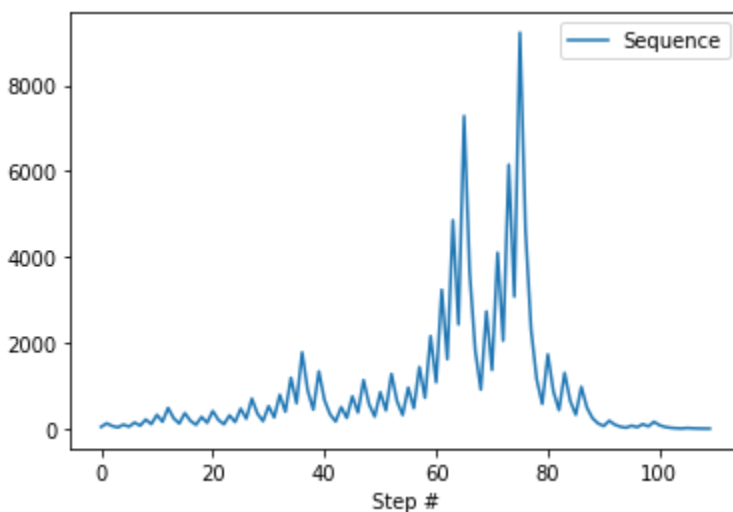
- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)



Odds: [39 59 89 67 101 19 29 11 17 13 5 1]

Length of this sequence: 35

Starting Value: 41



Odds: [41, 31, 47, 71, 107, 161, 121, 91, 137, 103, 155, 233, 175, 263, 395, 593, 445, 167, 251, 377, 283, 425, 319, 479, 719, 1079, 1619, 2429,

Hailstone Project Meeting Notes

Resources

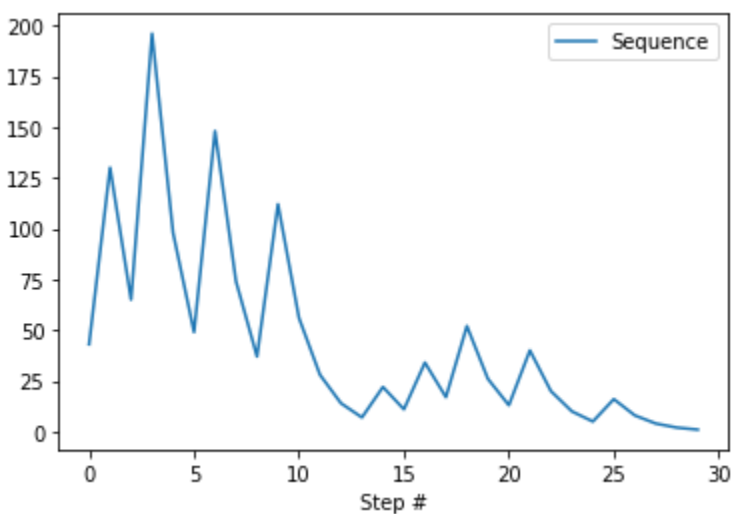
- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)

911, 1367, 2051, 3077, 577, 433, 325, 61, 23, 35, 53, 5, 1]

Length of this sequence: 110

```
#41 -> k =1 56%, k =2 -> 26.8%, k = 3 -> .07317, k = 4 -> .073%, k = 5  
.024%, k =6 -> 0
```

Starting Value: 43



Odds: [43 65 49 37 7 11 17 13 5 1]

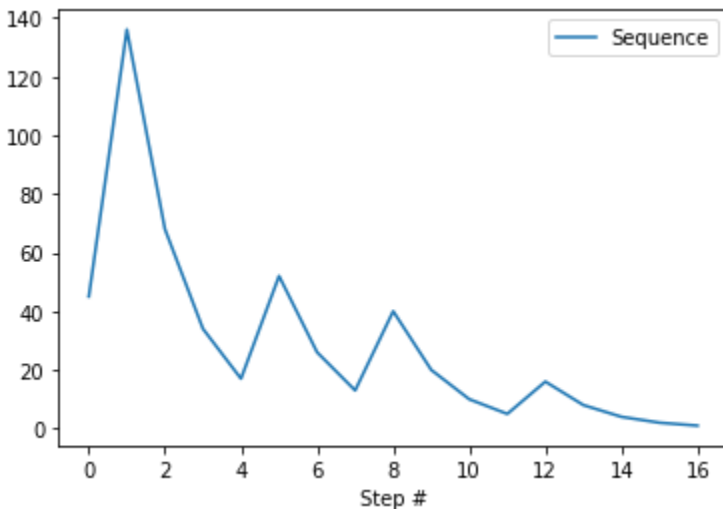
Length of this sequence: 30

Starting Value: 45

Hailstone Project Meeting Notes

Resources

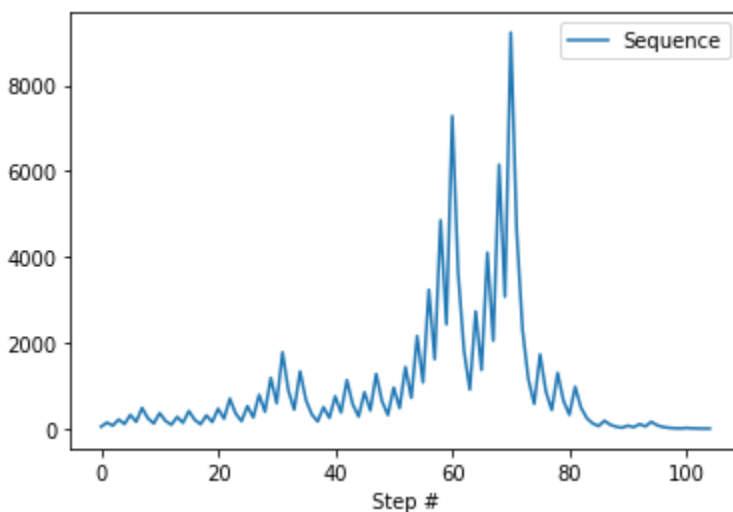
- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)



Odds: [45 17 13 5 1]

Length of this sequence: 17

Starting Value: 47



Odds: [47, 71, 107, 161, 121, 91, 137, 103, 155, 233, 175, 263, 395, 593, 445, 167, 251, 377, 283, 425, 319, 479, 719, 1079, 1619, 2429, 911, 1367,

Hailstone Project Meeting Notes

Resources

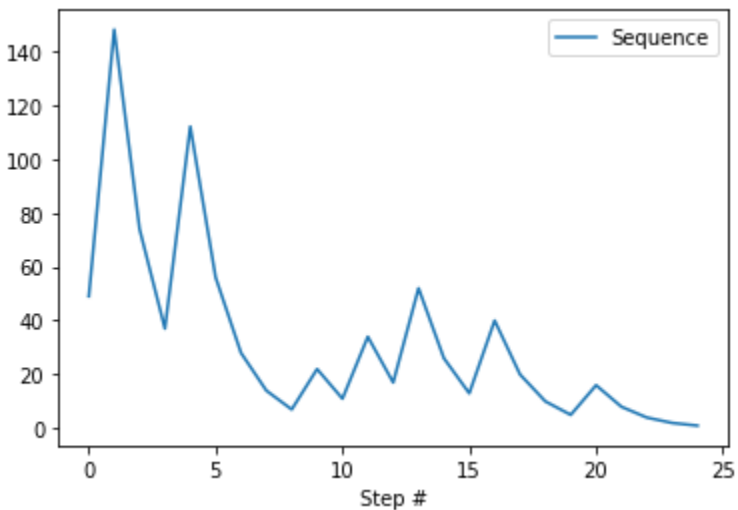
- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)

2051, 3077, 577, 433, 325, 61, 23, 35, 53, 5, 1]

Length of this sequence: 105

Percentages Breakdown: 1-> 56.4%, 2-> 25.6%, 3-> 7.7%, 4-> 7.7%, 5-> 2.56%, 6-> 0.0%

Starting Value: 49



Odds: [49 37 7 11 17 13 5 1]

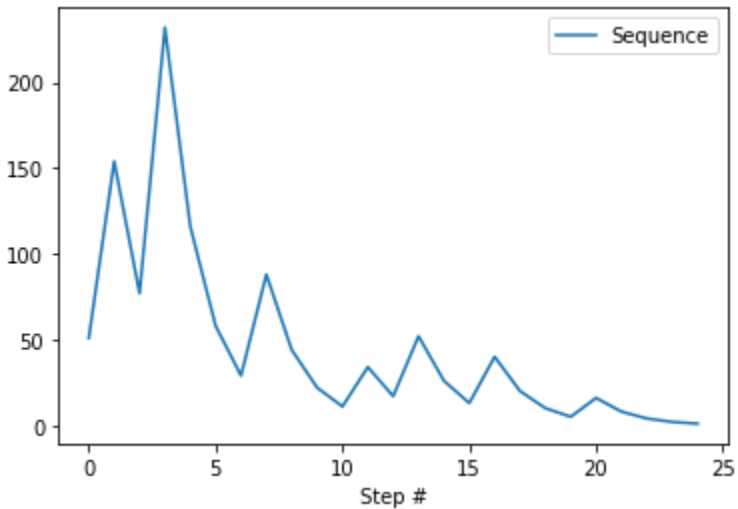
Length of this sequence: 25

Starting Value: 51

Hailstone Project Meeting Notes

Resources

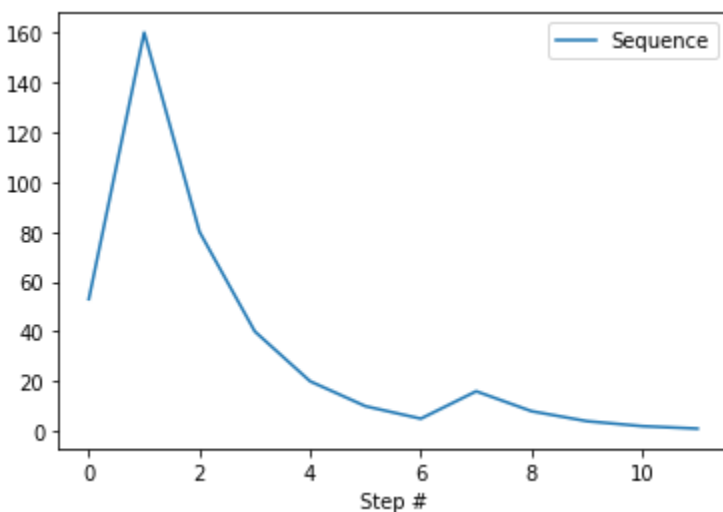
- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-



Odds: [51 77 29 11 17 13 5 1]

Length of this sequence: 25

Starting Value: 53



Odds: [53 5 1]

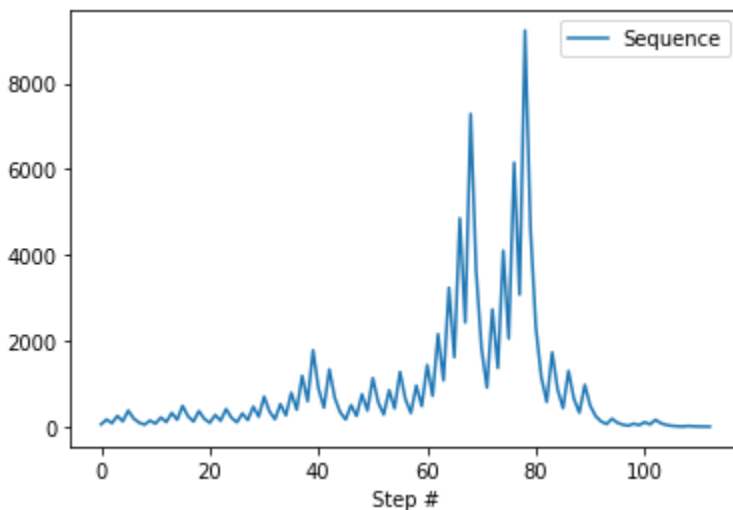
Length of this sequence: 12

Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-

Starting Value: 55



Odds: [55, 83, 125, 47, 71, 107, 161, 121, 91, 137, 103, 155, 233, 175, 263, 395, 593, 445, 167, 251, 377, 283, 425, 319, 479, 719, 1079, 1619, 2429, 911, 1367, 2051, 3077, 577, 433, 325, 61, 23, 35, 53, 5, 1]

Length of this sequence: 113

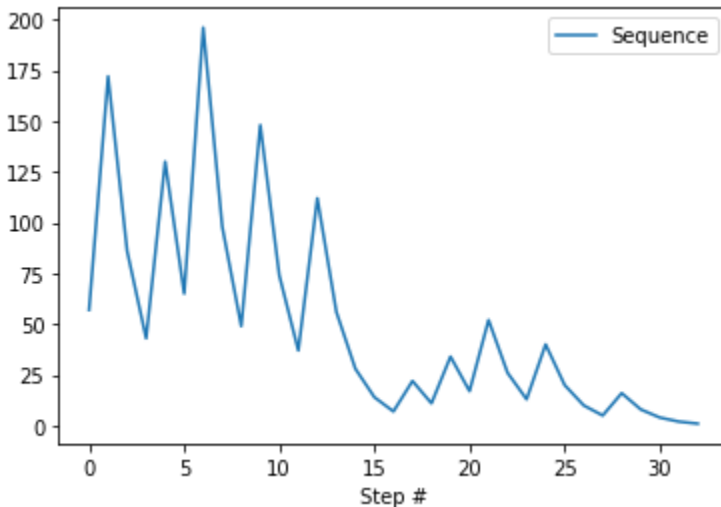
```
#55 -> k = 1 57%, k = 2 -> 23.8%, k = 3 -> 9.5%, k = 4 -> 7.1%, k = 5 -> 2.4% k = 6->0
```

Starting Value: 57

Hailstone Project Meeting Notes

Resources

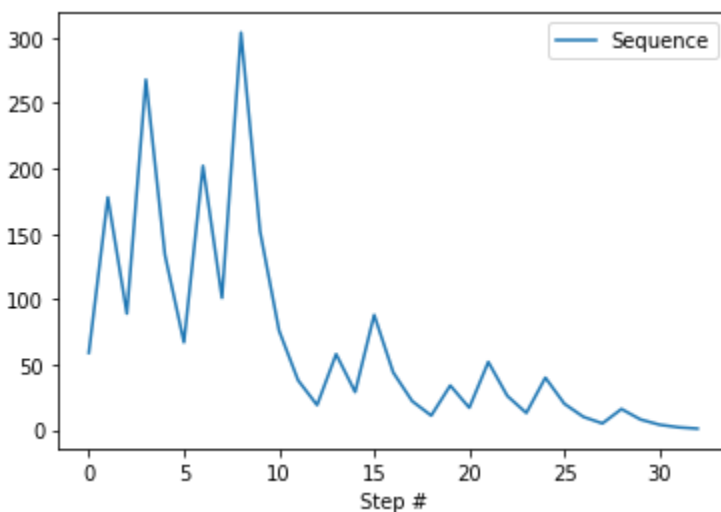
- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)



Odds: [57 43 65 49 37 7 11 17 13 5 1]

Length of this sequence: 33

Starting Value: 59



Odds: [59 89 67 101 19 29 11 17 13 5 1]

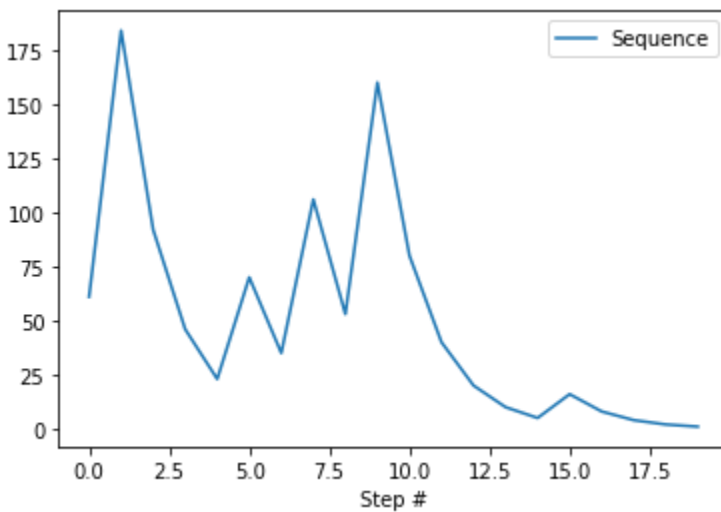
Length of this sequence: 33

Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-

Starting Value: 61



Odds: [61 23 35 53 5 1]

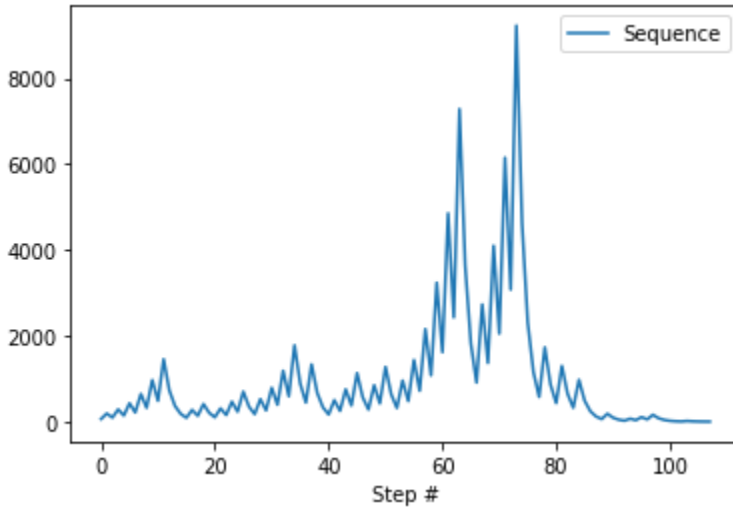
Length of this sequence: 20

Starting Value: 63

Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)



Odds: [63, 95, 143, 215, 323, 485, 91, 137, 103, 155, 233, 175, 263, 395, 593, 445, 167, 251, 377, 283, 425, 319, 479, 719, 1079, 1619, 2429, 911, 1367, 2051, 3077, 577, 433, 325, 61, 23, 35, 53, 5, 1]

Length of this sequence: 108

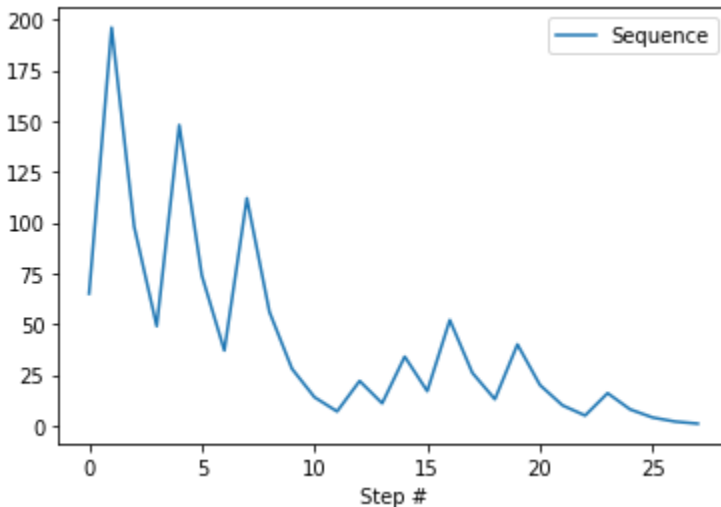
Percentages Breakdown: {1: 0.6, 2: 0.2, 3: 0.075, 4: 0.1, 5: 0.025, 6: 0.0}

Starting Value: 65

Hailstone Project Meeting Notes

Resources

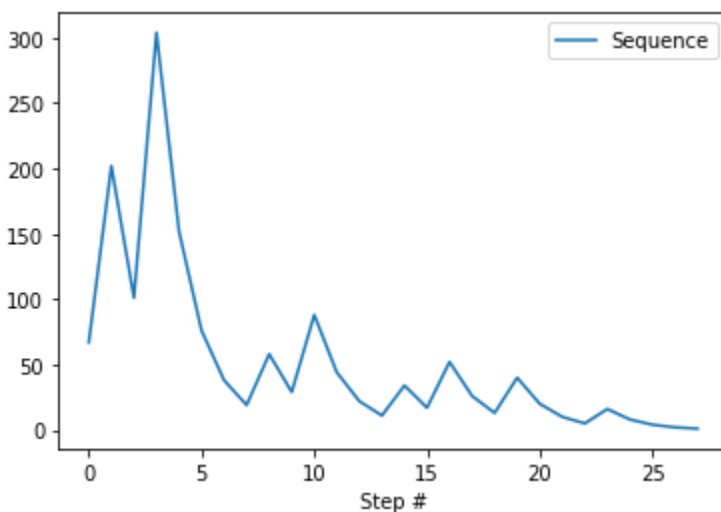
- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)



Odds: [65 49 37 7 11 17 13 5 1]

Length of this sequence: 28

Starting Value: 67



Odds: [67 101 19 29 11 17 13 5 1]

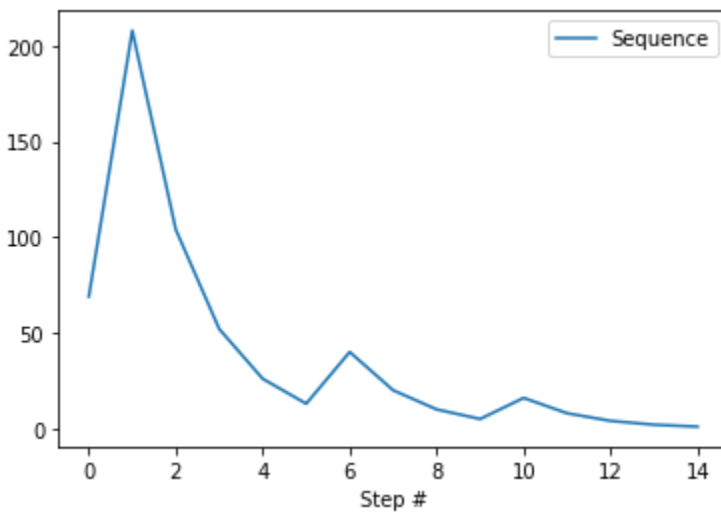
Length of this sequence: 28

Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-

Starting Value: 69



Odds: [69 13 5 1]

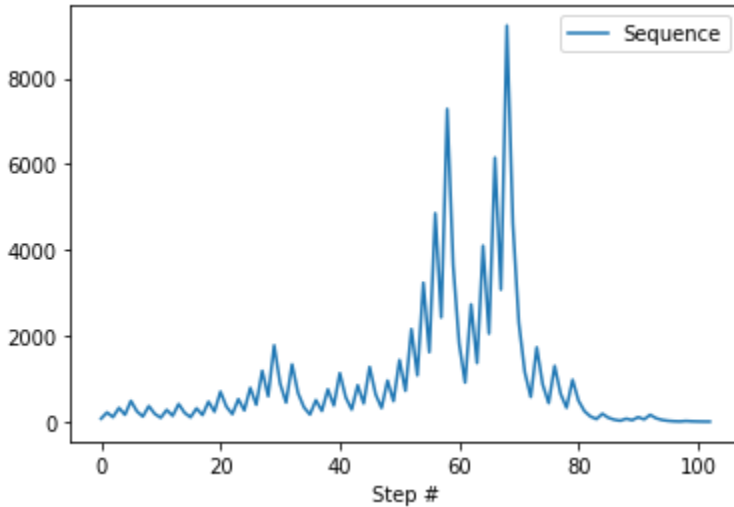
Length of this sequence: 15

Starting Value: 71

Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)



Odds: [71, 107, 161, 121, 91, 137, 103, 155, 233, 175, 263, 395, 593, 445, 167, 251, 377, 283, 425, 319, 479, 719, 1079, 1619, 2429, 911, 1367, 2051, 3077, 577, 433, 325, 61, 23, 35, 53, 5, 1]

Length of this sequence: 103

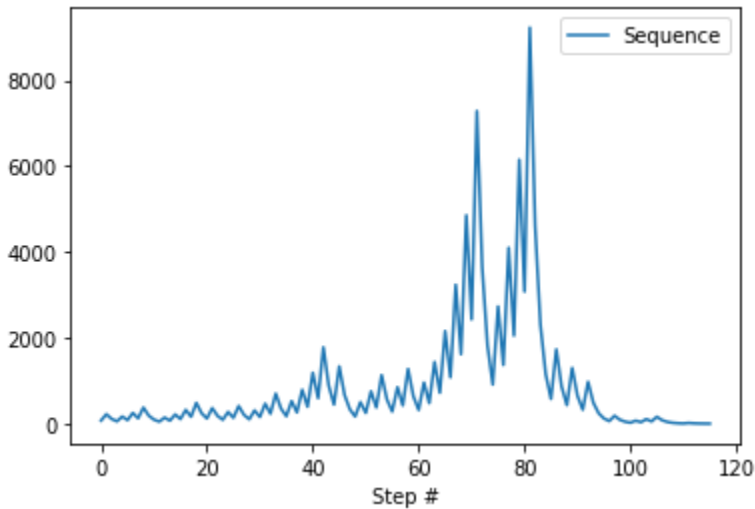
Percentages Breakdown: {1: 0.5526315789473685, 2: 0.2631578947368421, 3: 0.07894736842105263, 4: 0.07894736842105263, 5: 0.02631578947368421, 6: 0.0}

Starting Value: 73

Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)



Odds: [73 55 83 125 47 71 107 161 121 91 137 103 155 233
175 263 395 593 445 167 251 377 283 425 319 479 719 1079
1619 2429 911 1367 2051 3077 577 433 325 61 23 35 53 5
1]

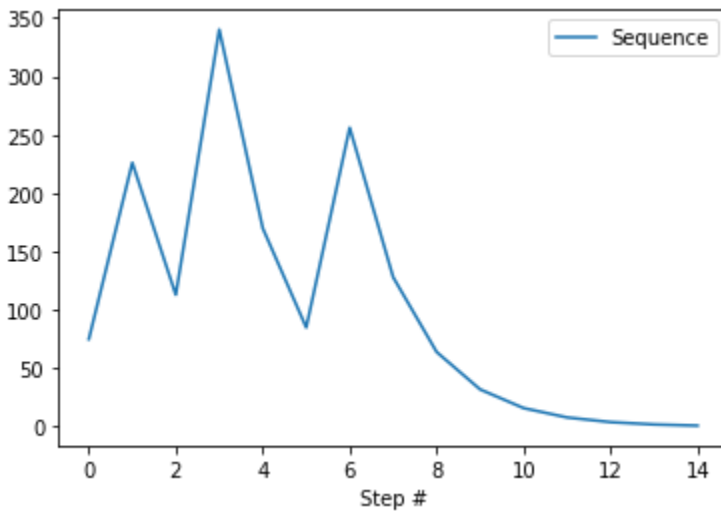
Length of this sequence: 116

Starting Value: 75

Hailstone Project Meeting Notes

Resources

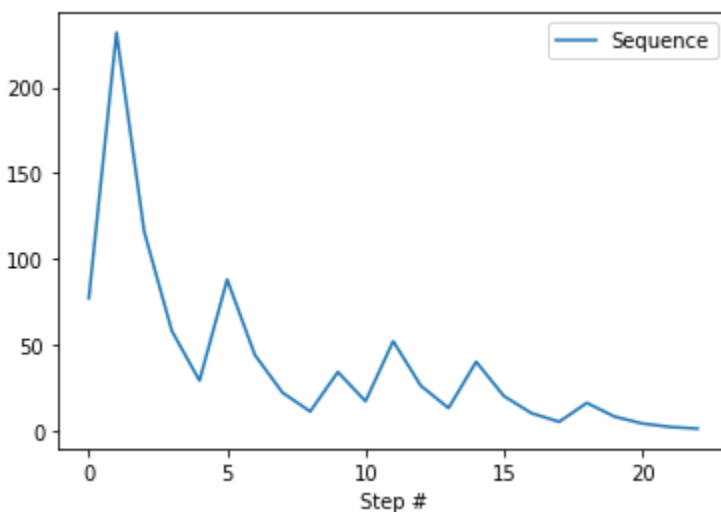
- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)



Odds: [75 113 85 1]

Length of this sequence: 15

Starting Value: 77



Odds: [77 29 11 17 13 5 1]

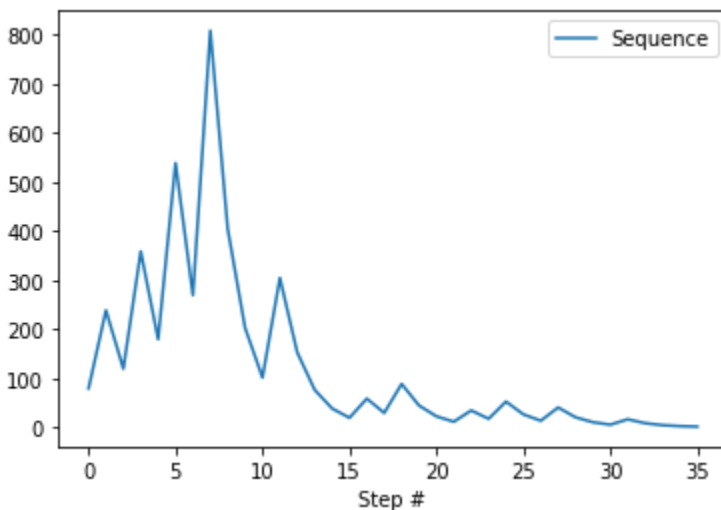
Length of this sequence: 23

Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-

Starting Value: 79



Odds: [79 119 179 269 101 19 29 11 17 13 5 1]

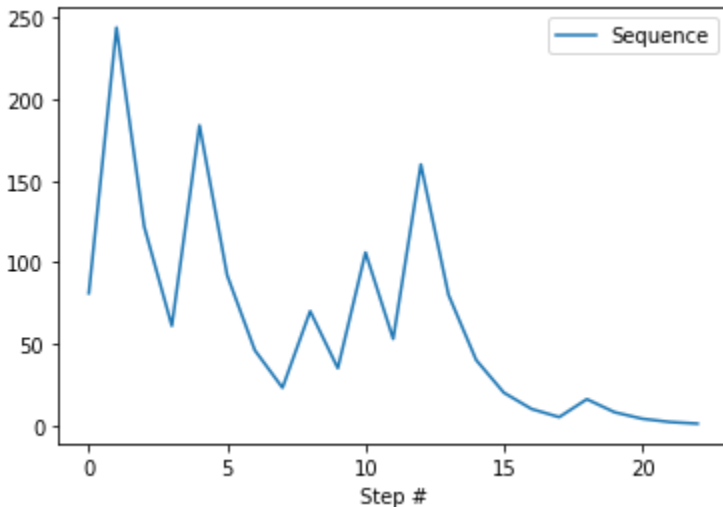
Length of this sequence: 36

Starting Value: 81

Hailstone Project Meeting Notes

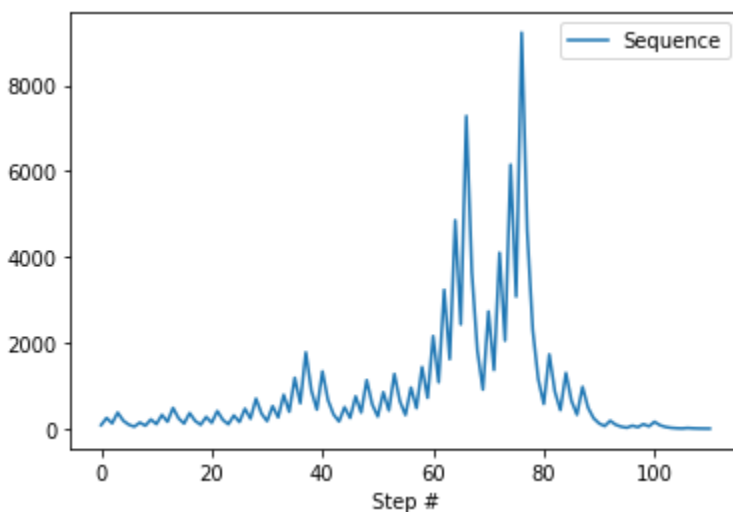
Resources

- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)



Odds: [81 61 23 35 53 5 1]
Length of this sequence: 23

Starting Value: 83



Odds: [83 125 47 71 107 161 121 91 137 103 155 233 175 263
395 593 445 167 251 377 283 425 319 479 719 1079 1619 2429

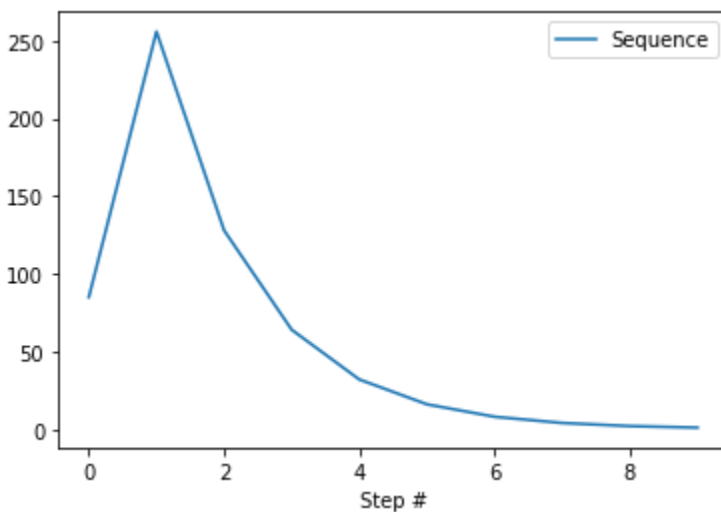
Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)

911 1367 2051 3077 577 433 325 61 23 35 53 5 1]
Length of this sequence: 111

Starting Value: 85



Odds: [85 1]

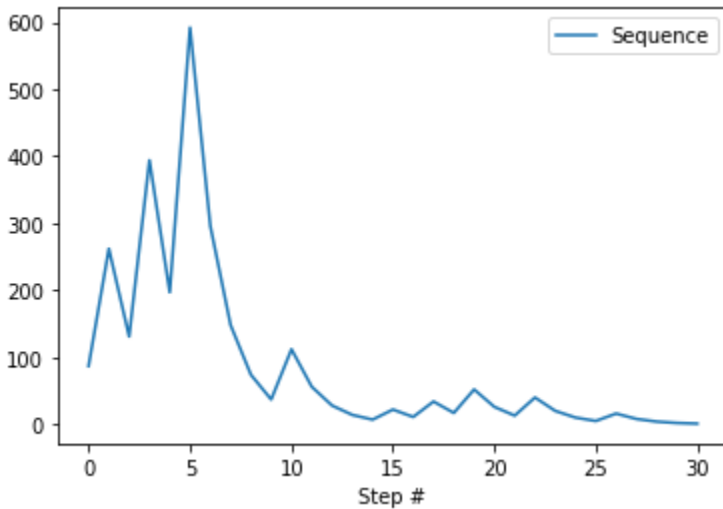
Length of this sequence: 10

Starting Value: 87

Hailstone Project Meeting Notes

Resources

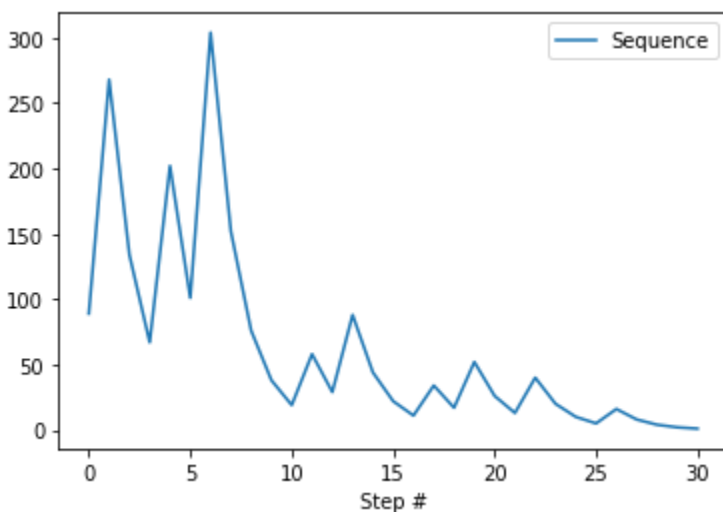
- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)



Odds: [87 131 197 37 7 11 17 13 5 1]

Length of this sequence: 31

Starting Value: 89



Odds: [89 67 101 19 29 11 17 13 5 1]

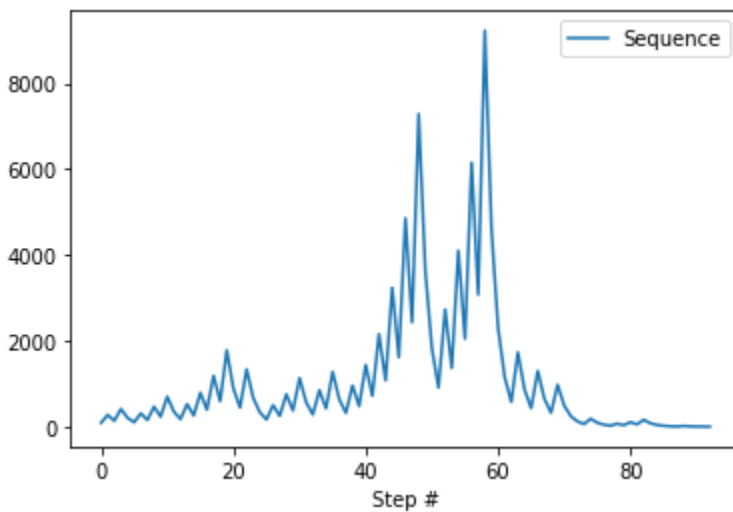
Length of this sequence: 31

Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-

Starting Value: 91



Odds: [91 137 103 155 233 175 263 395 593 445 167 251 377 283
425 319 479 719 1079 1619 2429 911 1367 2051 3077 577 433 325
61 23 35 53 5 1]

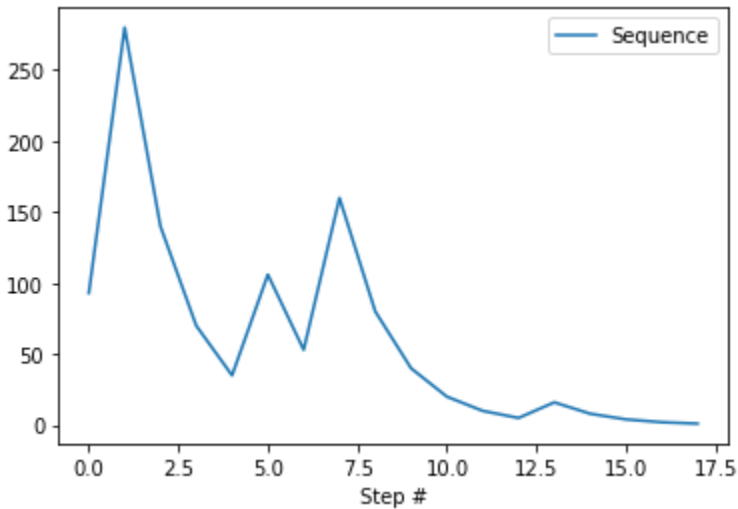
Length of this sequence: 93

Starting Value: 93

Hailstone Project Meeting Notes

Resources

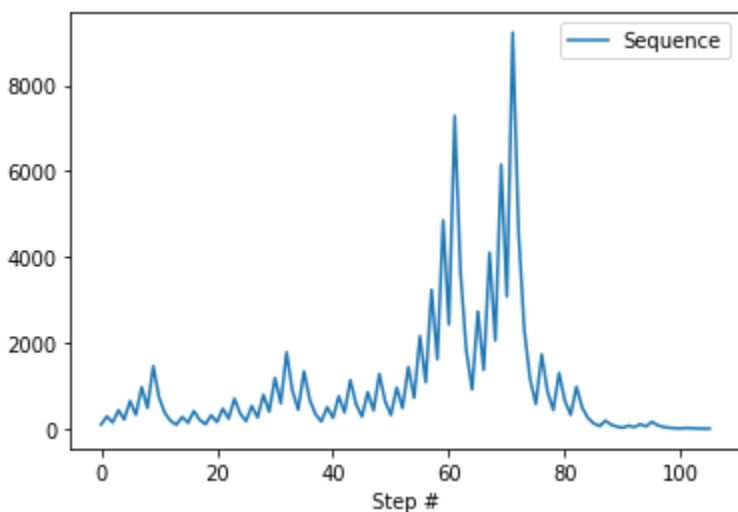
- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-



Odds: [93 35 53 5 1]

Length of this sequence: 18

Starting Value: 95



Odds: [95 143 215 323 485 91 137 103 155 233 175 263 395 593
445 167 251 377 283 425 319 479 719 1079 1619 2429 911 1367

Hailstone Project Meeting Notes

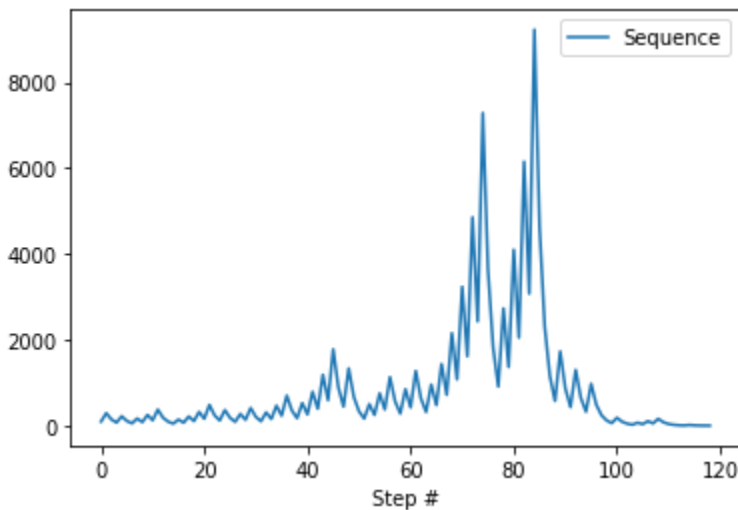
Resources

- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)

2051 3077 577 433 325 61 23 35 53 5 1]

Length of this sequence: 106

Starting Value: 97



Odds: [97 73 55 83 125 47 71 107 161 121 91 137 103 155
233 175 263 395 593 445 167 251 377 283 425 319 479 719
1079 1619 2429 911 1367 2051 3077 577 433 325 61 23 35 53
5 1]

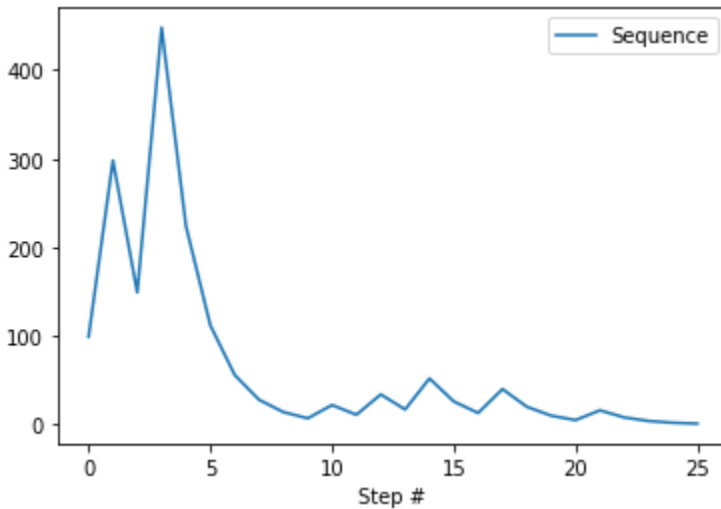
Length of this sequence: 119

Starting Value: 99

Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-



Odds: [99 149 7 11 17 13 5 1]

Length of this sequence: 26

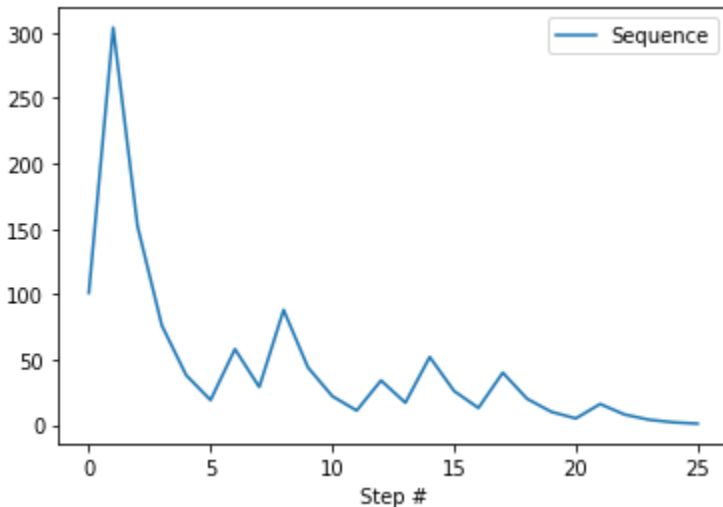
101-149

Starting Value: 101

Hailstone Project Meeting Notes

Resources

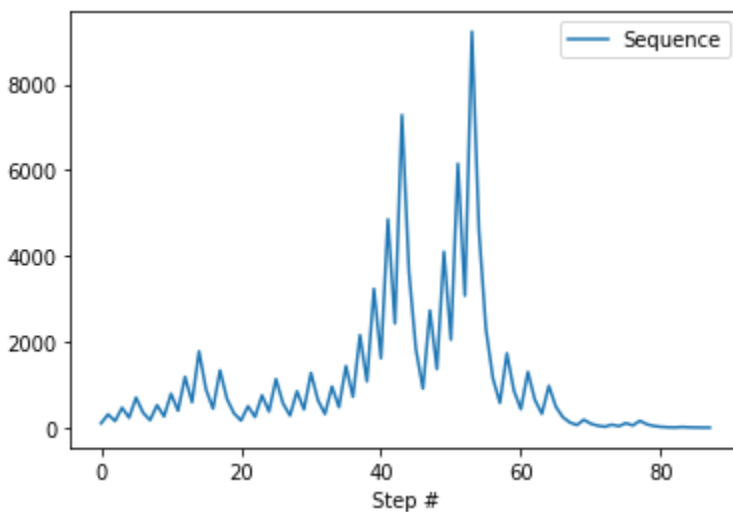
- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-



Odds: [101 19 29 11 17 13 5 1]

Length of this sequence: 26

Starting Value: 103



Odds: [103 155 233 175 263 395 593 445 167 251 377 283 425 319
479 719 1079 1619 2429 911 1367 2051 3077 577 433 325 61 23
35 53 5 1]

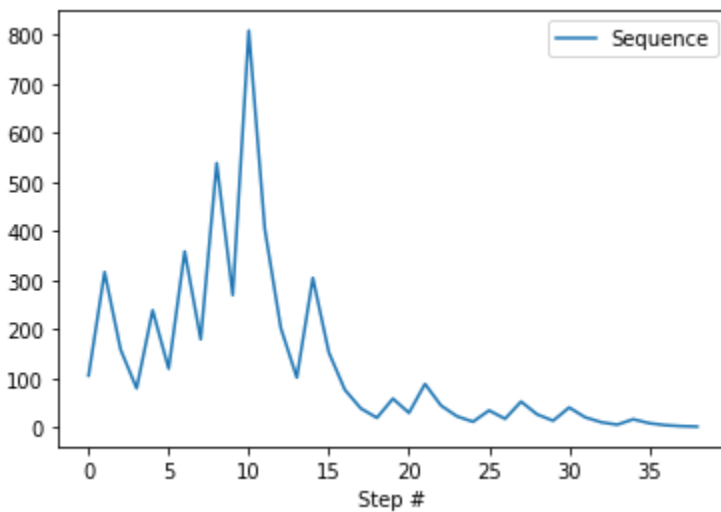
Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)

Length of this sequence: 88

Starting Value: 105



Odds: [105 79 119 179 269 101 19 29 11 17 13 5 1]

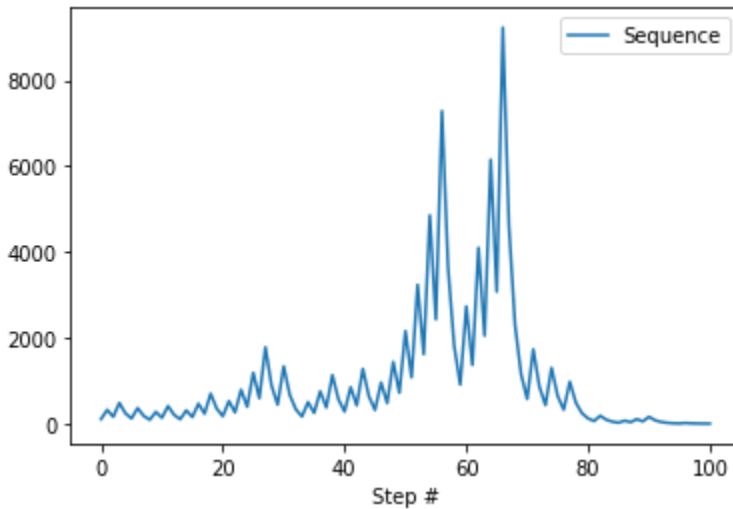
Length of this sequence: 39

Starting Value: 107

Hailstone Project Meeting Notes

Resources

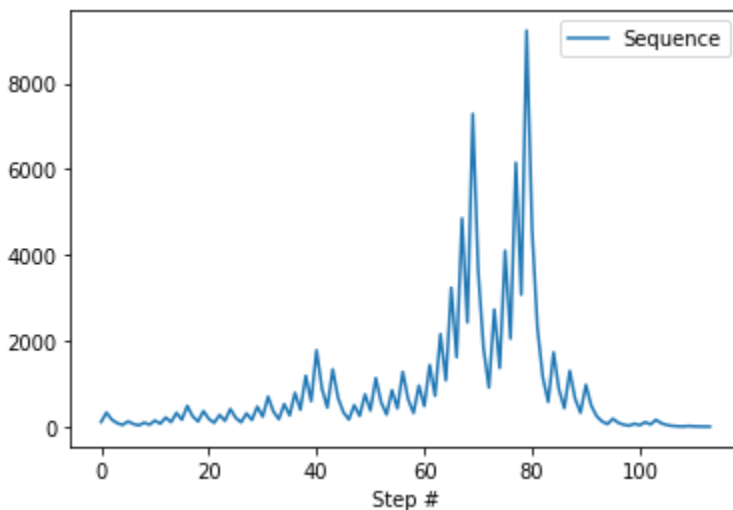
- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-



Odds: [107 161 121 91 137 103 155 233 175 263 395 593 445 167
251 377 283 425 319 479 719 1079 1619 2429 911 1367 2051 3077
577 433 325 61 23 35 53 5 1]

Length of this sequence: 101

Starting Value: 109



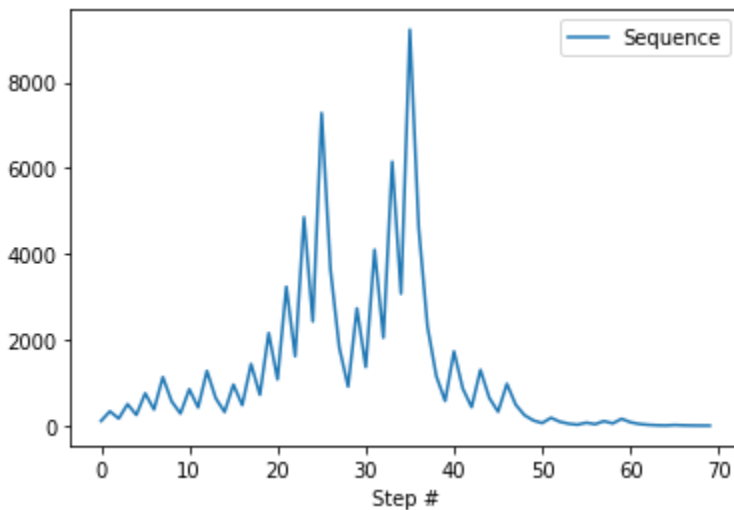
Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)

Odds: [109 41 31 47 71 107 161 121 91 137 103 155 233 175
263 395 593 445 167 251 377 283 425 319 479 719 1079 1619
2429 911 1367 2051 3077 577 433 325 61 23 35 53 5 1]
Length of this sequence: 114

Starting Value: 111



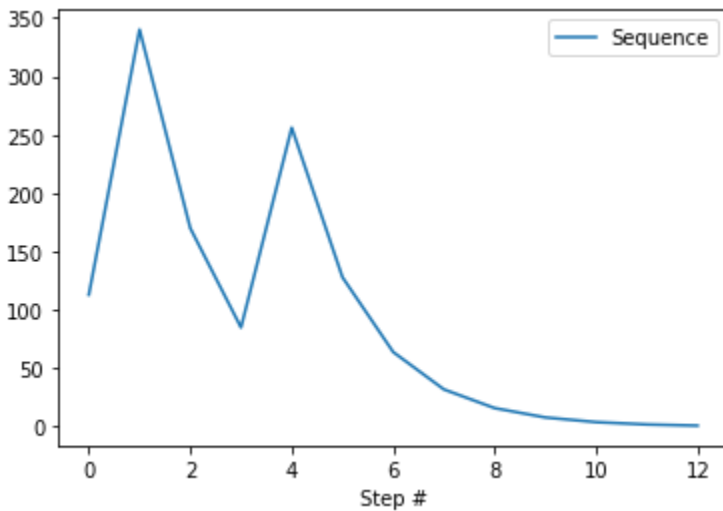
Odds: [111 167 251 377 283 425 319 479 719 1079 1619 2429 911 1367
2051 3077 577 433 325 61 23 35 53 5 1]
Length of this sequence: 70

Starting Value: 113

Hailstone Project Meeting Notes

Resources

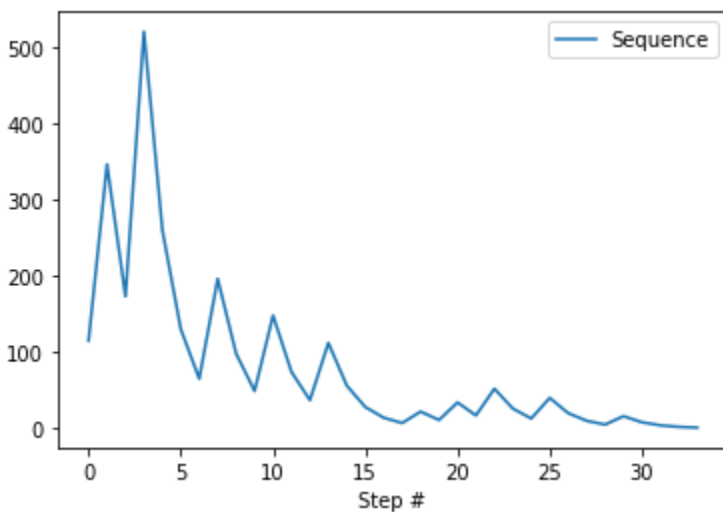
- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)



Odds: [113 85 1]

Length of this sequence: 13

Starting Value: 115



Odds: [115 173 65 49 37 7 11 17 13 5 1]

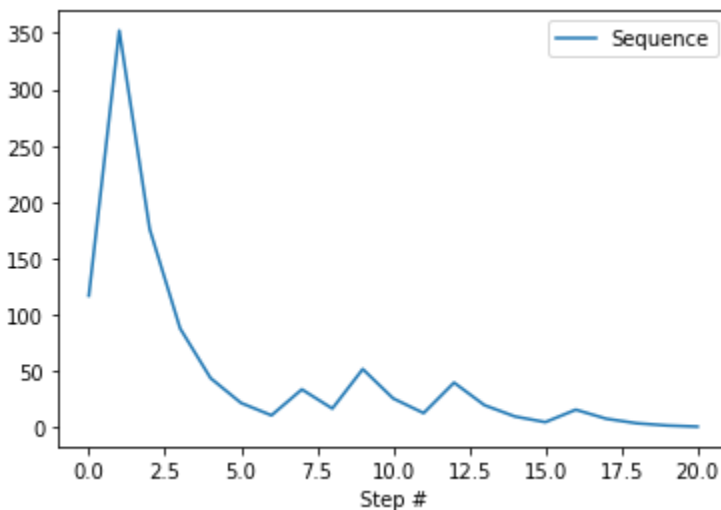
Length of this sequence: 34

Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-

Starting Value: 117



Odds: [117 11 17 13 5 1]

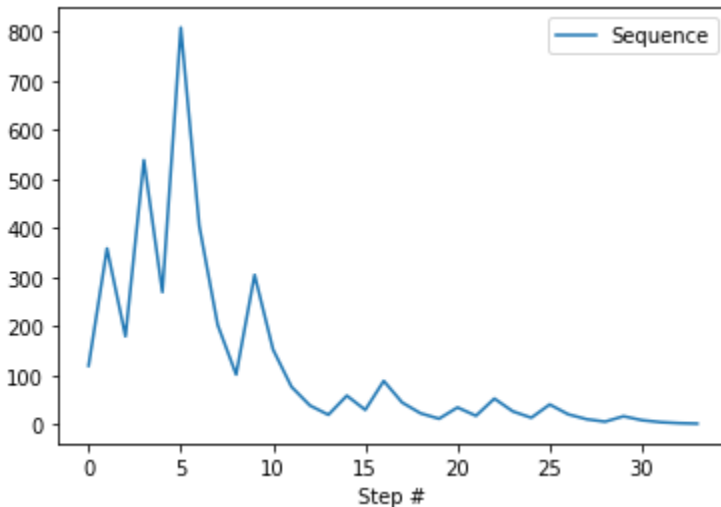
Length of this sequence: 21

Starting Value: 119

Hailstone Project Meeting Notes

Resources

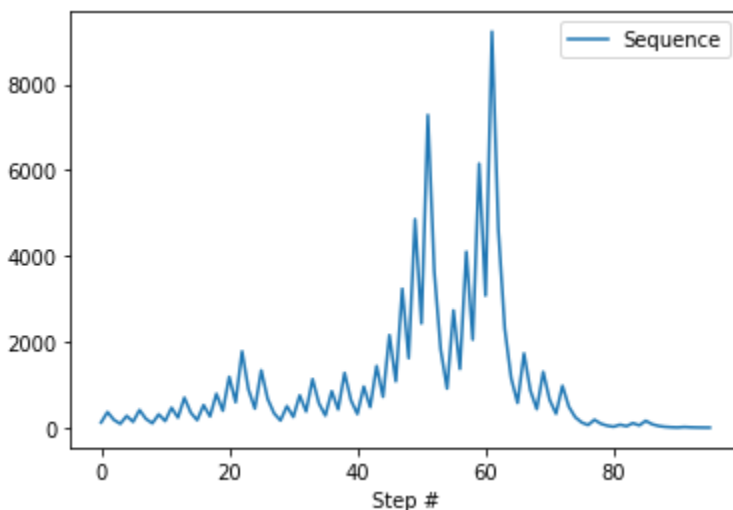
- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-



Odds: [119 179 269 101 19 29 11 17 13 5 1]

Length of this sequence: 34

Starting Value: 121



Odds: [121 91 137 103 155 233 175 263 395 593 445 167 251 377
283 425 319 479 719 1079 1619 2429 911 1367 2051 3077 577 433]

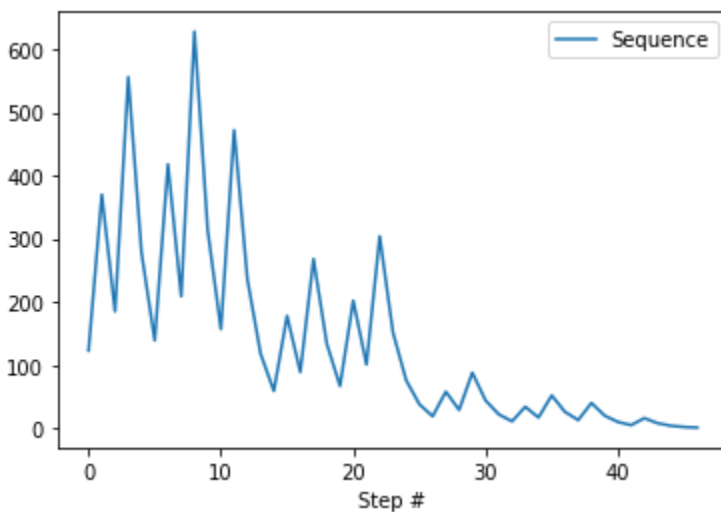
Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)

325 61 23 35 53 5 1]
Length of this sequence: 96

Starting Value: 123



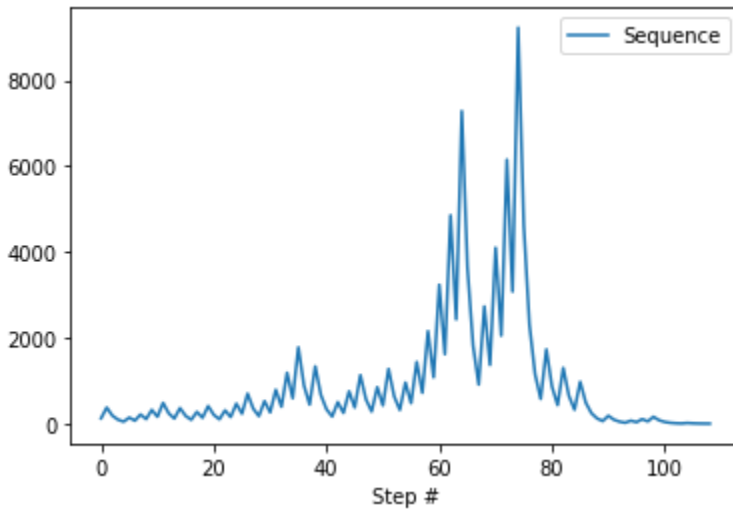
Odds: [123 185 139 209 157 59 89 67 101 19 29 11 17 13 5 1]
Length of this sequence: 47

Starting Value: 125

Hailstone Project Meeting Notes

Resources

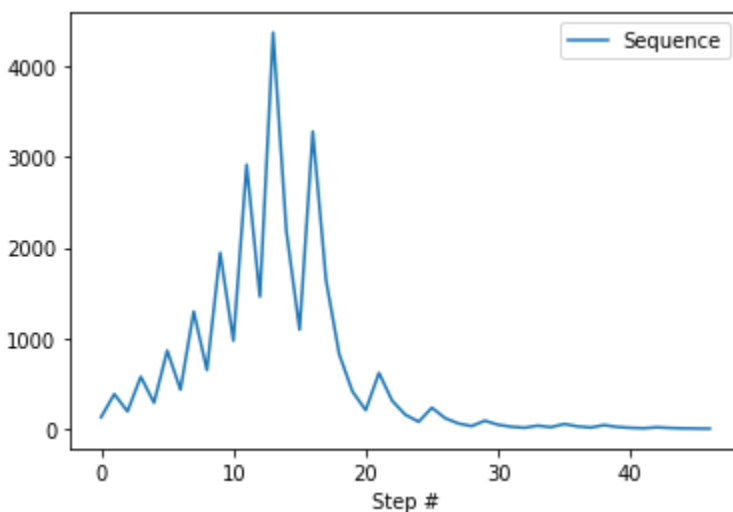
- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-



Odds: [125 47 71 107 161 121 91 137 103 155 233 175 263 395
593 445 167 251 377 283 425 319 479 719 1079 1619 2429 911
1367 2051 3077 577 433 325 61 23 35 53 5 1]

Length of this sequence: 109

Starting Value: 127



Hailstone Project Meeting Notes

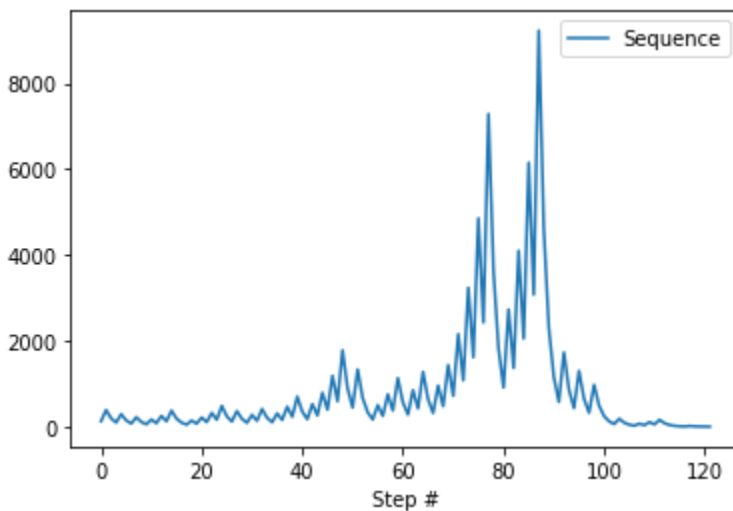
Resources

- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)

Odds: [127 191 287 431 647 971 1457 1093 205 77 29 11 17 13
5 1]

Length of this sequence: 47

Starting Value: 129



Odds: [129 97 73 55 83 125 47 71 107 161 121 91 137 103
155 233 175 263 395 593 445 167 251 377 283 425 319 479
719 1079 1619 2429 911 1367 2051 3077 577 433 325 61 23 35
53 5 1]

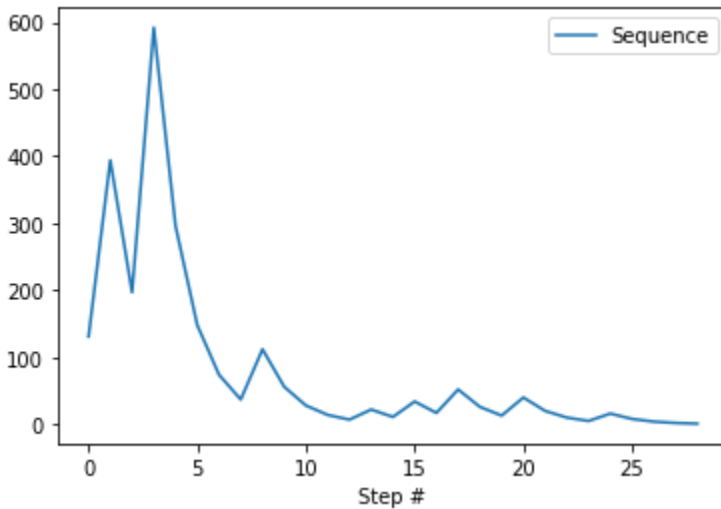
Length of this sequence: 122

Starting Value: 131

Hailstone Project Meeting Notes

Resources

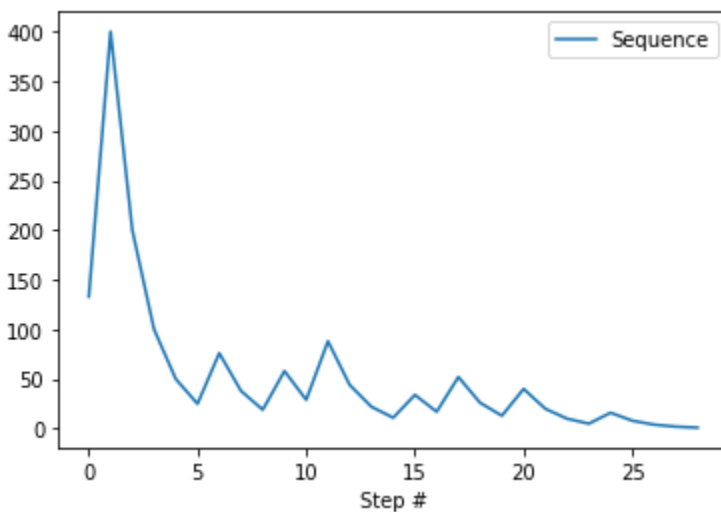
- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)



Odds: [131 197 37 7 11 17 13 5 1]

Length of this sequence: 29

Starting Value: 133



Odds: [133 25 19 29 11 17 13 5 1]

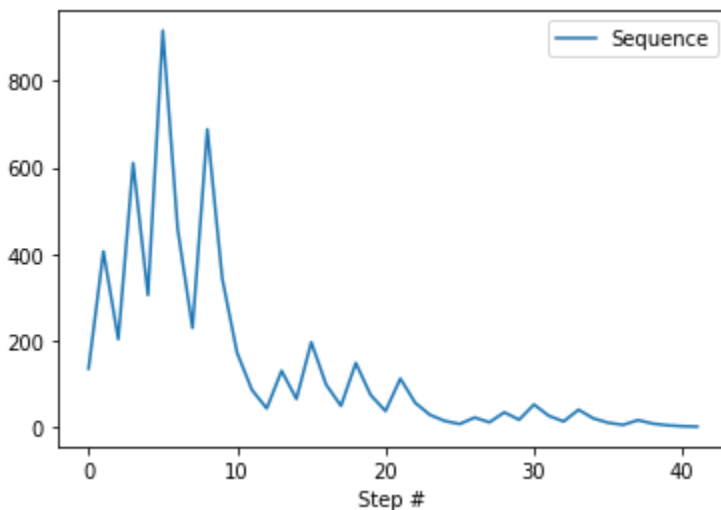
Length of this sequence: 29

Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-

Starting Value: 135



Odds: [135 203 305 229 43 65 49 37 7 11 17 13 5 1]

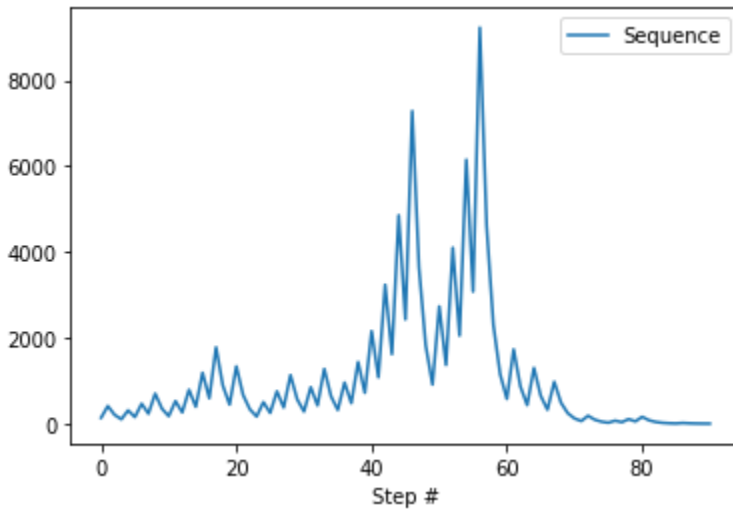
Length of this sequence: 42

Starting Value: 137

Hailstone Project Meeting Notes

Resources

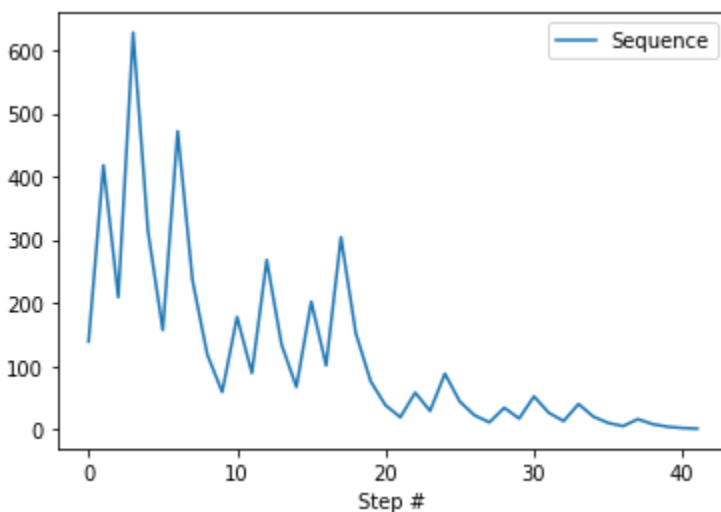
- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-



Odds: [137 103 155 233 175 263 395 593 445 167 251 377 283 425
319 479 719 1079 1619 2429 911 1367 2051 3077 577 433 325 61
23 35 53 5 1]

Length of this sequence: 91

Starting Value: 139



Hailstone Project Meeting Notes

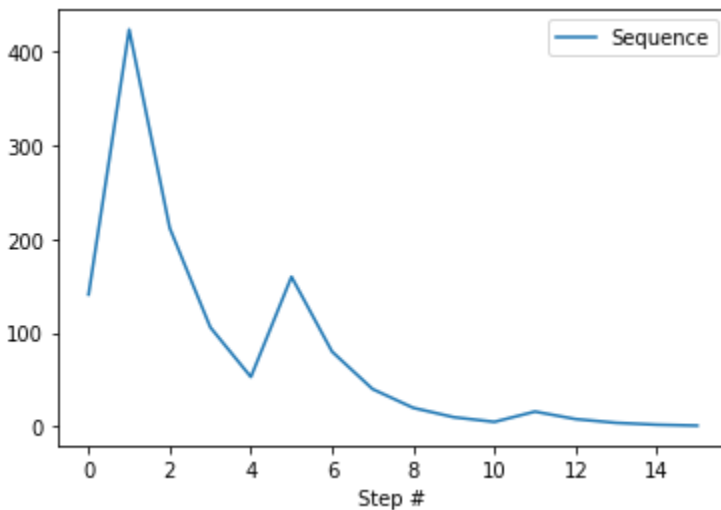
Resources

- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)

Odds: [139 209 157 59 89 67 101 19 29 11 17 13 5 1]

Length of this sequence: 42

Starting Value: 141



Odds: [141 53 5 1]

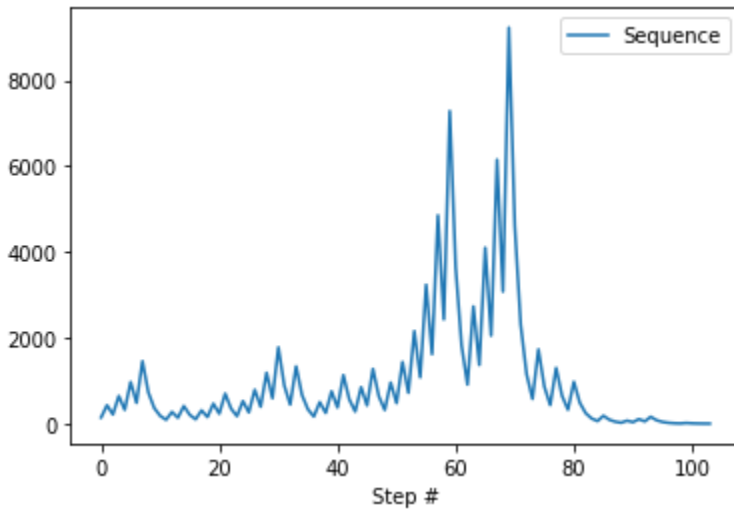
Length of this sequence: 16

Starting Value: 143

Hailstone Project Meeting Notes

Resources

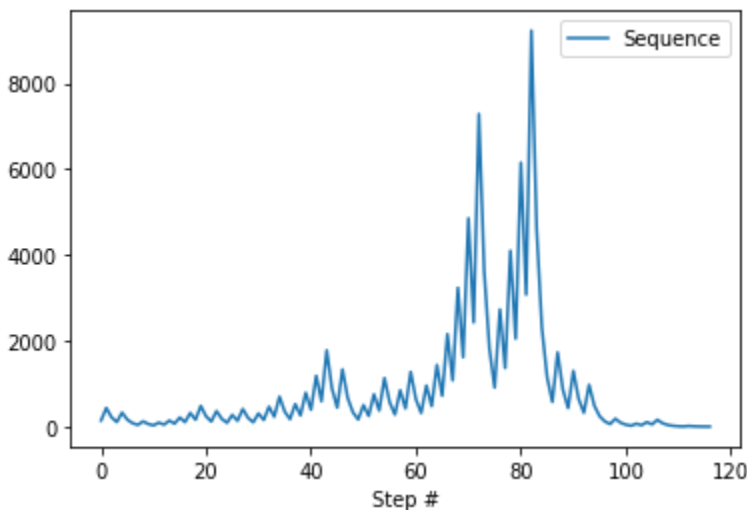
- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-



Odds: [143 215 323 485 91 137 103 155 233 175 263 395 593 445
167 251 377 283 425 319 479 719 1079 1619 2429 911 1367 2051
3077 577 433 325 61 23 35 53 5 1]

Length of this sequence: 104

Starting Value: 145



Hailstone Project Meeting Notes

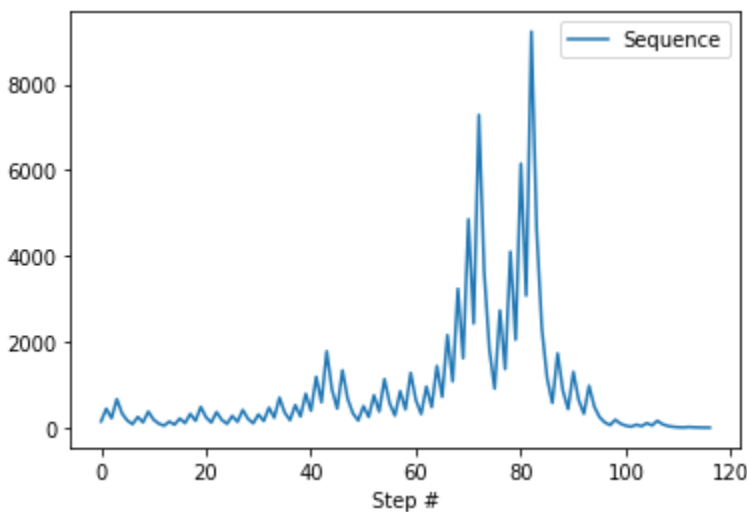
Resources

- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)

Odds: [145 109 41 31 47 71 107 161 121 91 137 103 155 233
175 263 395 593 445 167 251 377 283 425 319 479 719 1079
1619 2429 911 1367 2051 3077 577 433 325 61 23 35 53 5
1]

Length of this sequence: 117

Starting Value: 147



Odds: [147 221 83 125 47 71 107 161 121 91 137 103 155 233
175 263 395 593 445 167 251 377 283 425 319 479 719 1079
1619 2429 911 1367 2051 3077 577 433 325 61 23 35 53 5
1]

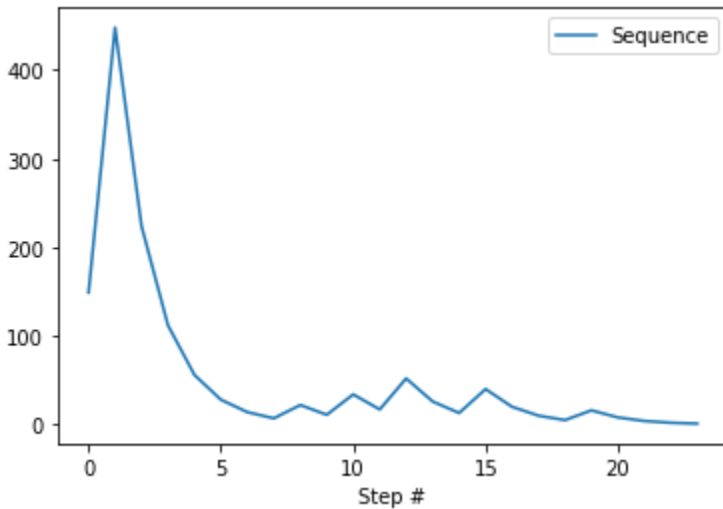
Length of this sequence: 117

Starting Value: 149

Hailstone Project Meeting Notes

Resources

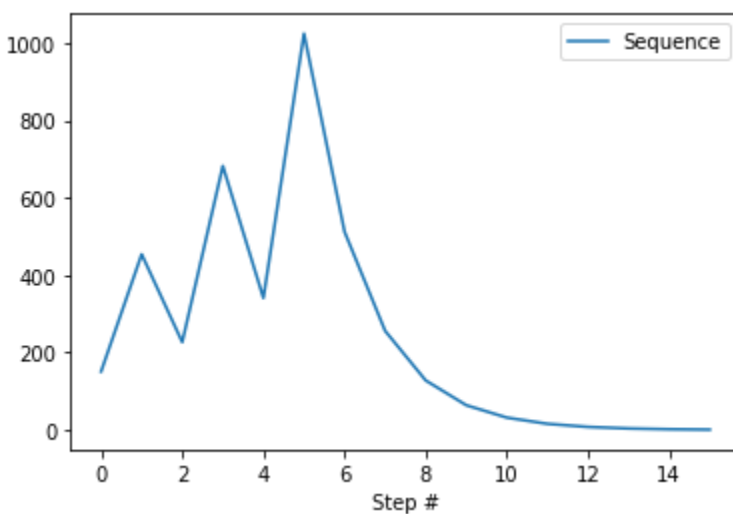
- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-



Odds: [149 7 11 17 13 5 1]

Length of this sequence: 24

Starting Value: 151



Odds: [151 227 341 1]

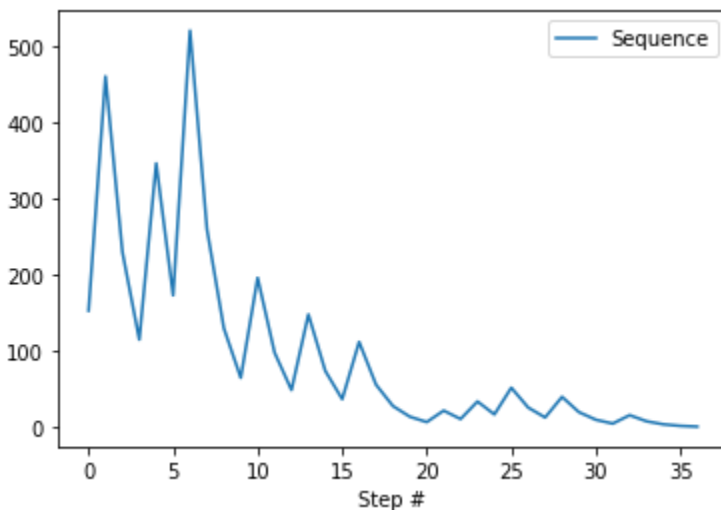
Length of this sequence: 16

Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-

Starting Value: 153



Odds: [153 115 173 65 49 37 7 11 17 13 5 1]

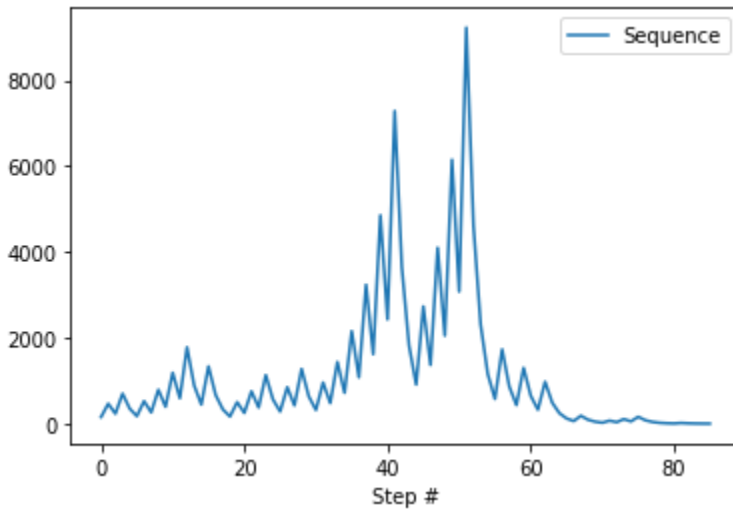
Length of this sequence: 37

Starting Value: 155

Hailstone Project Meeting Notes

Resources

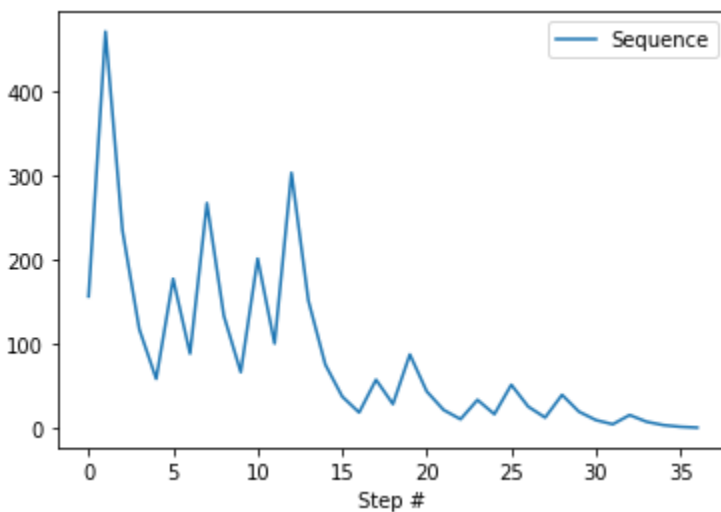
- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-



Odds: [155 233 175 263 395 593 445 167 251 377 283 425 319 479
719 1079 1619 2429 911 1367 2051 3077 577 433 325 61 23 35
53 5 1]

Length of this sequence: 86

Starting Value: 157



Hailstone Project Meeting Notes

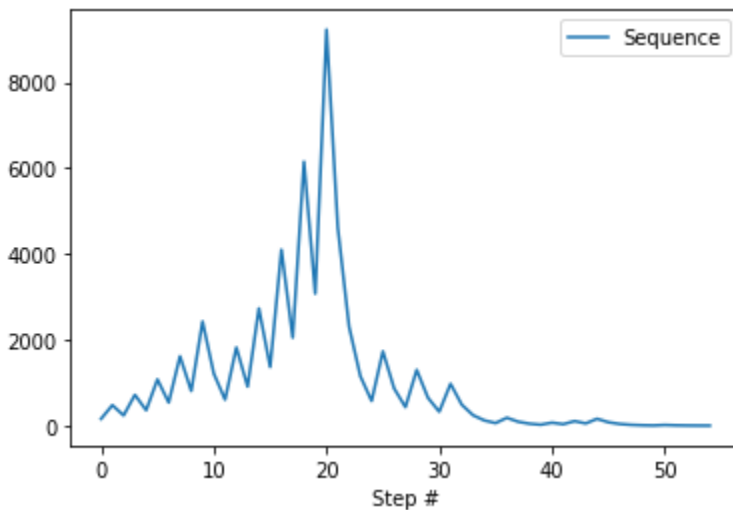
Resources

- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)

Odds: [157 59 89 67 101 19 29 11 17 13 5 1]

Length of this sequence: 37

Starting Value: 159



Odds: [159 239 359 539 809 607 911 1367 2051 3077 577 433 325 61
23 35 53 5 1]

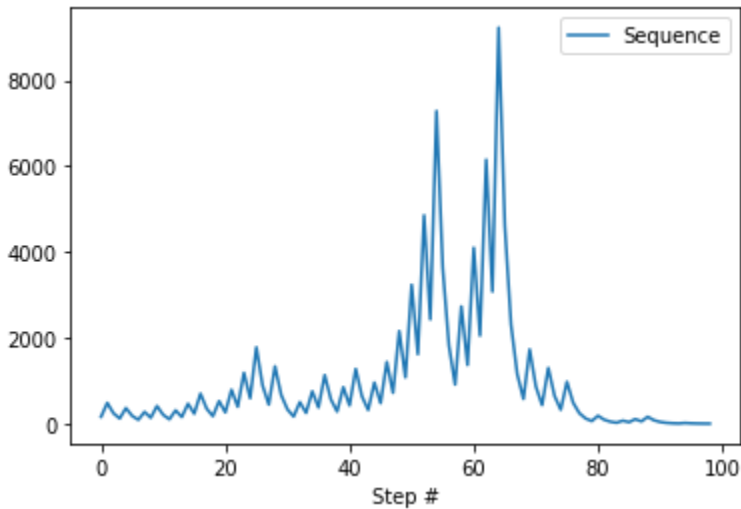
Length of this sequence: 55

Starting Value: 161

Hailstone Project Meeting Notes

Resources

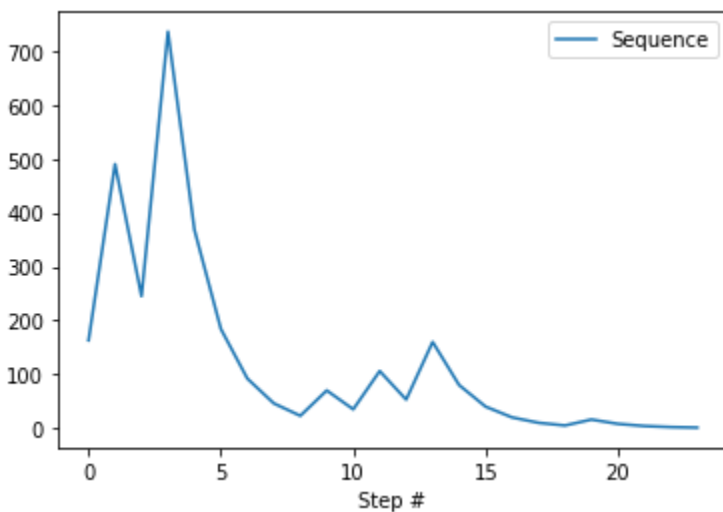
- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-



Odds: [161 121 91 137 103 155 233 175 263 395 593 445 167 251
377 283 425 319 479 719 1079 1619 2429 911 1367 2051 3077 577
433 325 61 23 35 53 5 1]

Length of this sequence: 99

Starting Value: 163



Hailstone Project Meeting Notes

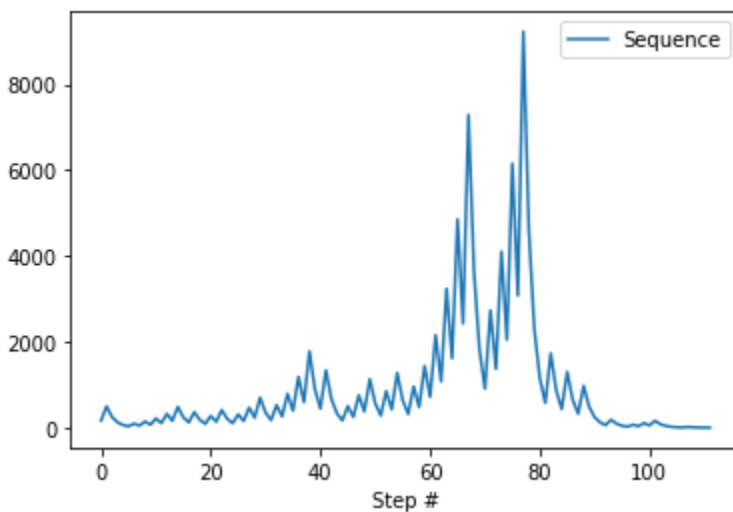
Resources

- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-

Odds: [163 245 23 35 53 5 1]

Length of this sequence: 24

Starting Value: 165



Odds: [165 31 47 71 107 161 121 91 137 103 155 233 175 263
395 593 445 167 251 377 283 425 319 479 719 1079 1619 2429
911 1367 2051 3077 577 433 325 61 23 35 53 5 1]

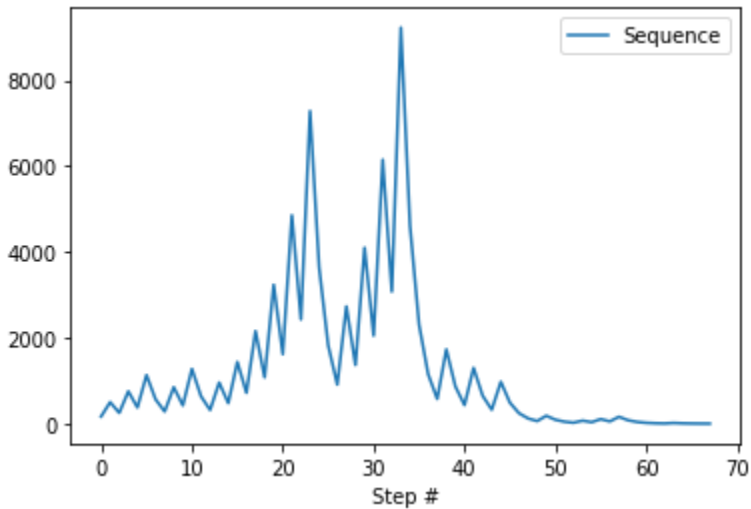
Length of this sequence: 112

Starting Value: 167

Hailstone Project Meeting Notes

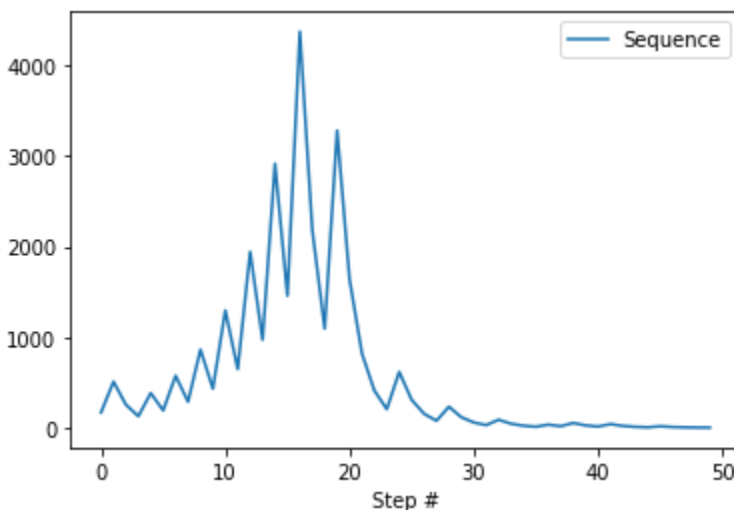
Resources

- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-



Odds: [167 251 377 283 425 319 479 719 1079 1619 2429 911 1367 2051
3077 577 433 325 61 23 35 53 5 1]
Length of this sequence: 68

Starting Value: 169



Odds: [169 127 191 287 431 647 971 1457 1093 205 77 29 11 17

Hailstone Project Meeting Notes

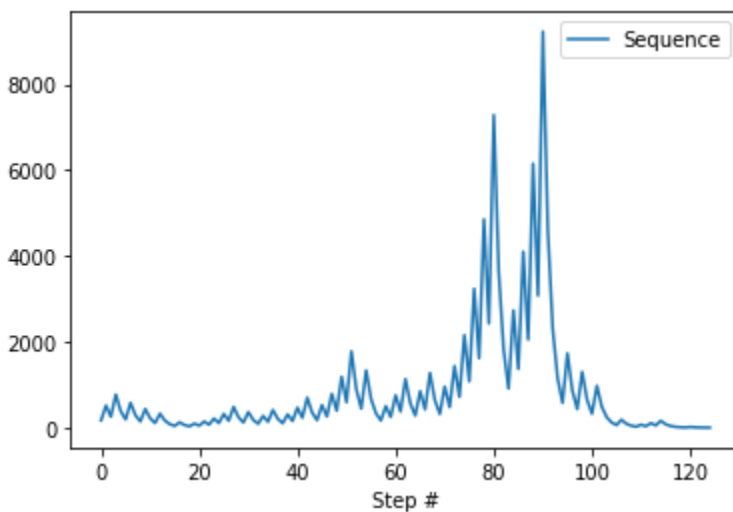
Resources

- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-

13 5 1]

Length of this sequence: 50

Starting Value: 171



Odds: [171 257 193 145 109 41 31 47 71 107 161 121 91 137
103 155 233 175 263 395 593 445 167 251 377 283 425 319
479 719 1079 1619 2429 911 1367 2051 3077 577 433 325 61 23
35 53 5 1]

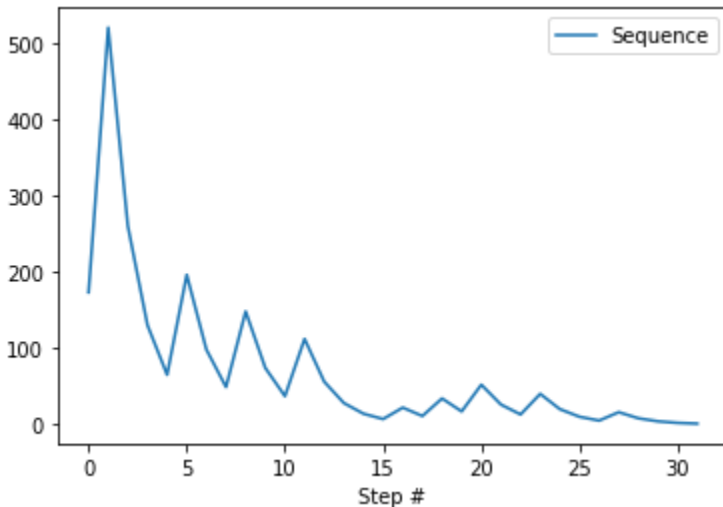
Length of this sequence: 125

Starting Value: 173

Hailstone Project Meeting Notes

Resources

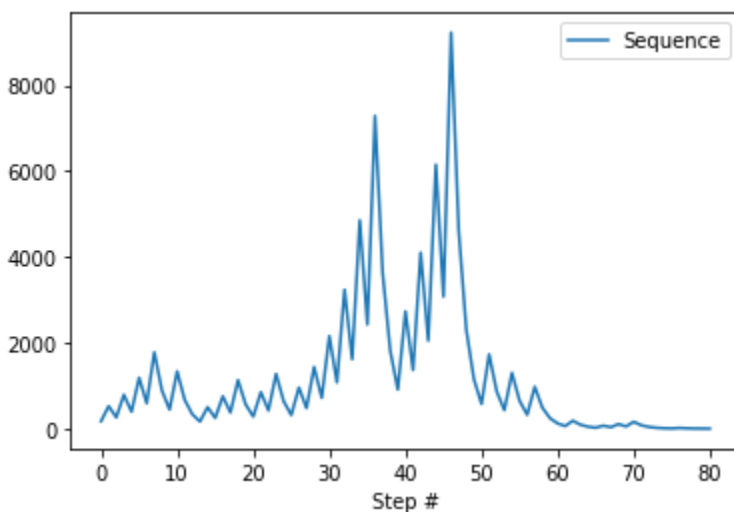
- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)



Odds: [173 65 49 37 7 11 17 13 5 1]

Length of this sequence: 32

Starting Value: 175



Odds: [175 263 395 593 445 167 251 377 283 425 319 479 719 1079

1619 2429 911 1367 2051 3077 577 433 325 61 23 35 53 5

Hailstone Project Meeting Notes

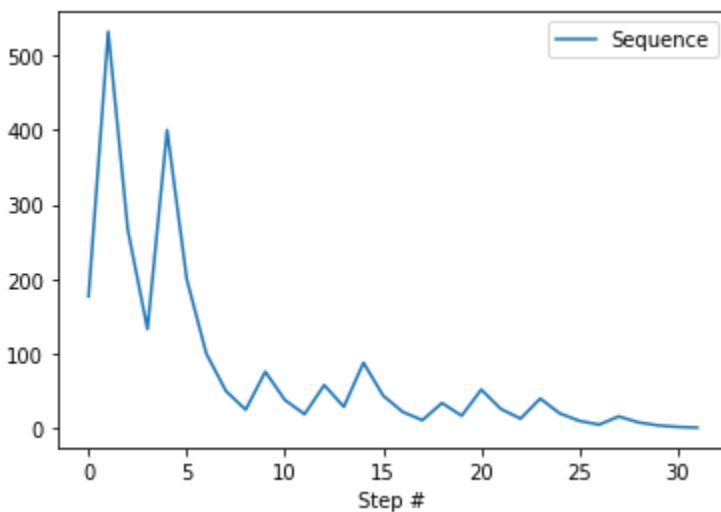
Resources

- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-

1]

Length of this sequence: 81

Starting Value: 177



Odds: [177 133 25 19 29 11 17 13 5 1]

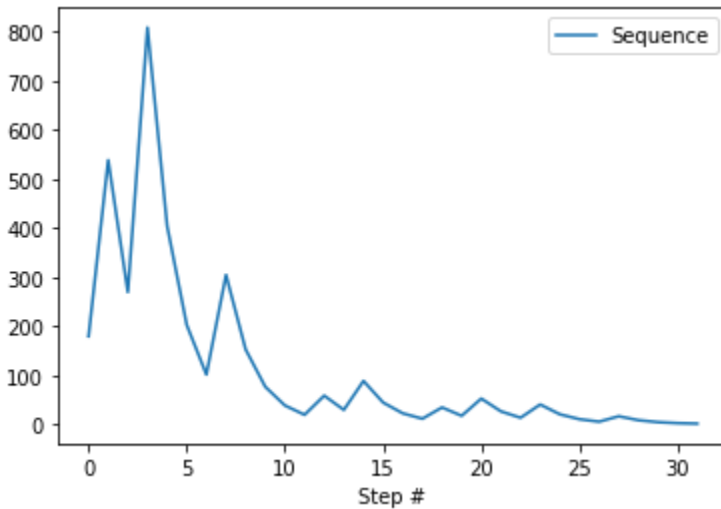
Length of this sequence: 32

Starting Value: 179

Hailstone Project Meeting Notes

Resources

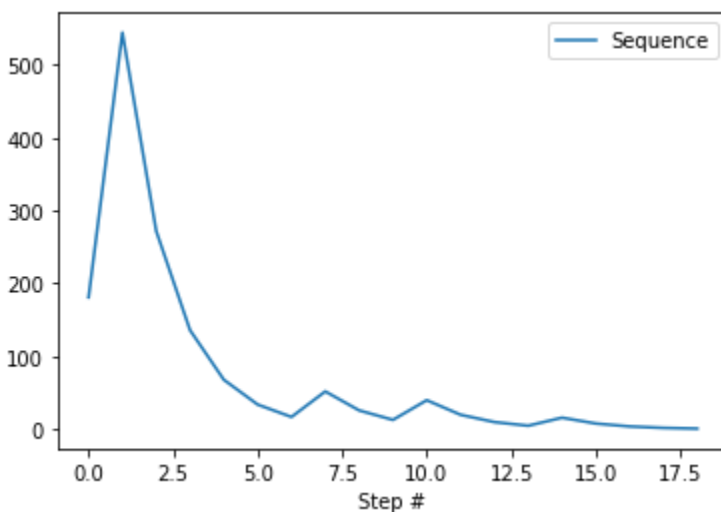
- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)



Odds: [179 269 101 19 29 11 17 13 5 1]

Length of this sequence: 32

Starting Value: 181



Odds: [181 17 13 5 1]

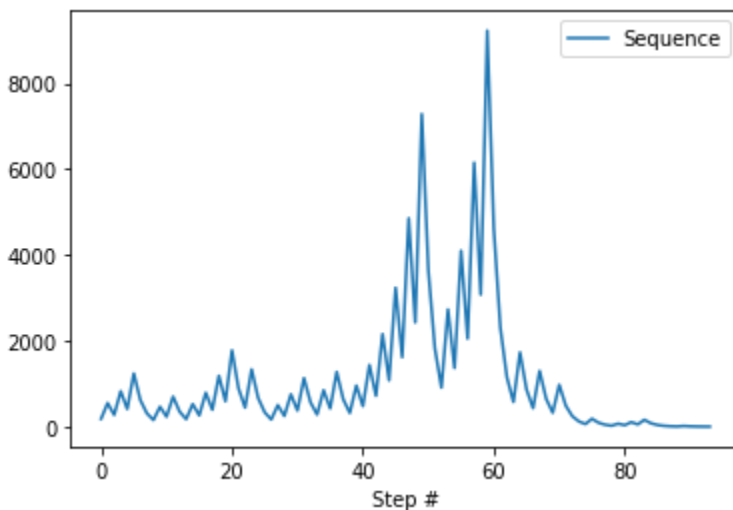
Length of this sequence: 19

Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-

Starting Value: 183



Odds: [183 275 413 155 233 175 263 395 593 445 167 251 377 283
425 319 479 719 1079 1619 2429 911 1367 2051 3077 577 433 325
61 23 35 53 5 1]

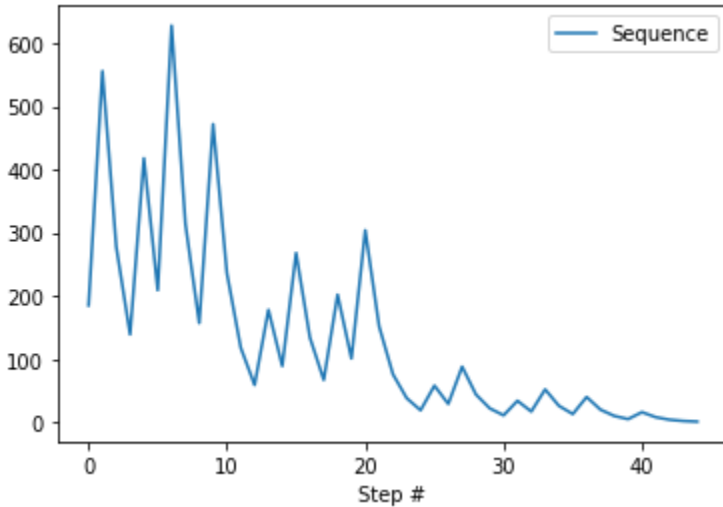
Length of this sequence: 94

Starting Value: 185

Hailstone Project Meeting Notes

Resources

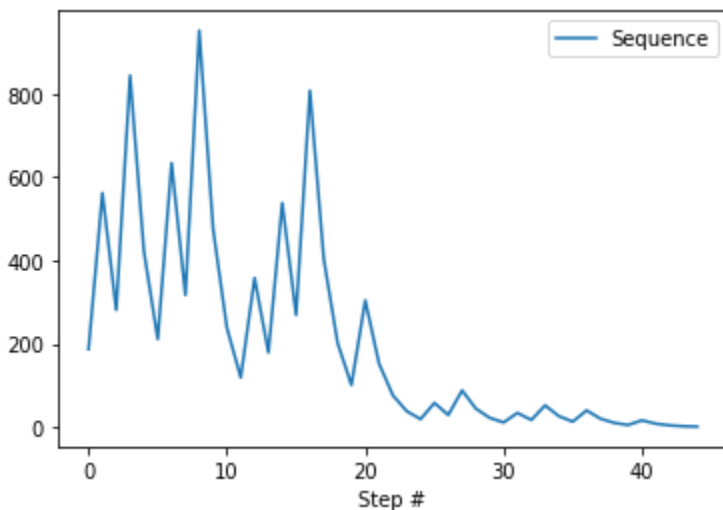
- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)



Odds: [185 139 209 157 59 89 67 101 19 29 11 17 13 5 1]

Length of this sequence: 45

Starting Value: 187



Odds: [187 281 211 317 119 179 269 101 19 29 11 17 13 5 1]

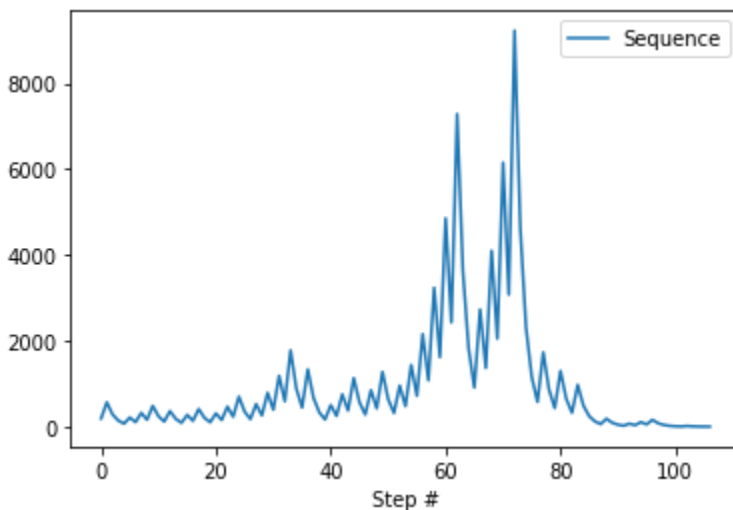
Length of this sequence: 45

Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-

Starting Value: 189



Odds: [189 71 107 161 121 91 137 103 155 233 175 263 395 593
445 167 251 377 283 425 319 479 719 1079 1619 2429 911 1367
2051 3077 577 433 325 61 23 35 53 5 1]

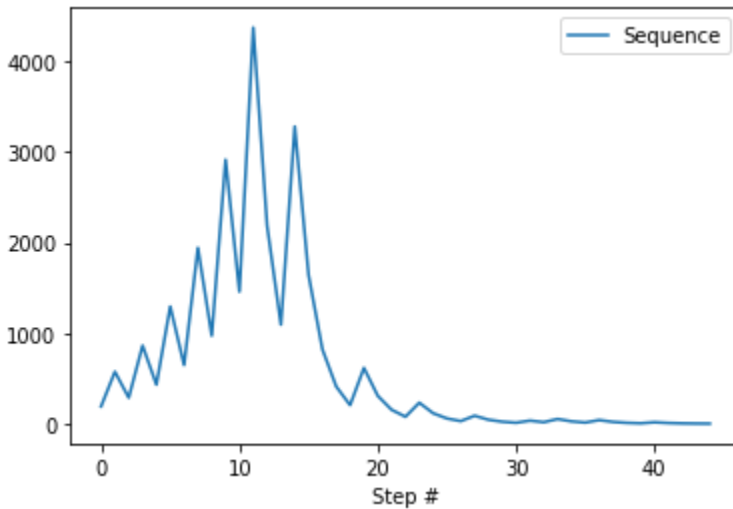
Length of this sequence: 107

Starting Value: 191

Hailstone Project Meeting Notes

Resources

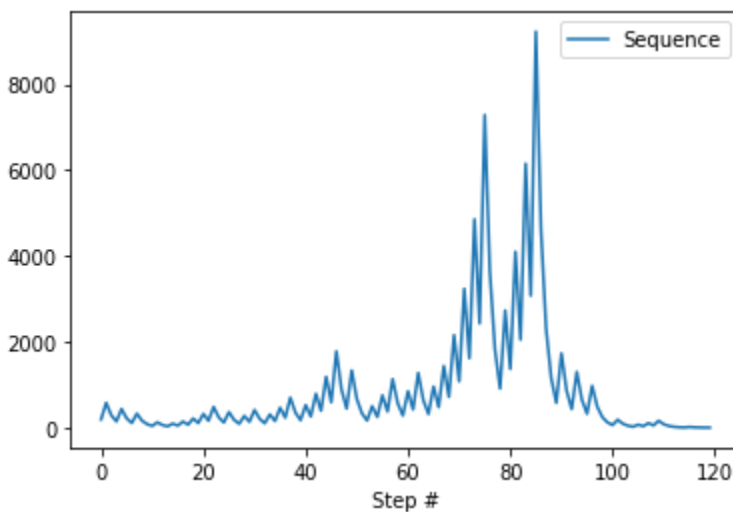
- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-



Odds: [191 287 431 647 971 1457 1093 205 77 29 11 17 13 5
1]

Length of this sequence: 45

Starting Value: 193



Odds: [193 145 109 41 31 47 71 107 161 121 91 137 103 155

Hailstone Project Meeting Notes

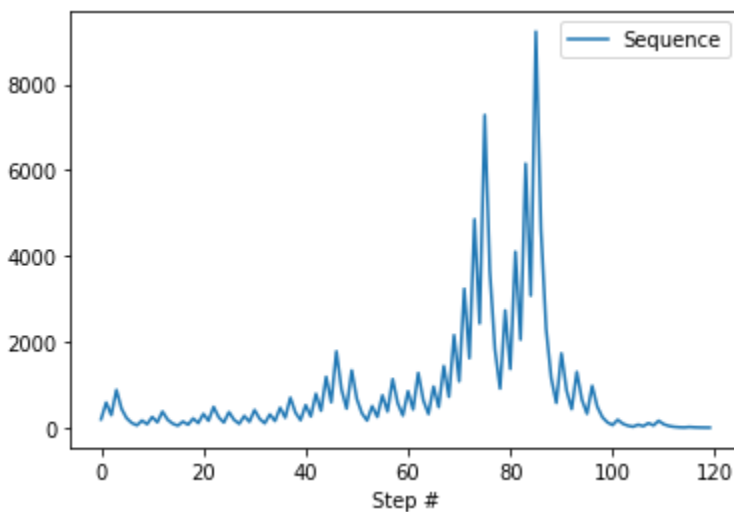
Resources

- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)

233 175 263 395 593 445 167 251 377 283 425 319 479 719
1079 1619 2429 911 1367 2051 3077 577 433 325 61 23 35 53
5 1]

Length of this sequence: 120

Starting Value: 195



Odds: [195 293 55 83 125 47 71 107 161 121 91 137 103 155
233 175 263 395 593 445 167 251 377 283 425 319 479 719
1079 1619 2429 911 1367 2051 3077 577 433 325 61 23 35 53
5 1]

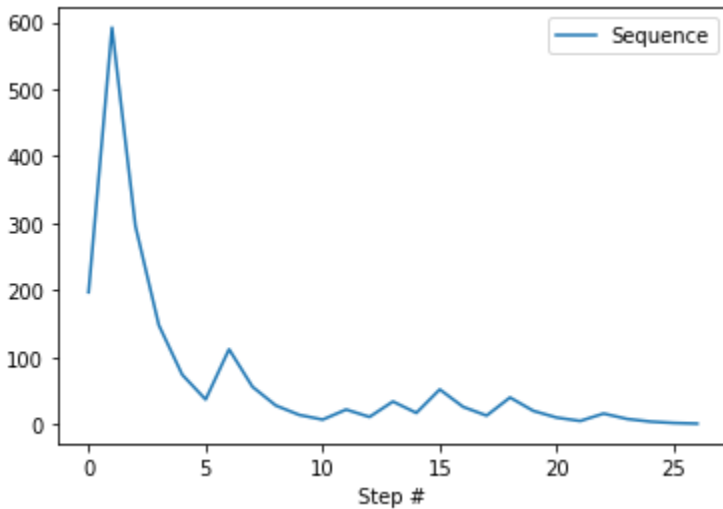
Length of this sequence: 120

Starting Value: 197

Hailstone Project Meeting Notes

Resources

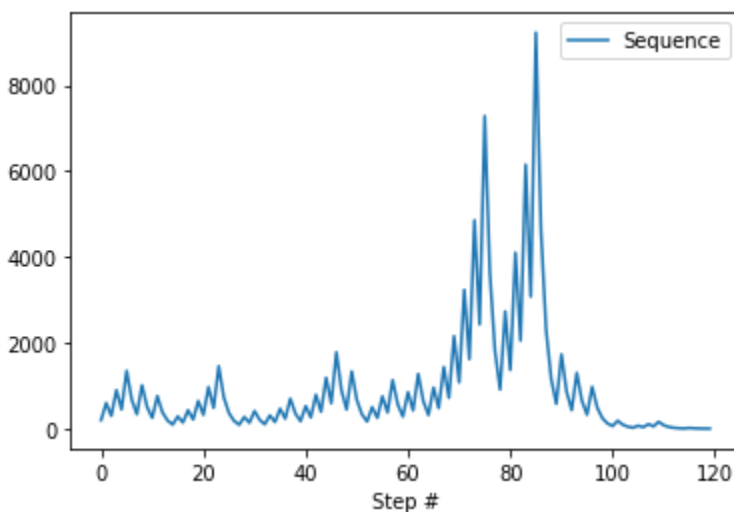
- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)



Odds: [197 37 7 11 17 13 5 1]

Length of this sequence: 27

Starting Value: 199



Odds: [199 299 449 337 253 95 143 215 323 485 91 137 103 155
233 175 263 395 593 445 167 251 377 283 425 319 479 719]

Hailstone Project Meeting Notes

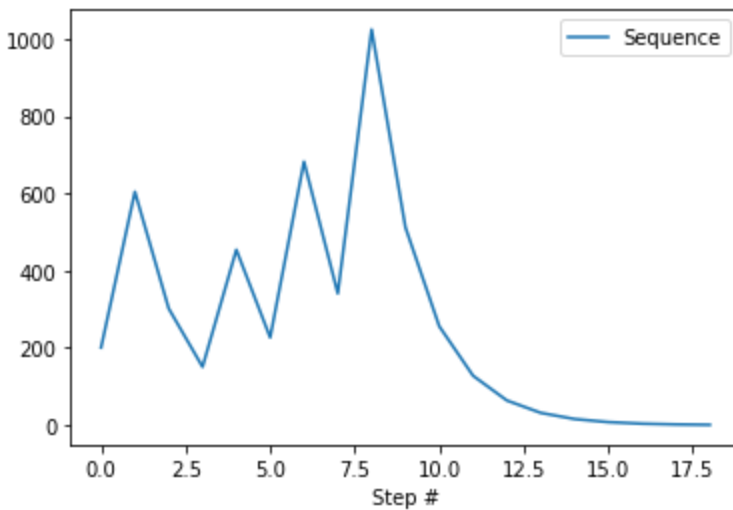
Resources

- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)

1079 1619 2429 911 1367 2051 3077 577 433 325 61 23 35 53
5 1]

Length of this sequence: 120

Starting Value: 201



Odds: [201 151 227 341 1]

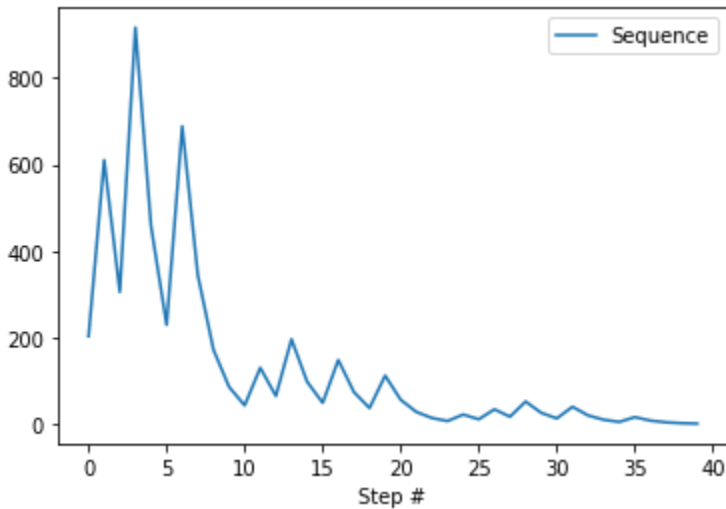
Length of this sequence: 19

Starting Value: 203

Hailstone Project Meeting Notes

Resources

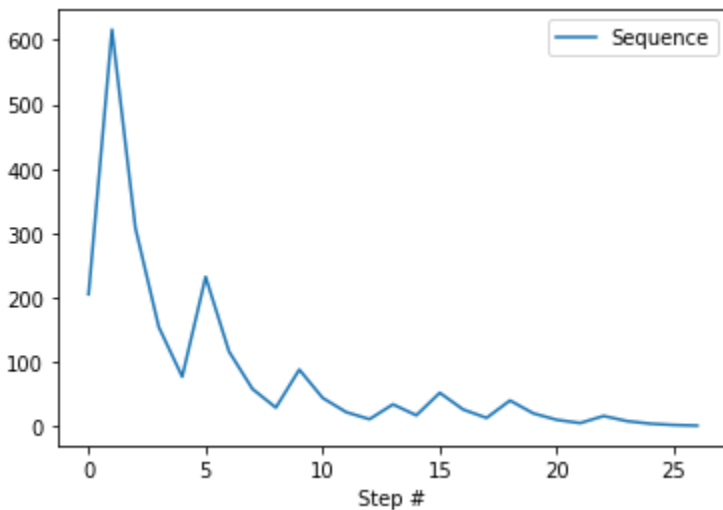
- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-



Odds: [203 305 229 43 65 49 37 7 11 17 13 5 1]

Length of this sequence: 40

Starting Value: 205



Odds: [205 77 29 11 17 13 5 1]

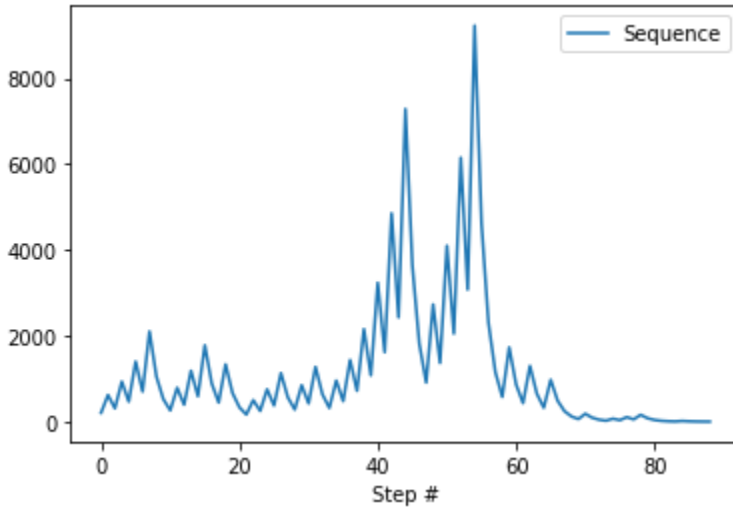
Length of this sequence: 27

Starting Value: 207

Hailstone Project Meeting Notes

Resources

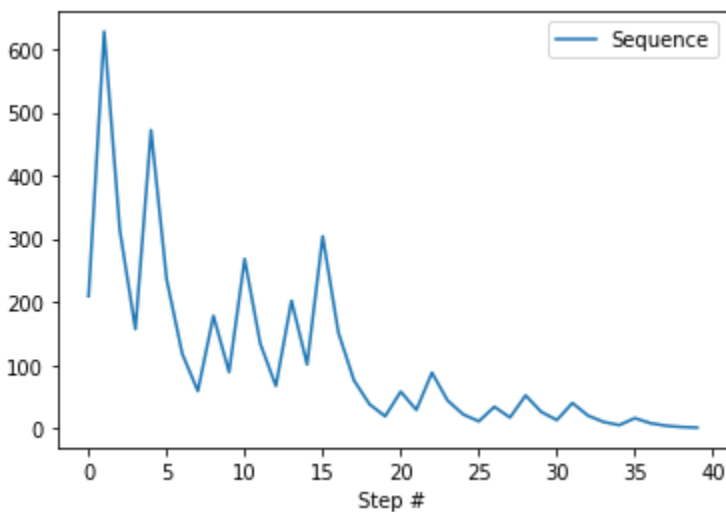
- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-



Odds: [207 311 467 701 263 395 593 445 167 251 377 283 425 319
479 719 1079 1619 2429 911 1367 2051 3077 577 433 325 61 23
35 53 5 1]

Length of this sequence: 89

Starting Value: 209



Odds: [209 157 59 89 67 101 19 29 11 17 13 5 1]

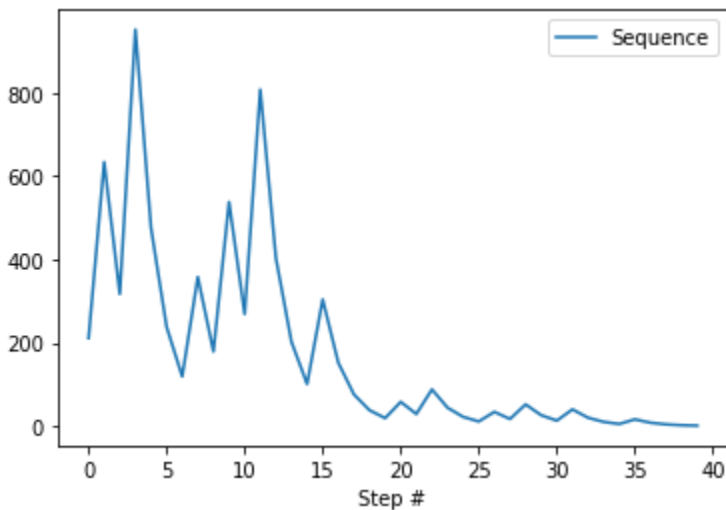
Length of this sequence: 40

Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-

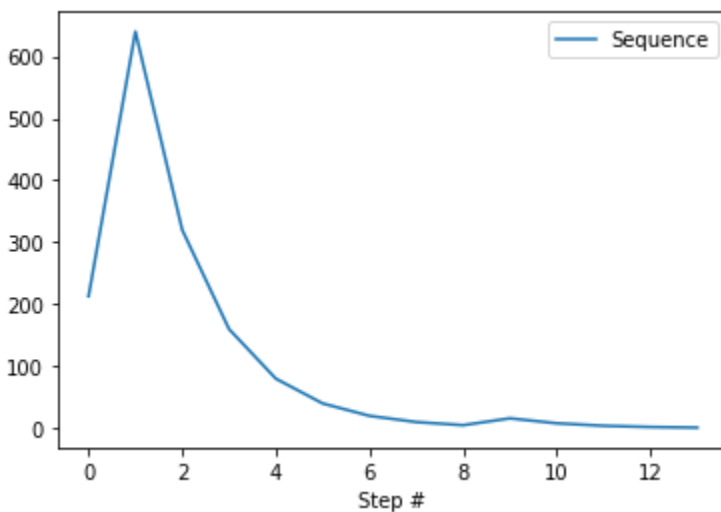
Starting Value: 211



Odds: [211 317 119 179 269 101 19 29 11 17 13 5 1]

Length of this sequence: 40

Starting Value: 213



Odds: [213 5 1]

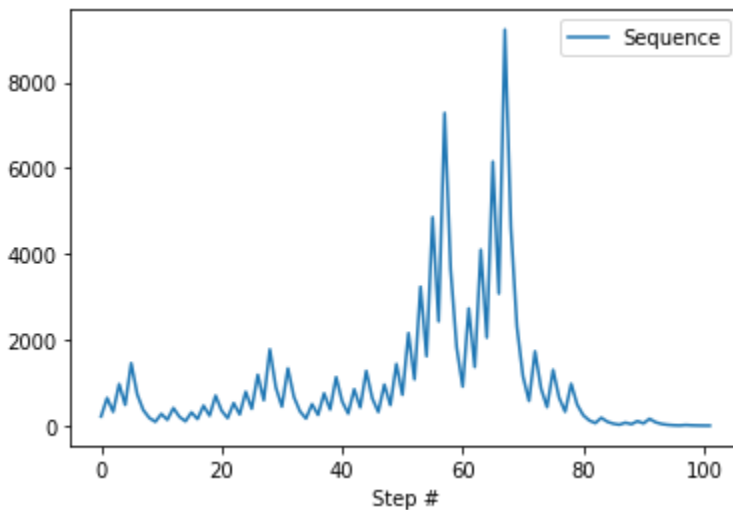
Length of this sequence: 14

Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-

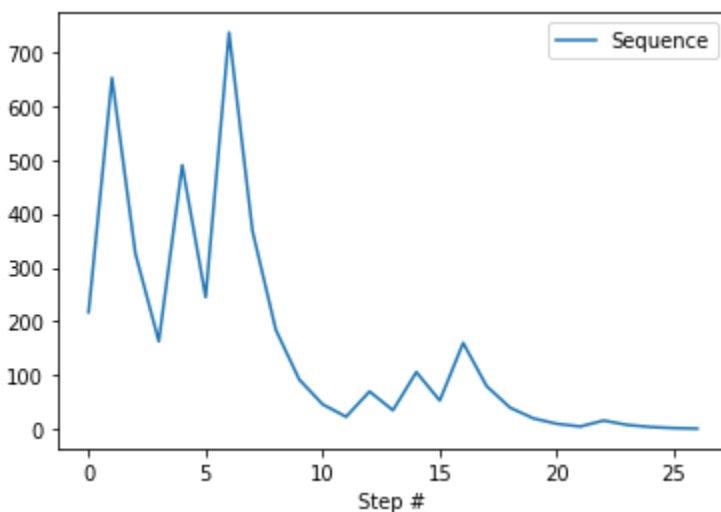
Starting Value: 215



Odds: [215 323 485 91 137 103 155 233 175 263 395 593 445 167
251 377 283 425 319 479 719 1079 1619 2429 911 1367 2051 3077
577 433 325 61 23 35 53 5 1]

Length of this sequence: 102

Starting Value: 217



Hailstone Project Meeting Notes

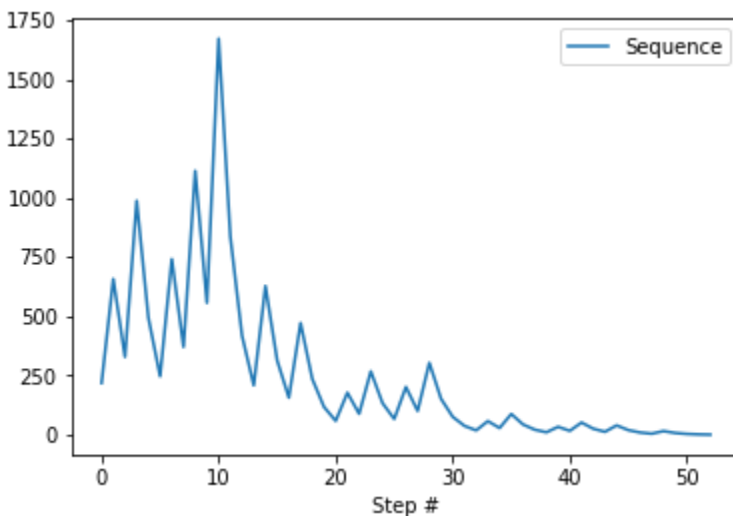
Resources

- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)

Odds: [217 163 245 23 35 53 5 1]

Length of this sequence: 27

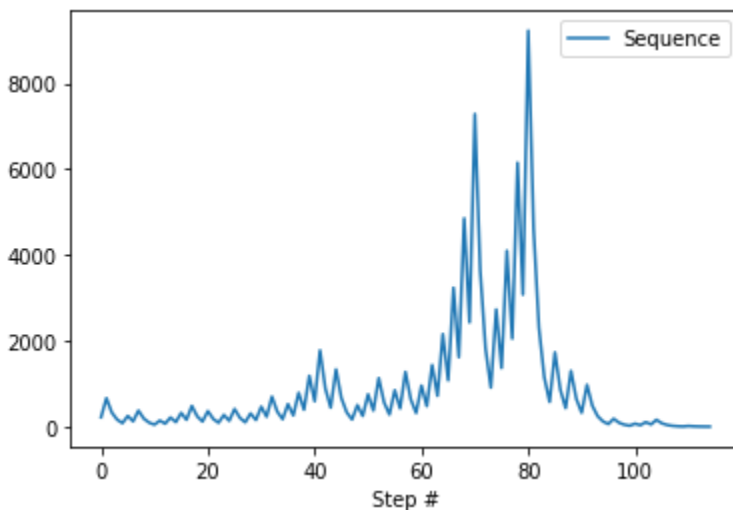
Starting Value: 219



Odds: [219 329 247 371 557 209 157 59 89 67 101 19 29 11 17 13 5 1]

Length of this sequence: 53

Starting Value: 221



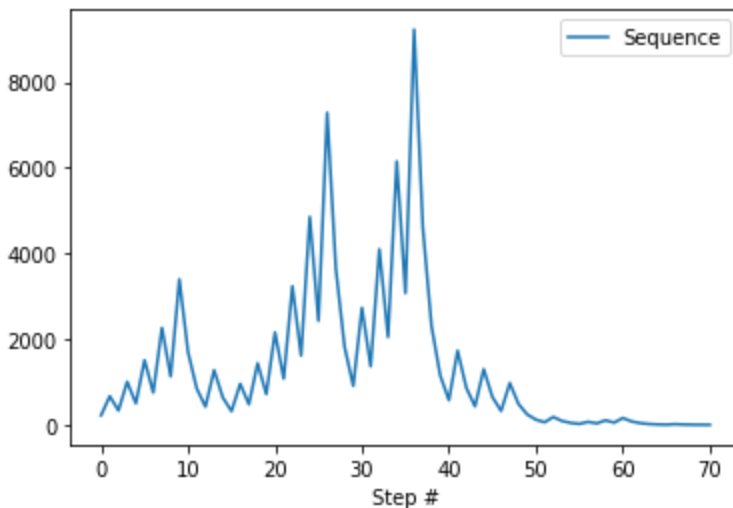
Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)

Odds: [221 83 125 47 71 107 161 121 91 137 103 155 233 175
263 395 593 445 167 251 377 283 425 319 479 719 1079 1619
2429 911 1367 2051 3077 577 433 325 61 23 35 53 5 1]
Length of this sequence: 115

Starting Value: 223



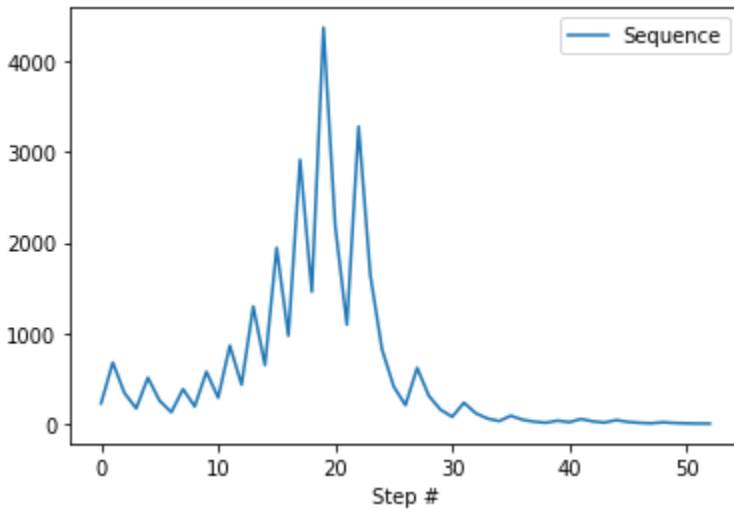
Odds: [223 335 503 755 1133 425 319 479 719 1079 1619 2429 911 1367
2051 3077 577 433 325 61 23 35 53 5 1]
Length of this sequence: 71

Starting Value: 225

Hailstone Project Meeting Notes

Resources

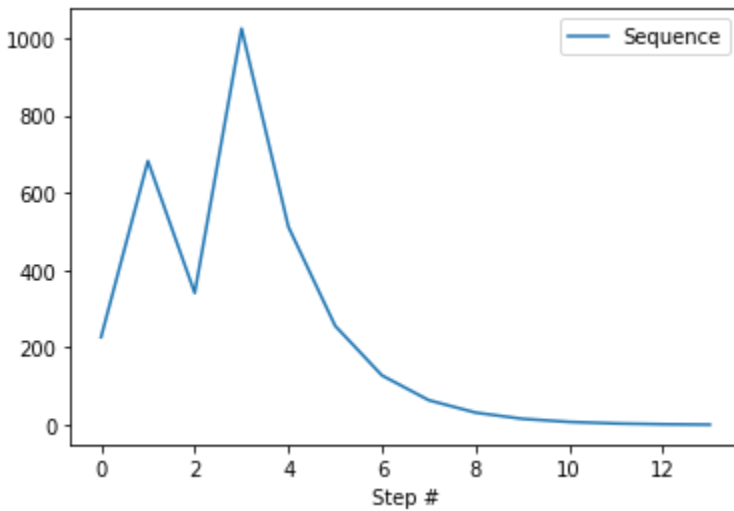
- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-



Odds: [225 169 127 191 287 431 647 971 1457 1093 205 77 29 11
17 13 5 1]

Length of this sequence: 53

Starting Value: 227



Odds: [227 341 1]

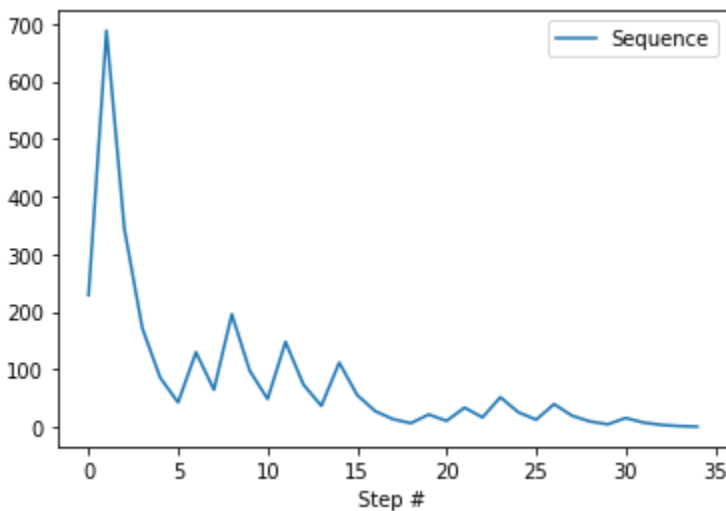
Length of this sequence: 14

Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)

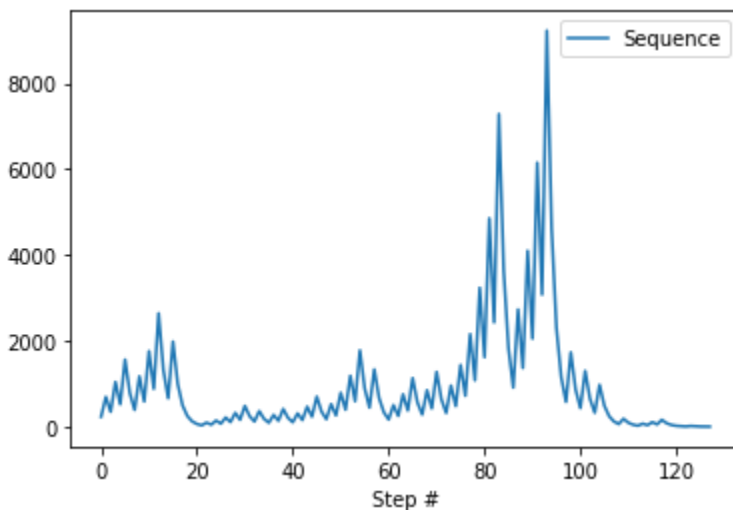
Starting Value: 229



Odds: [229 43 65 49 37 7 11 17 13 5 1]

Length of this sequence: 35

Starting Value: 231



Odds: [231 347 521 391 587 881 661 31 47 71 107 161 121 91
137 103 155 233 175 263 395 593 445 167 251 377 283 425
319 479 719 1079 1619 2429 911 1367 2051 3077 577 433 325 61]

Hailstone Project Meeting Notes

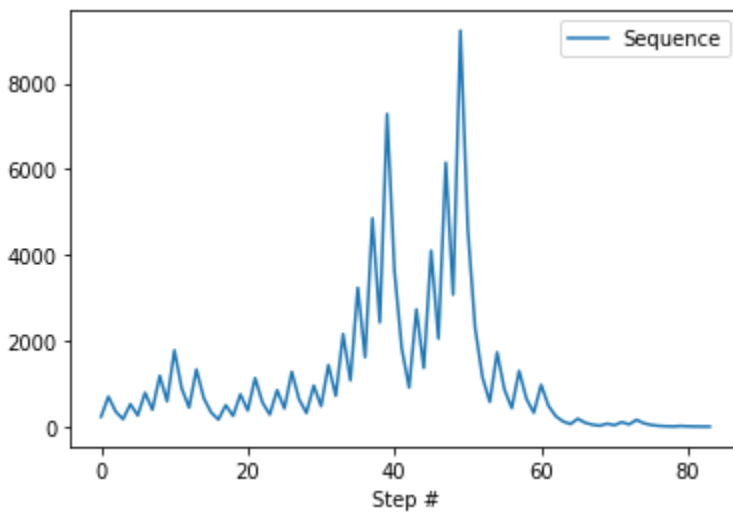
Resources

- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-

23 35 53 5 1]

Length of this sequence: 128

Starting Value: 233



Odds: [233 175 263 395 593 445 167 251 377 283 425 319 479 719
1079 1619 2429 911 1367 2051 3077 577 433 325 61 23 35 53
5 1]

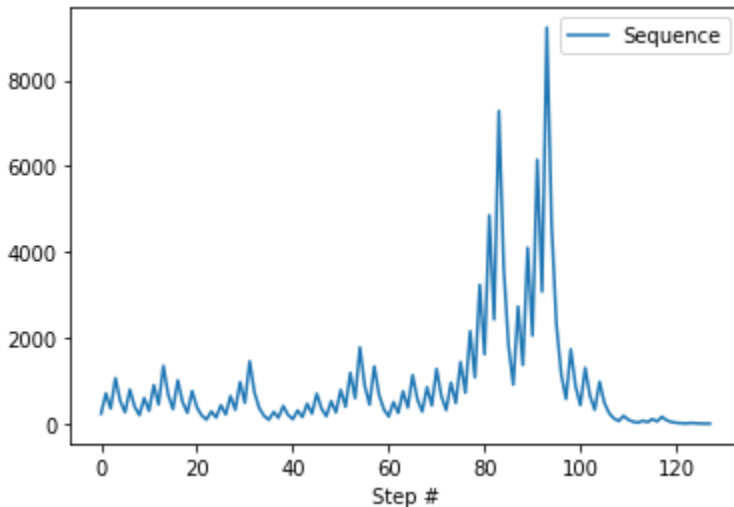
Length of this sequence: 84

Starting Value: 235

Hailstone Project Meeting Notes

Resources

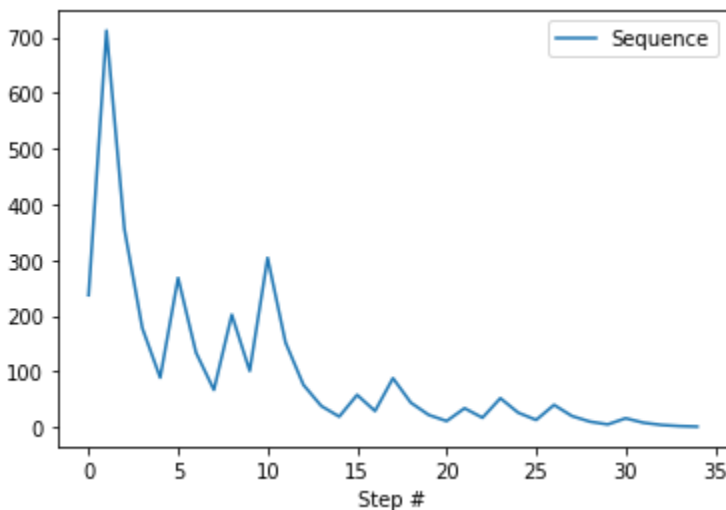
- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-



Odds: [235 353 265 199 299 449 337 253 95 143 215 323 485 91
137 103 155 233 175 263 395 593 445 167 251 377 283 425
319 479 719 1079 1619 2429 911 1367 2051 3077 577 433 325 61
23 35 53 5 1]

Length of this sequence: 128

Starting Value: 237



Hailstone Project Meeting Notes

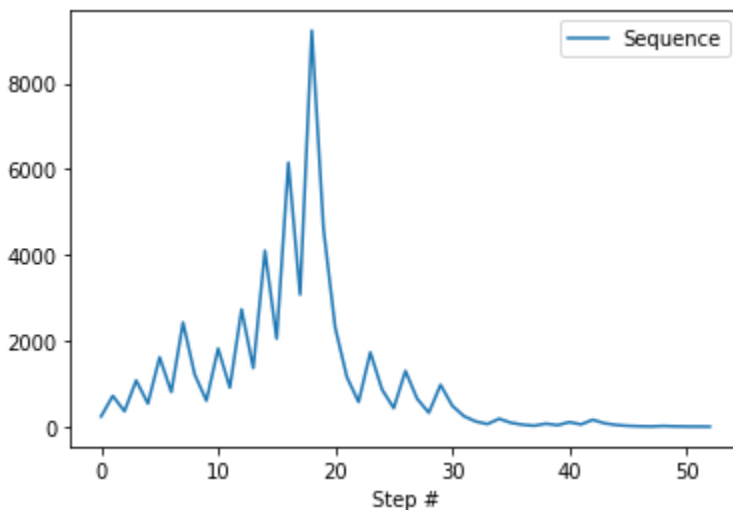
Resources

- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)

Odds: [237 89 67 101 19 29 11 17 13 5 1]

Length of this sequence: 35

Starting Value: 239



Odds: [239 359 539 809 607 911 1367 2051 3077 577 433 325 61 23
35 53 5 1]

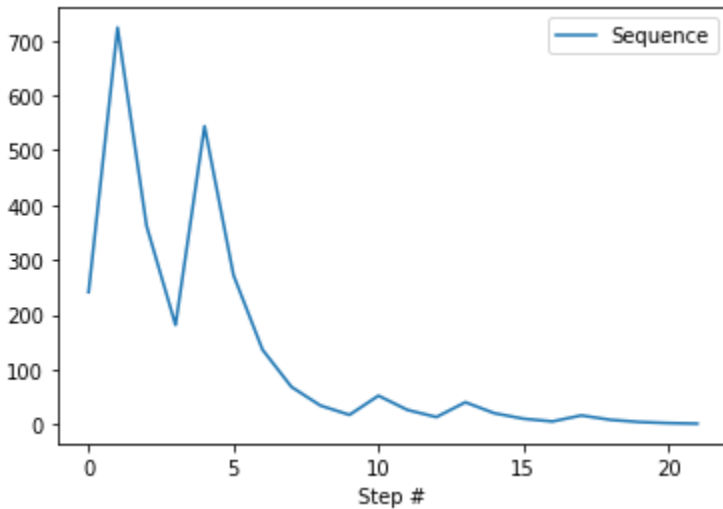
Length of this sequence: 53

Starting Value: 241

Hailstone Project Meeting Notes

Resources

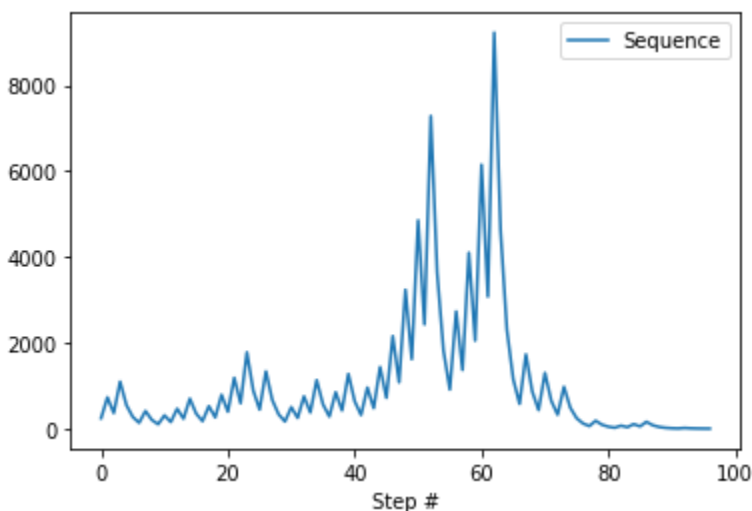
- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-



Odds: [241 181 17 13 5 1]

Length of this sequence: 22

Starting Value: 243



Odds: [243 365 137 103 155 233 175 263 395 593 445 167 251 377
283 425 319 479 719 1079 1619 2429 911 1367 2051 3077 577 433
325 61 23 35 53 5 1]

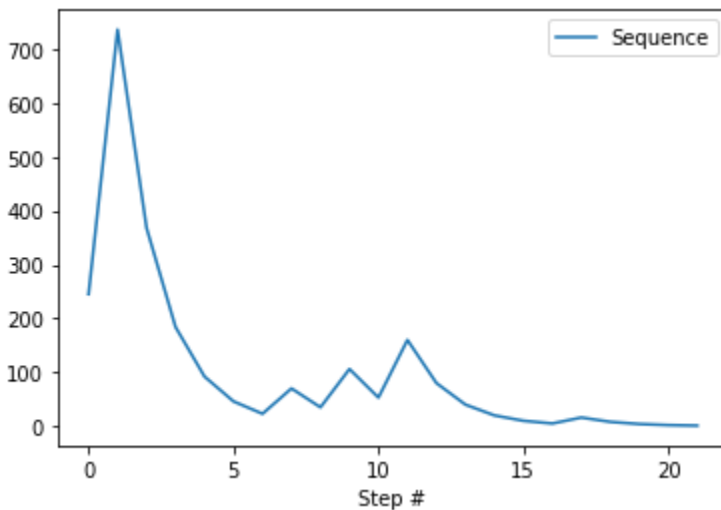
Length of this sequence: 97

Hailstone Project Meeting Notes

Resources

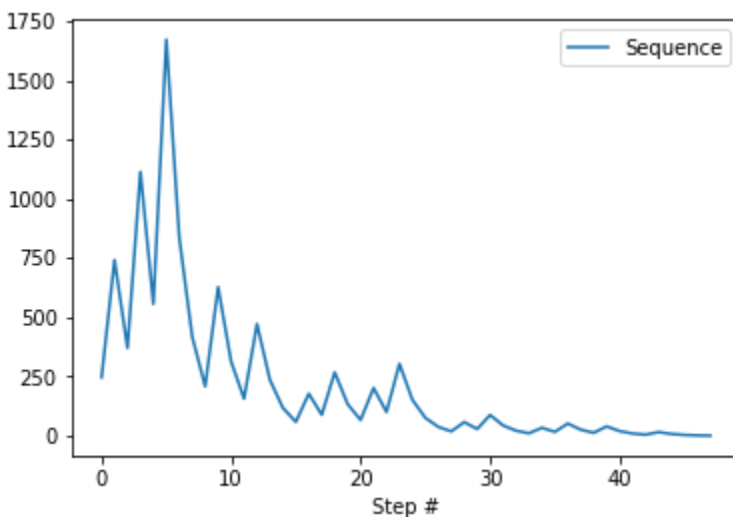
- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-

Starting Value: 245



Odds: [245 23 35 53 5 1]
Length of this sequence: 22

Starting Value: 247



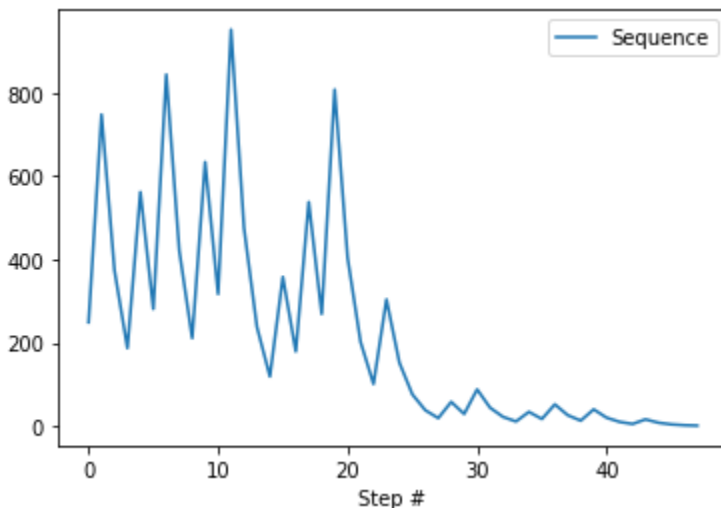
Odds: [247 371 557 209 157 59 89 67 101 19 29 11 17 13 5 1]
Length of this sequence: 48

Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-

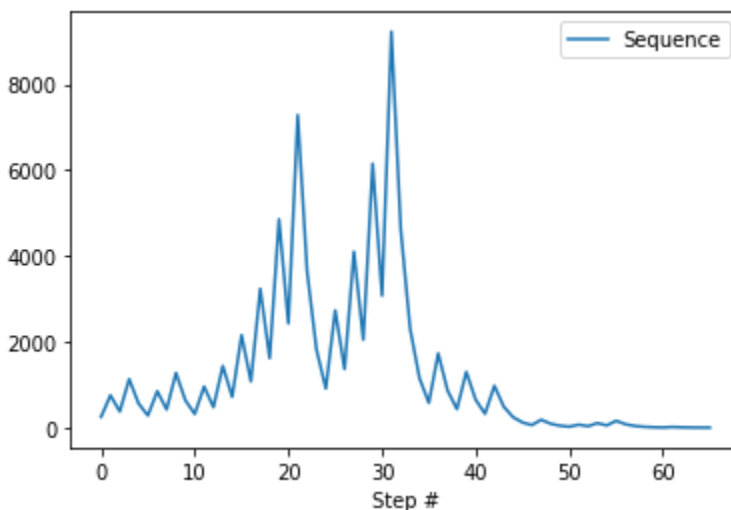
Starting Value: 249



Odds: [249 187 281 211 317 119 179 269 101 19 29 11 17 13 5 1]

Length of this sequence: 48

Starting Value: 251



Odds: [251 377 283 425 319 479 719 1079 1619 2429 911 1367 2051 3077 577 433 325 61 23 35 53 5 1]

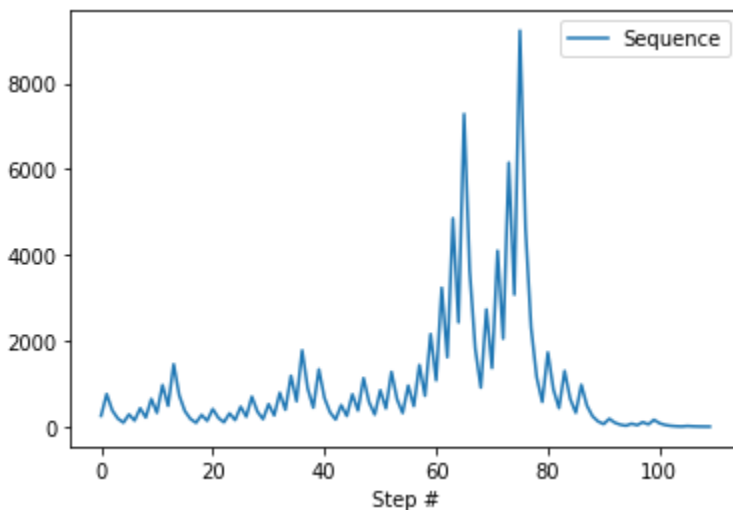
Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)

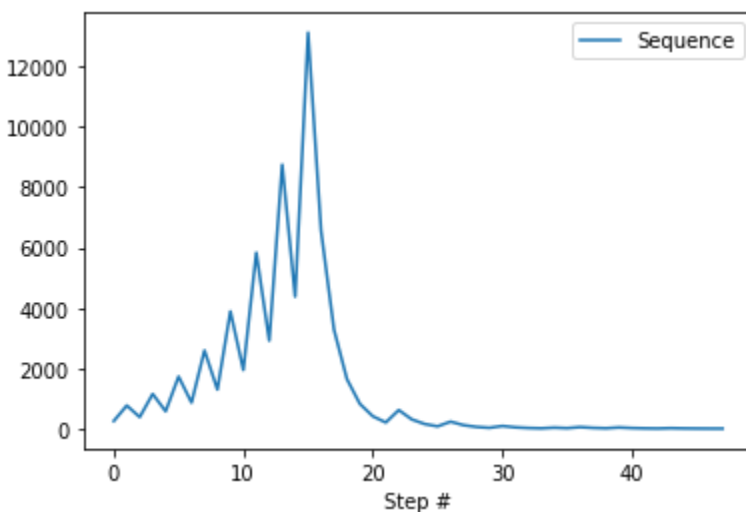
Length of this sequence: 66

Starting Value: 253



Odds: [253 95 143 215 323 485 91 137 103 155 233 175 263 395 593 445 167 251 377
283 425 319 479 719 1079 1619 2429 911 1367 2051 3077 577 433 325 61 23 35 53 5 1]
Length of this sequence: 110

Starting Value: 255



Hailstone Project Meeting Notes

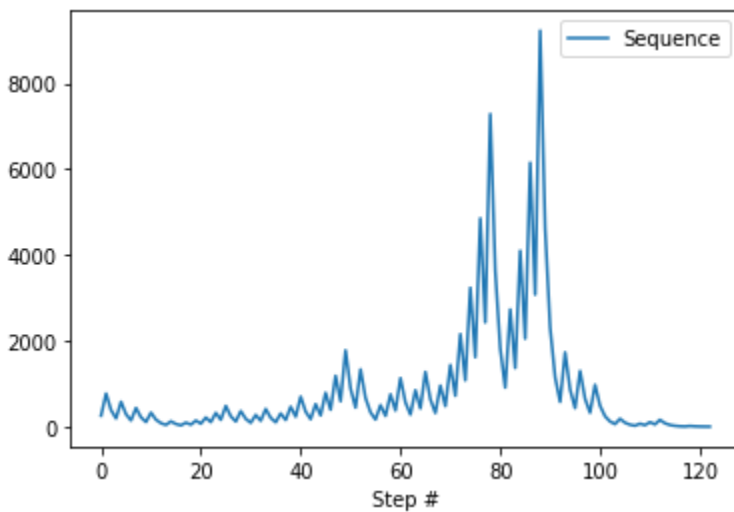
Resources

- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)

Odds: [255 383 575 863 1295 1943 2915 4373 205 77 29 11 17 13 5 1]

Length of this sequence: 48

Starting Value: 257



Odds: [257 193 145 109 41 31 47 71 107 161 121 91 137 103 155 233 175 263 395 593
445 167 251 377 283 425 319 479 719 1079 1619 2429 911 1367 2051 3077 577 433 325
61 23 35 53 5 1]

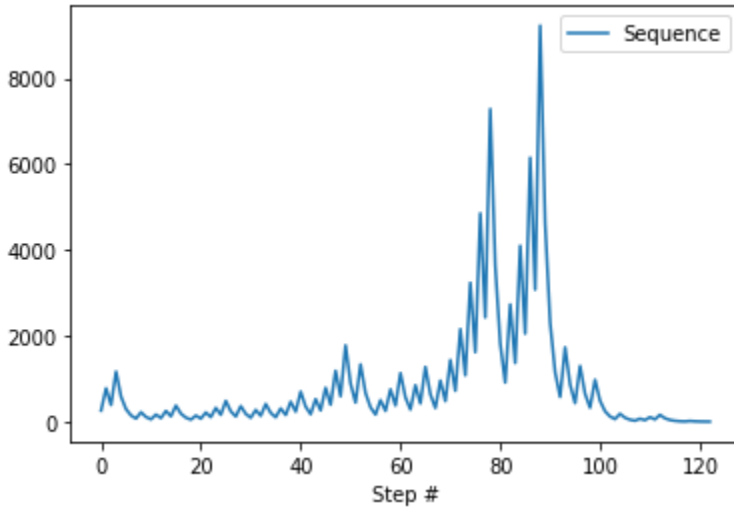
Length of this sequence: 123

Starting Value: 259

Hailstone Project Meeting Notes

Resources

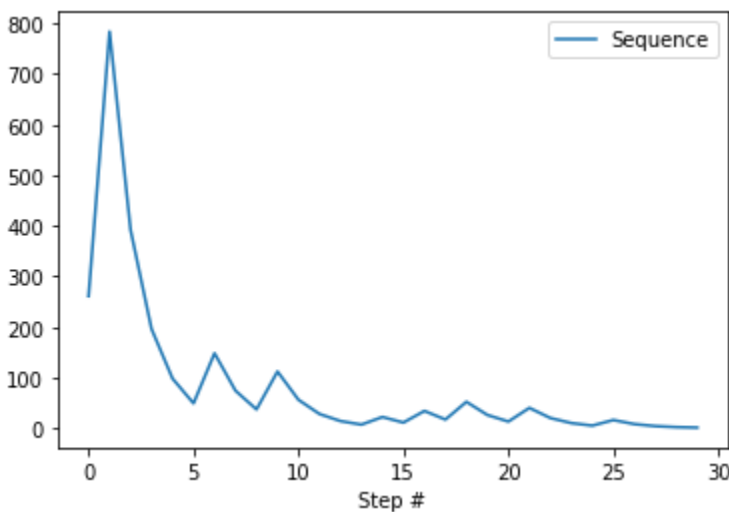
- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)



Odds: [259 389 73 55 83 125 47 71 107 161 121 91 137 103 155 233 175 263 395 593
445 167 251 377 283 425 319 479 719 1079 1619 2429 911 1367 2051 3077 577 433 325
61 23 35 53 5 1]

Length of this sequence: 123

Starting Value: 261



Odds: [261 49 37 7 11 17 13 5 1]

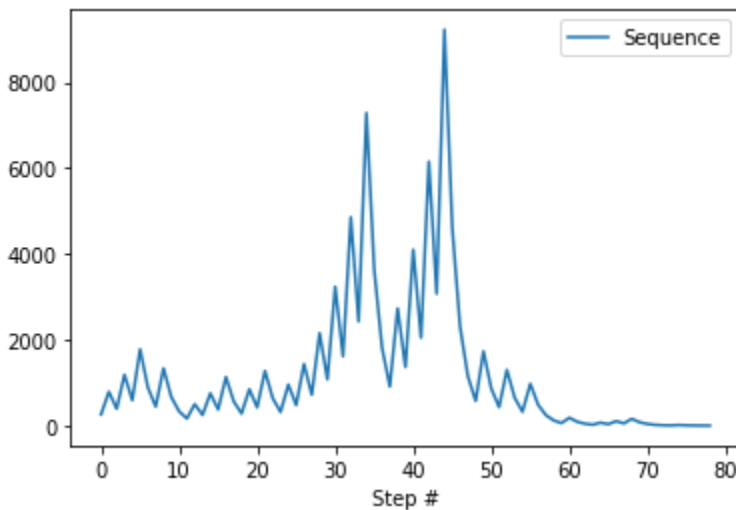
Length of this sequence: 30

Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-

Starting Value: 263



Odds: [263 395 593 445 167 251 377 283 425 319 479 719 1079 1619
2429 911 1367 2051 3077 577 433 325 61 23 35 53 5 1]

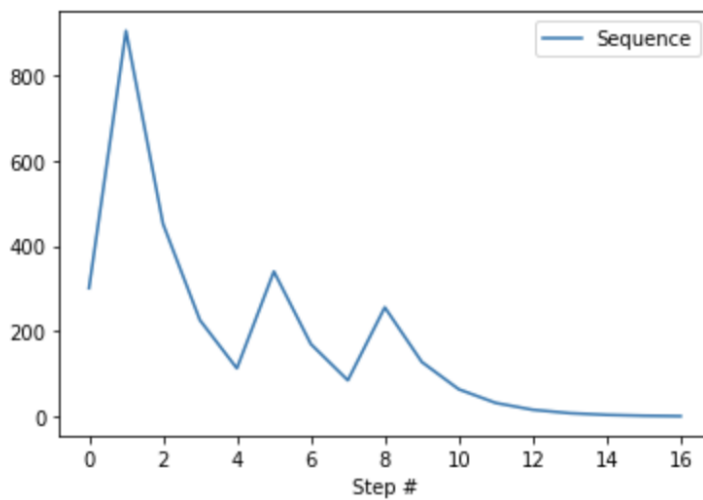
Length of this sequence: 79

Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-

Starting Value: 301



Odds: [301 113 85 1]

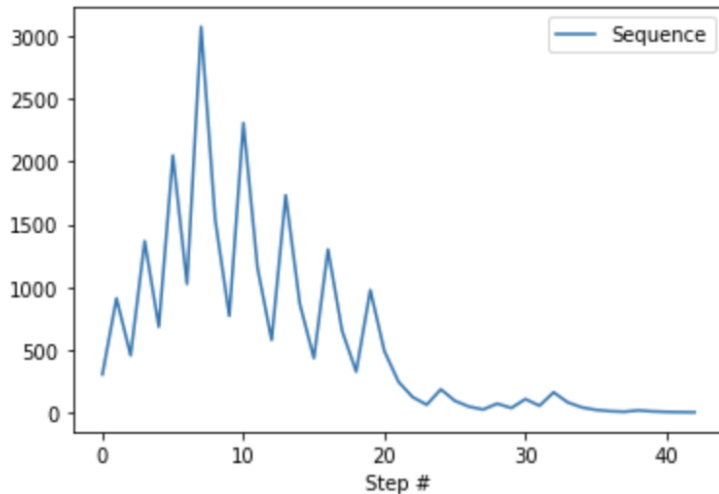
Length of this sequence: 17

Starting Value: 303

Hailstone Project Meeting Notes

Resources

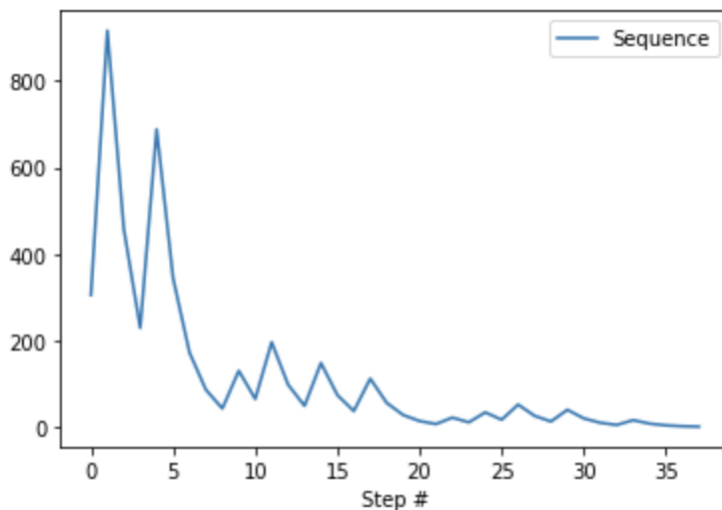
- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)



Odds: [303 455 683 1025 769 577 433 325 61 23 35 53 5 1]

Length of this sequence: 43

Starting Value: 305



Odds: [305 229 43 65 49 37 7 11 17 13 5 1]

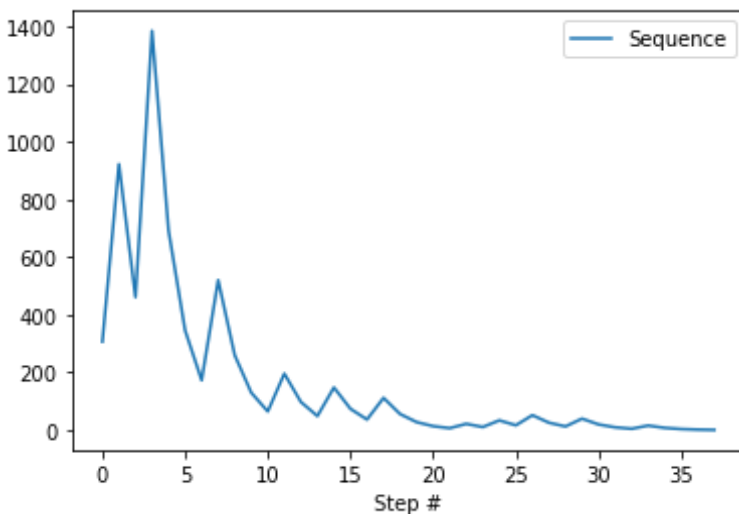
Length of this sequence: 38

Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-

Starting Value: 307



Odds: [307 461 173 65 49 37 7 11 17 13 5 1]

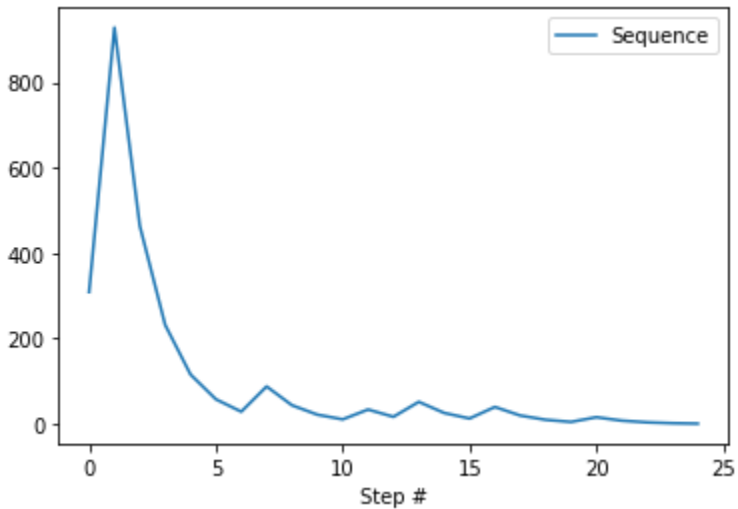
Length of this sequence: 38

Starting Value: 309

Hailstone Project Meeting Notes

Resources

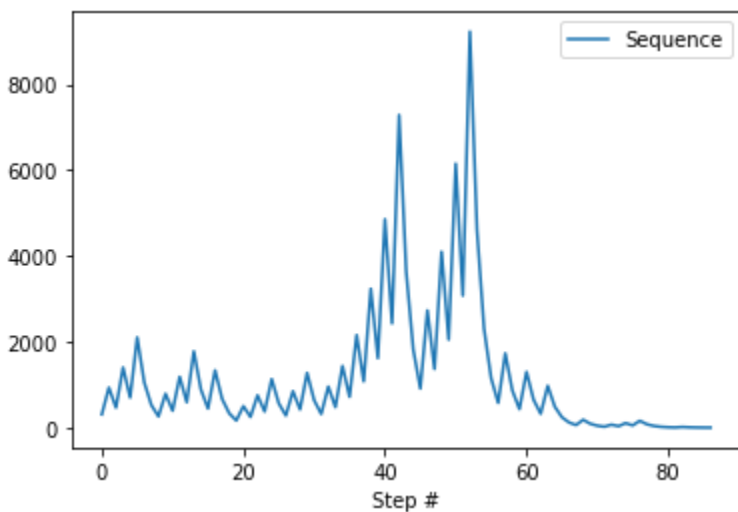
- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-



Odds: [309 29 11 17 13 5 1]

Length of this sequence: 25

Starting Value: 311



Odds: [311 467 701 263 395 593 445 167 251 377 283 425 319 479 719 1079 1619 2429 911 1367 2051 3077 577 433 325 61 23 35 53 5 1]

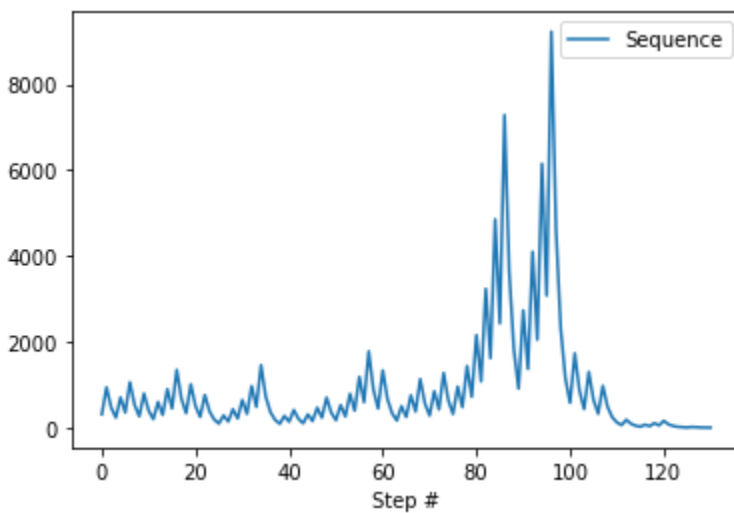
Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)

Length of this sequence: 87

Starting Value: 313



Odds: [313 235 353 265 199 299 449 337 253 95 143 215 323 485 91 137 103 155 233
175 263 395 593 445 167 251 377 283 425 319 479 719 1079 1619 2429 911 1367 2051
3077 577 433 325 61 23 35 53 5 1]

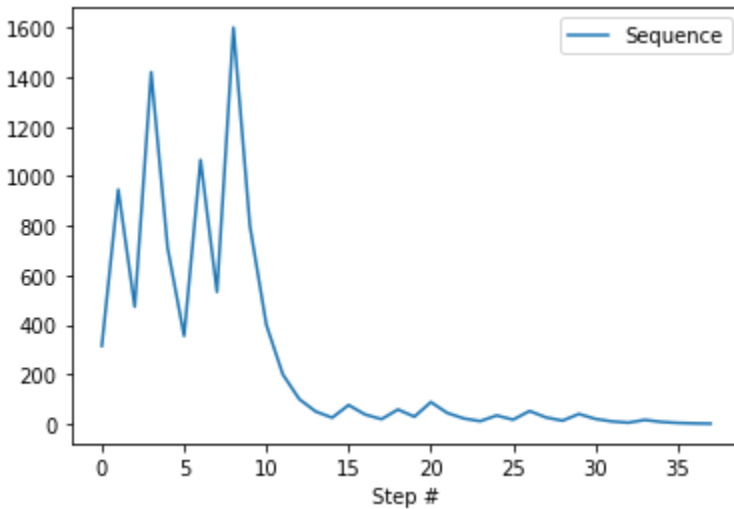
Length of this sequence: 131

Starting Value: 315

Hailstone Project Meeting Notes

Resources

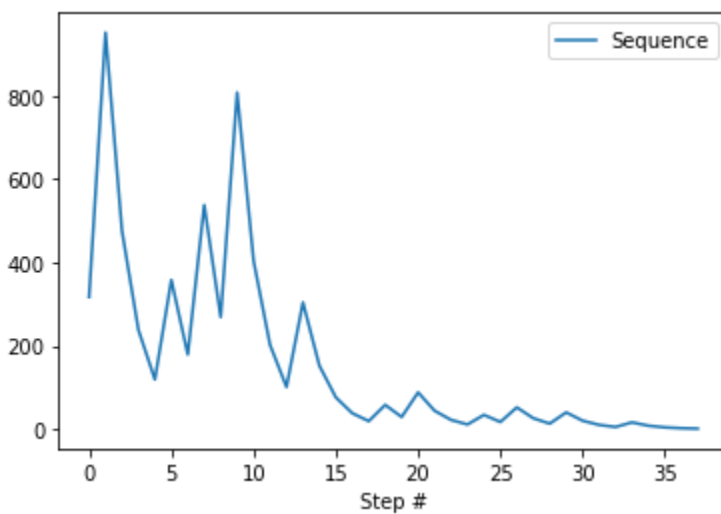
- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-



Odds: [315 473 355 533 25 19 29 11 17 13 5 1]

Length of this sequence: 38

Starting Value: 317



Odds: [317 119 179 269 101 19 29 11 17 13 5 1]

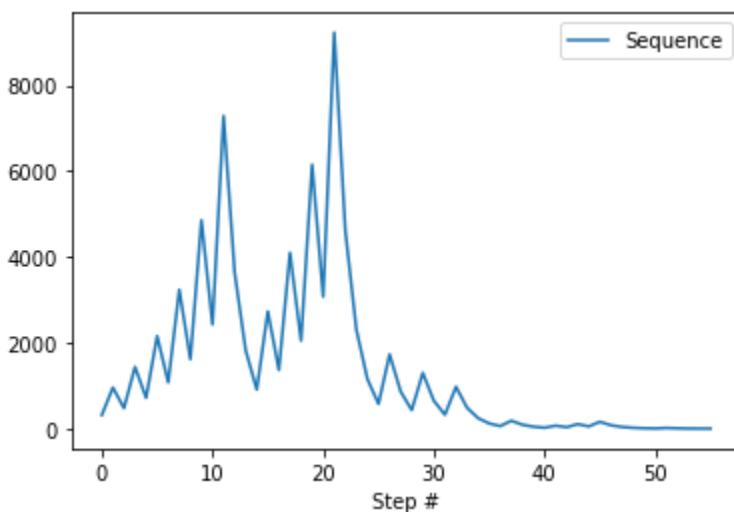
Length of this sequence: 38

Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-

Starting Value: 319



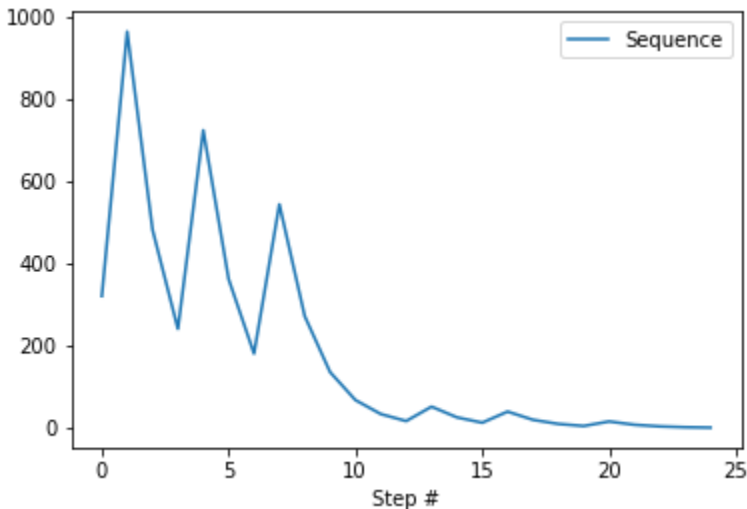
Odds: [319 479 719 1079 1619 2429 911 1367 2051 3077 577 433 325 61 23 35 53 5 1]
Length of this sequence: 56

Starting Value: 321

Hailstone Project Meeting Notes

Resources

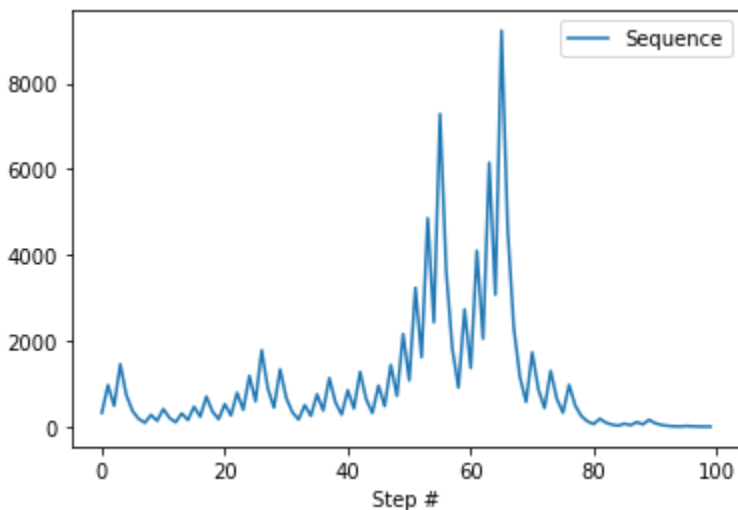
- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)



Odds: [321 241 181 17 13 5 1]

Length of this sequence: 25

Starting Value: 323



Odds: [323 485 91 137 103 155 233 175 263 395 593 445 167 251 377 283 425 319 479 719 1079 1619 2429 911 1367 2051 3077 577 433 325 61 23 35 53 5 1]

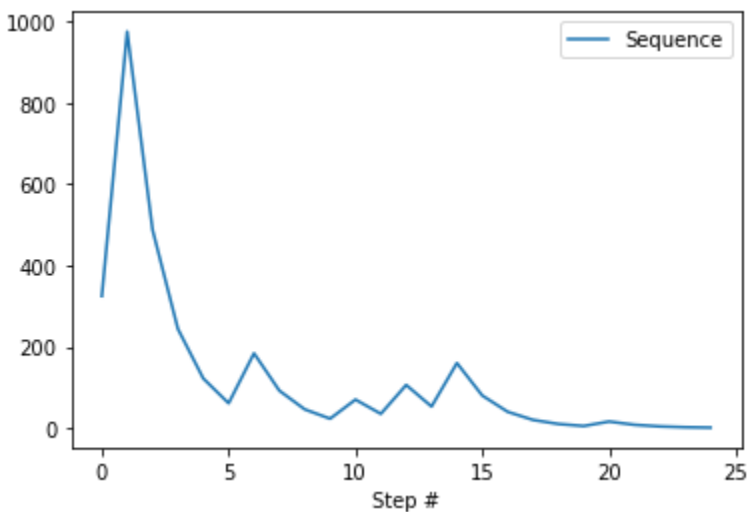
Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)

Length of this sequence: 100

Starting Value: 325



Odds: [325 61 23 35 53 5 1]

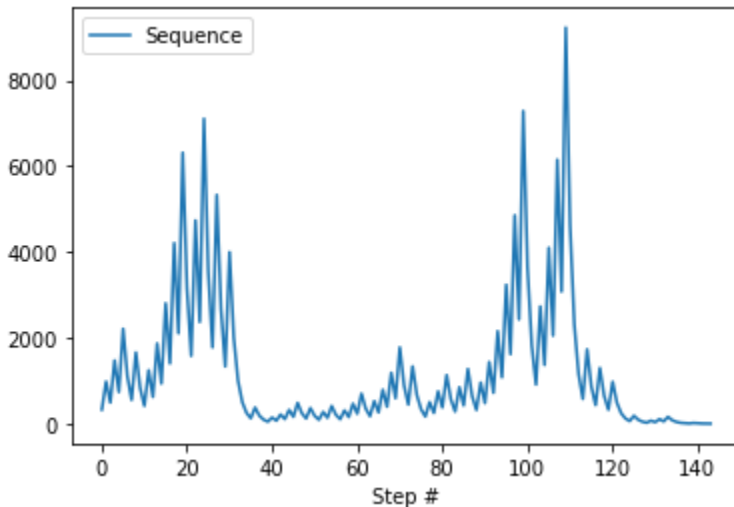
Length of this sequence: 25

Starting Value: 327

Hailstone Project Meeting Notes

Resources

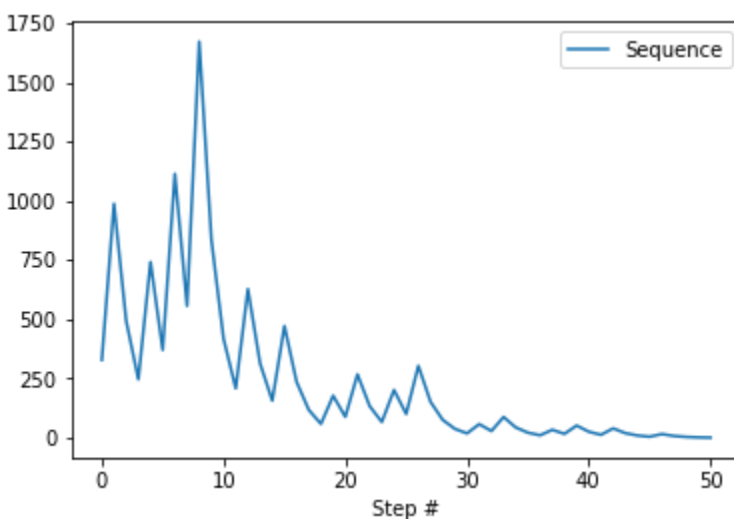
- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-



Odds: [327 491 737 553 415 623 935 1403 2105 1579 2369 1777 1333 125 47 71 107
161 121 91 137 103 155 233 175 263 395 593 445 167 251 377 283 425 319 479 719
1079 1619 2429 911 1367 2051 3077 577 433 325 61 23 35 53 5 1]

Length of this sequence: 144

Starting Value: 329



Hailstone Project Meeting Notes

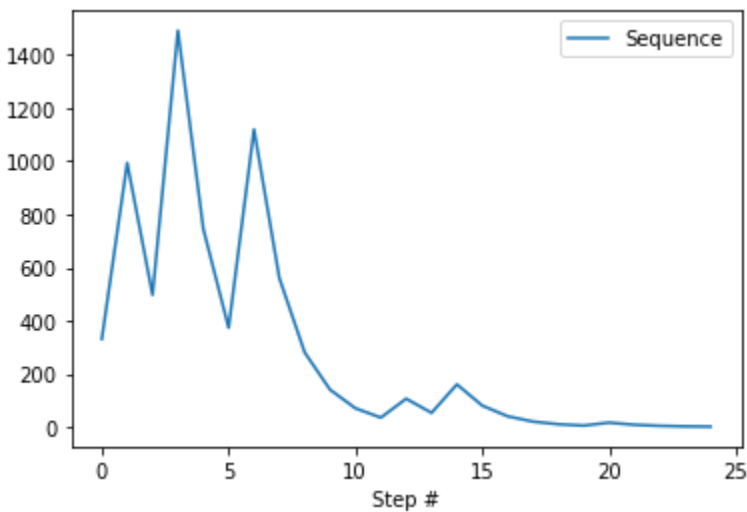
Resources

- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)

Odds: [329 247 371 557 209 157 59 89 67 101 19 29 11 17 13 5 1]

Length of this sequence: 51

Starting Value: 331



Odds: [331 497 373 35 53 5 1]

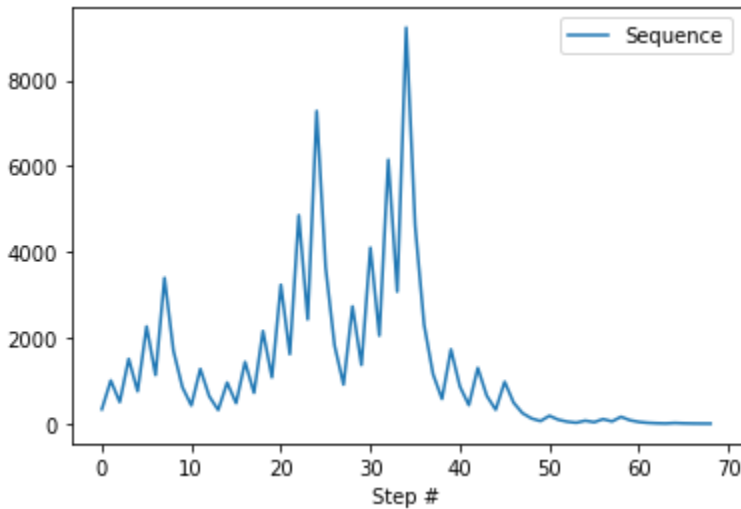
Length of this sequence: 25

Starting Value: 335

Hailstone Project Meeting Notes

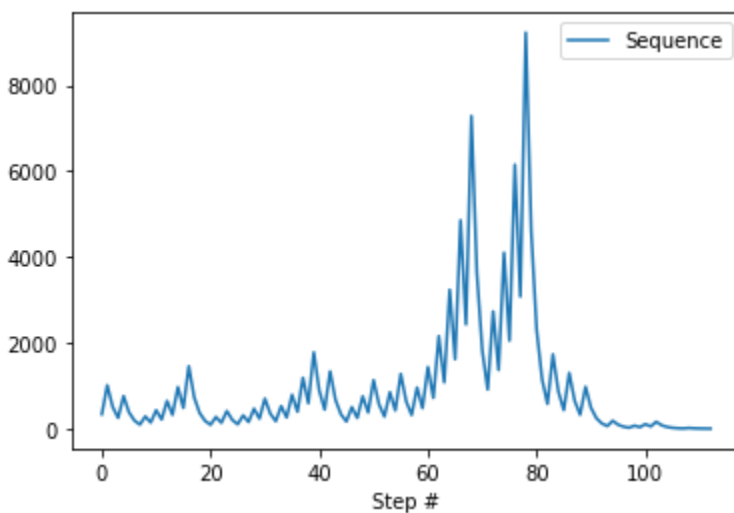
Resources

- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-



Odds: [335 503 755 1133 425 319 479 719 1079 1619 2429 911 1367 2051 3077 577 433
325 61 23 35 53 5 1]
Length of this sequence: 69

Starting Value: 337



Hailstone Project Meeting Notes

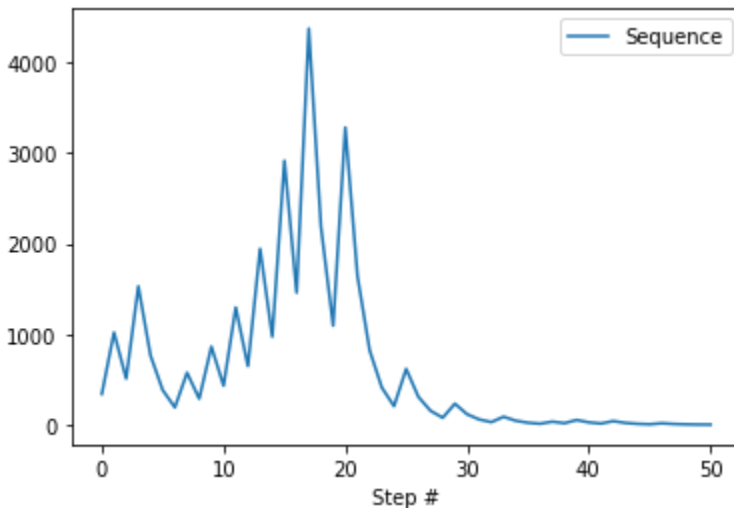
Resources

- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)

Odds: [337 253 95 143 215 323 485 91 137 103 155 233 175 263 395 593 445 167 251 377 283 425 319 479 719 1079 1619 2429 911 1367 2051 3077 577 433 325 61 23 35 53 5 1]

Length of this sequence: 113

Starting Value: 339



Odds: [339 509 191 287 431 647 971 1457 1093 205 77 29 11 17 13 5 1]

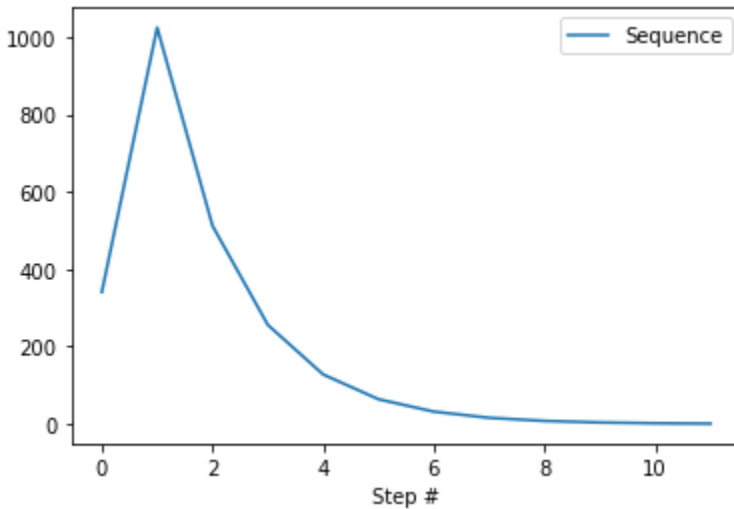
Length of this sequence: 51

Starting Value: 341

Hailstone Project Meeting Notes

Resources

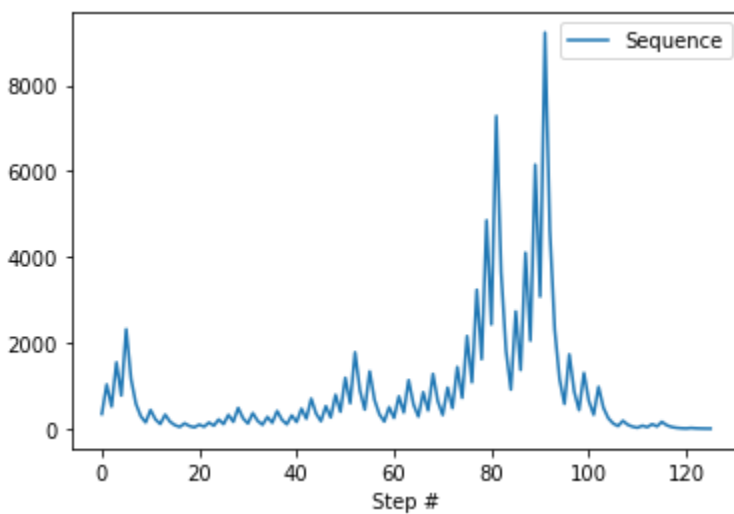
- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-



Odds: [341 1]

Length of this sequence: 12

Starting Value: 343



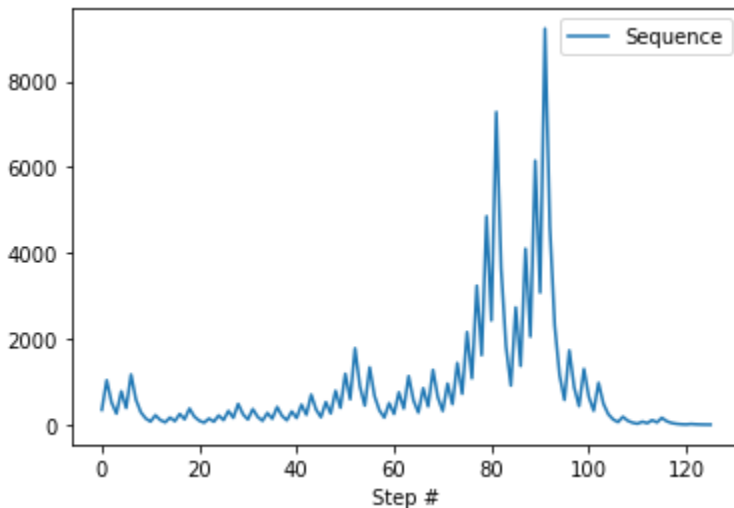
Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)

Odds: [343 515 773 145 109 41 31 47 71 107 161 121 91 137 103 155 233 175 263
395 593 445 167 251 377 283 425 319 479 719 1079 1619 2429 911 1367 2051 3077
577 433 325 61 23 35 53 5 1]
Length of this sequence: 126

Starting Value: 345



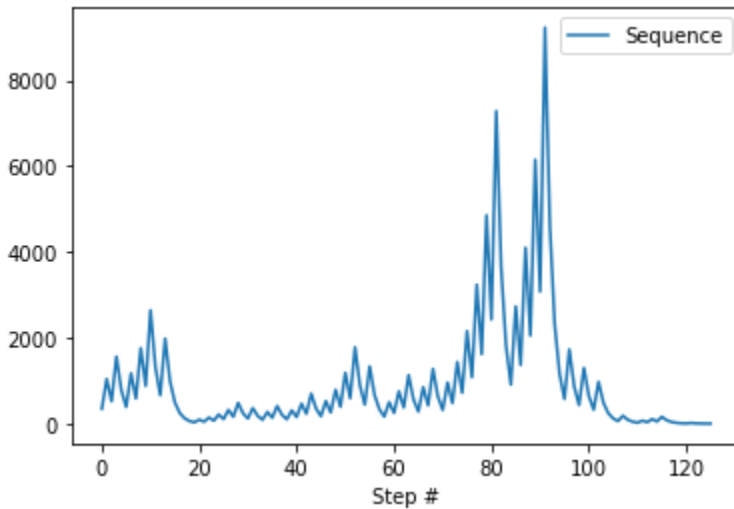
Odds: [345 259 389 73 55 83 125 47 71 107 161 121 91 137 103 155 233 175 263 395
593 445 167 251 377 283 425 319 479 719 1079 1619 2429 911 1367 2051 3077 577 433
325 61 23 35 53 5 1]
Length of this sequence: 126

Starting Value: 347

Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-



Odds: [347 521 391 587 881 661 31 47 71 107 161 121 91 137
103 155 233 175 263 395 593 445 167 251 377 283 425 319
479 719 1079 1619 2429 911 1367 2051 3077 577 433 325 61 23
35 53 5 1]

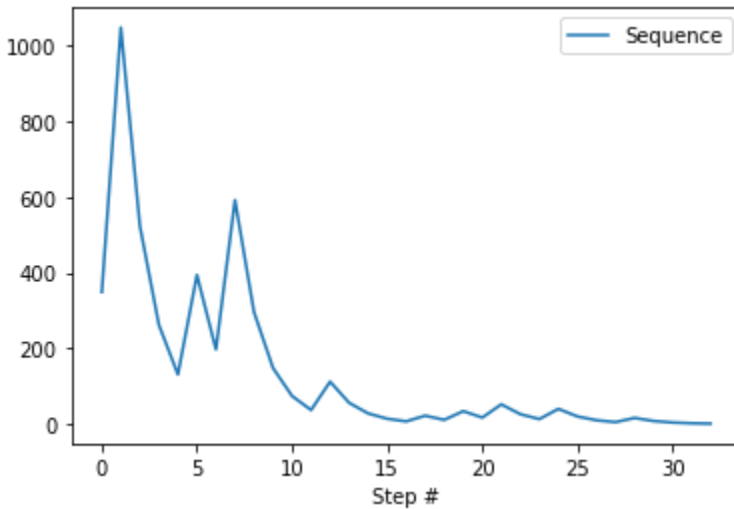
Length of this sequence: 126

Starting Value: 349

Hailstone Project Meeting Notes

Resources

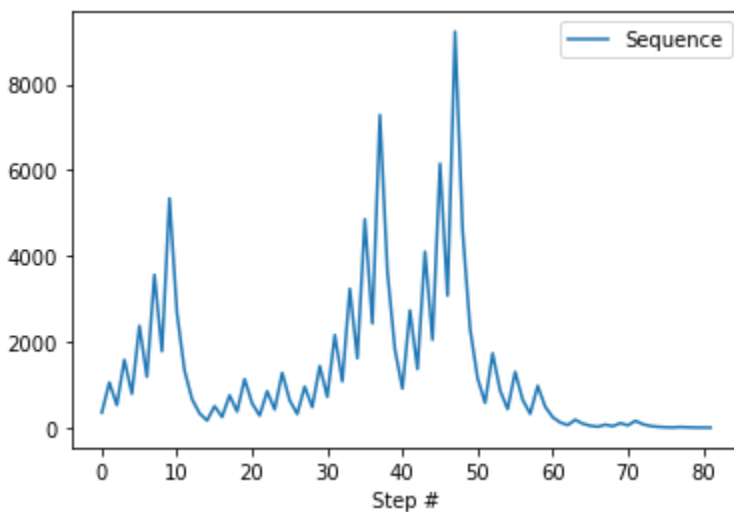
- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-



Odds: [349 131 197 37 7 11 17 13 5 1]

Length of this sequence: 33

Starting Value: 351



Odds: [351 527 791 1187 1781 167 251 377 283 425 319 479 719 1079
1619 2429 911 1367 2051 3077 577 433 325 61 23 35 53 5

Hailstone Project Meeting Notes

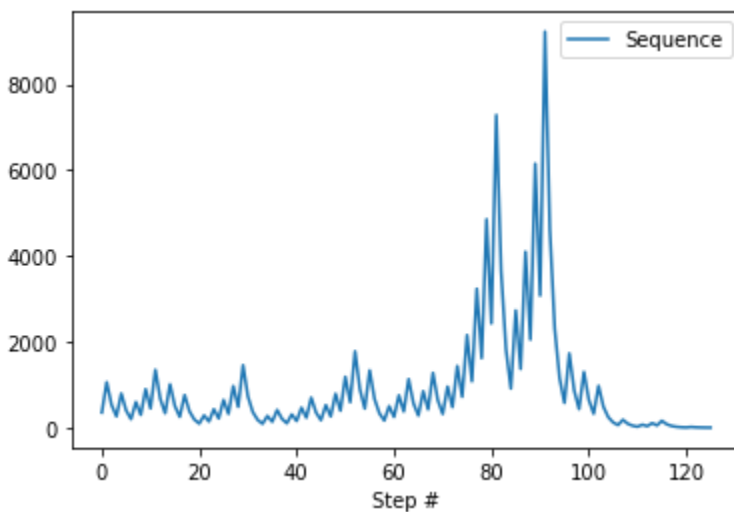
Resources

- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-

1]

Length of this sequence: 82

Starting Value: 353



Odds: [353 265 199 299 449 337 253 95 143 215 323 485 91 137
103 155 233 175 263 395 593 445 167 251 377 283 425 319
479 719 1079 1619 2429 911 1367 2051 3077 577 433 325 61 23
35 53 5 1]

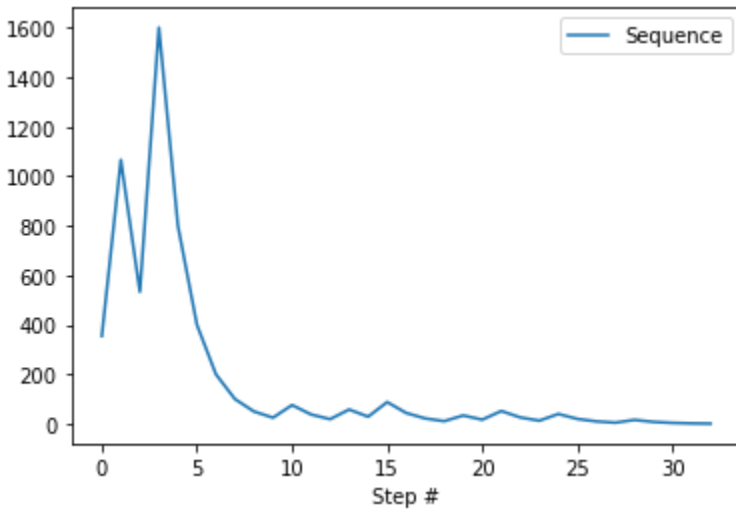
Length of this sequence: 126

Starting Value: 355

Hailstone Project Meeting Notes

Resources

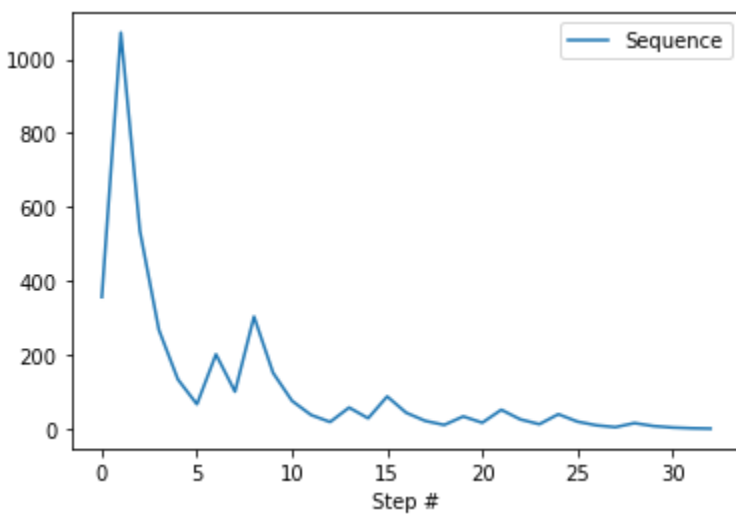
- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-



Odds: [355 533 25 19 29 11 17 13 5 1]

Length of this sequence: 33

Starting Value: 357



Odds: [357 67 101 19 29 11 17 13 5 1]

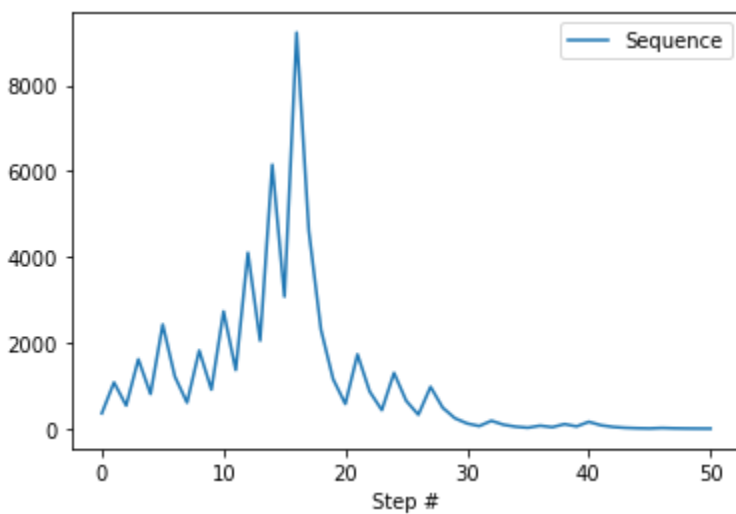
Length of this sequence: 33

Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-

Starting Value: 359



Odds: [359 539 809 607 911 1367 2051 3077 577 433 325 61 23 35 53 5 1]

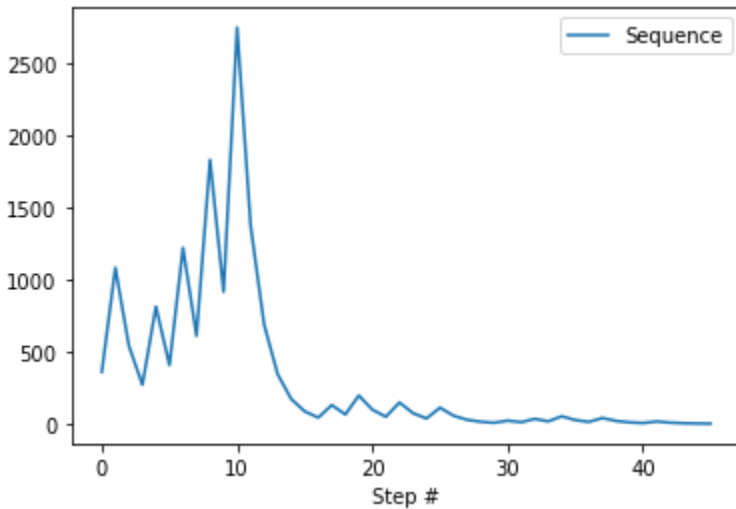
Length of this sequence: 51

Starting Value: 361

Hailstone Project Meeting Notes

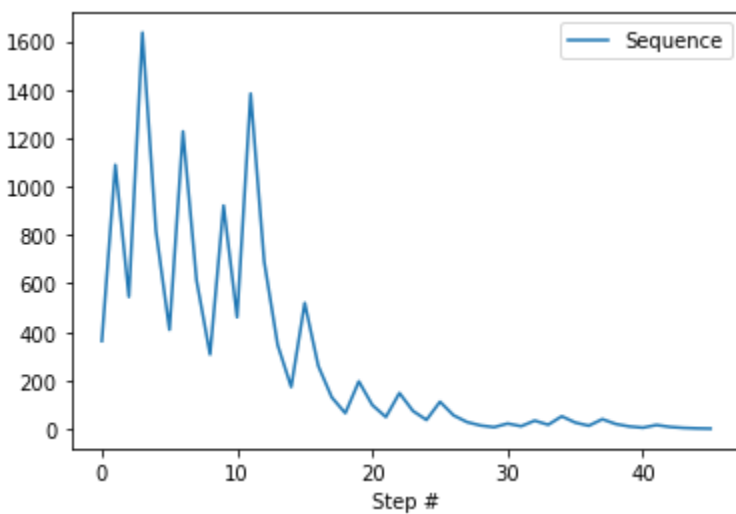
Resources

- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-



Odds: [361 271 407 611 917 43 65 49 37 7 11 17 13 5 1]
Length of this sequence: 46

Starting Value: 363



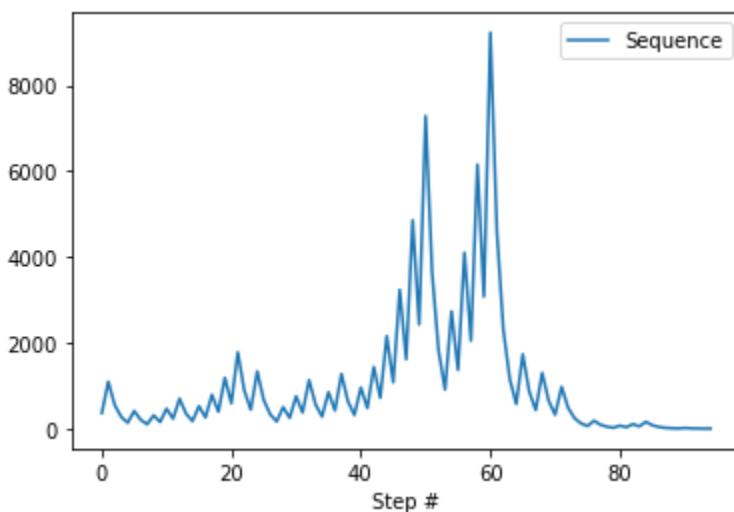
Odds: [363 545 409 307 461 173 65 49 37 7 11 17 13 5 1]
Length of this sequence: 46

Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-

Starting Value: 365



Odds: [365 137 103 155 233 175 263 395 593 445 167 251 377 283
425 319 479 719 1079 1619 2429 911 1367 2051 3077 577 433 325
61 23 35 53 5 1]

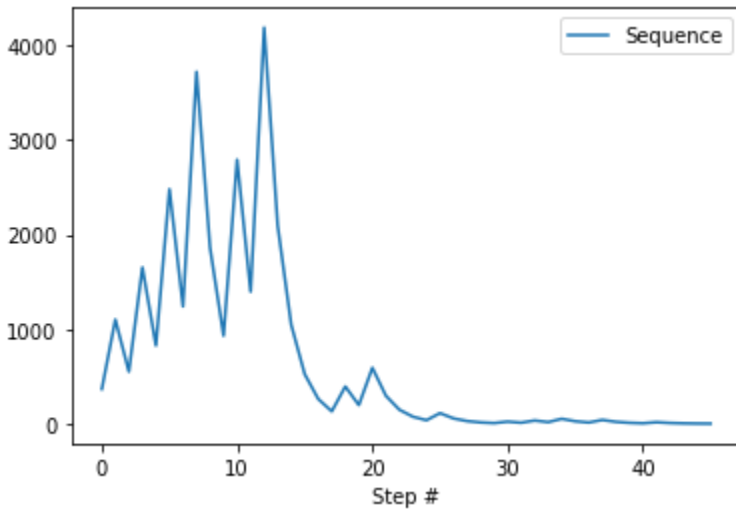
Length of this sequence: 95

Starting Value: 367

Hailstone Project Meeting Notes

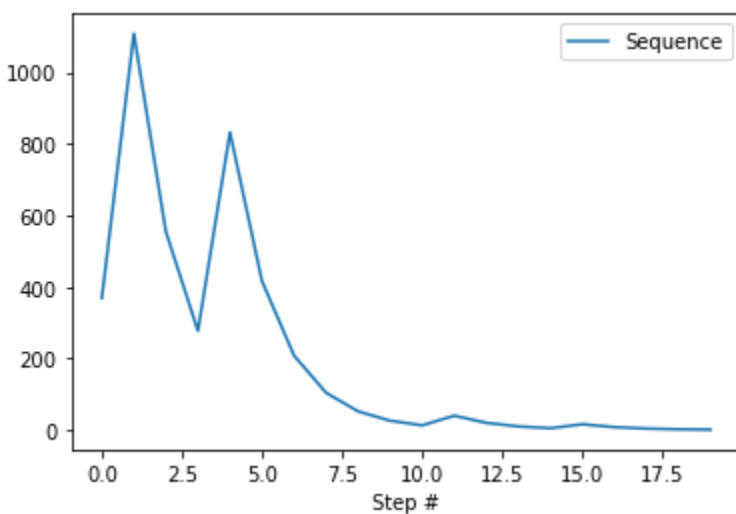
Resources

- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-



Odds: [367 551 827 1241 931 1397 131 197 37 7 11 17 13 5 1]
Length of this sequence: 46

Starting Value: 369



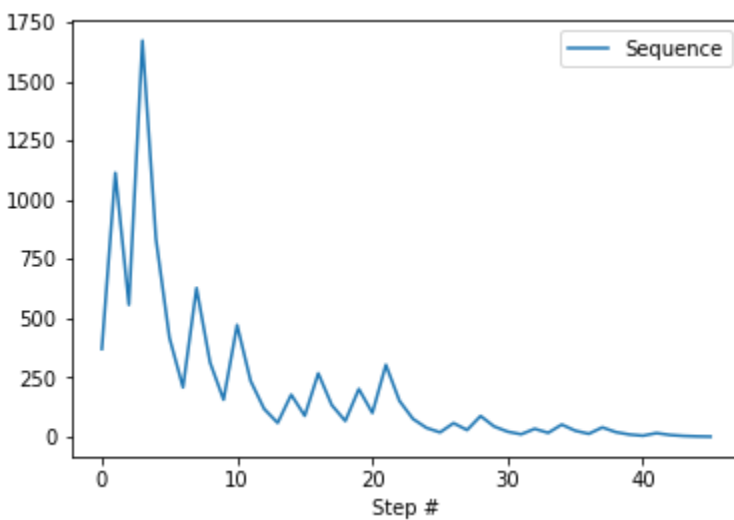
Odds: [369 277 13 5 1]
Length of this sequence: 20

Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-

Starting Value: 371



Odds: [371 557 209 157 59 89 67 101 19 29 11 17 13 5 1]

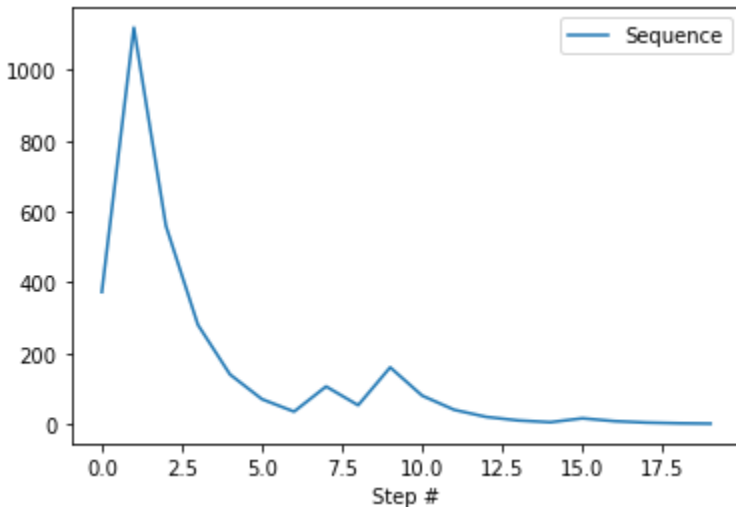
Length of this sequence: 46

Starting Value: 373

Hailstone Project Meeting Notes

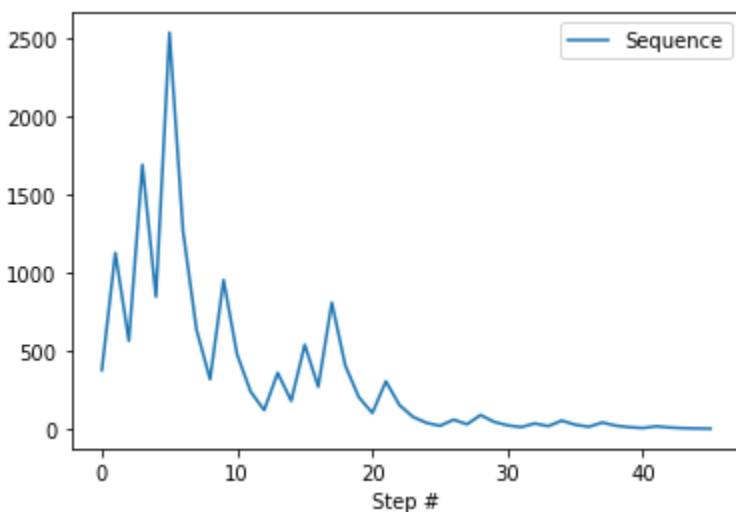
Resources

- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-



Odds: [373 35 53 5 1]
Length of this sequence: 20

Starting Value: 375



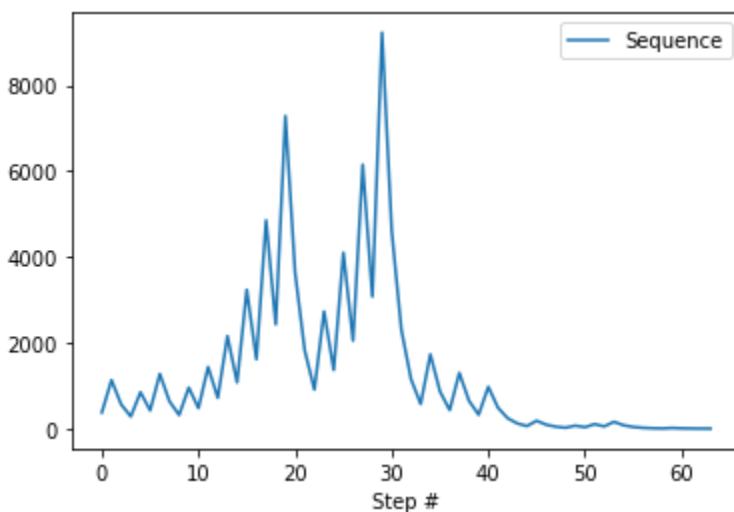
Odds: [375 563 845 317 119 179 269 101 19 29 11 17 13 5 1]
Length of this sequence: 46

Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-

Starting Value: 377



Odds: [377 283 425 319 479 719 1079 1619 2429 911 1367 2051 3077 577
433 325 61 23 35 53 5 1]

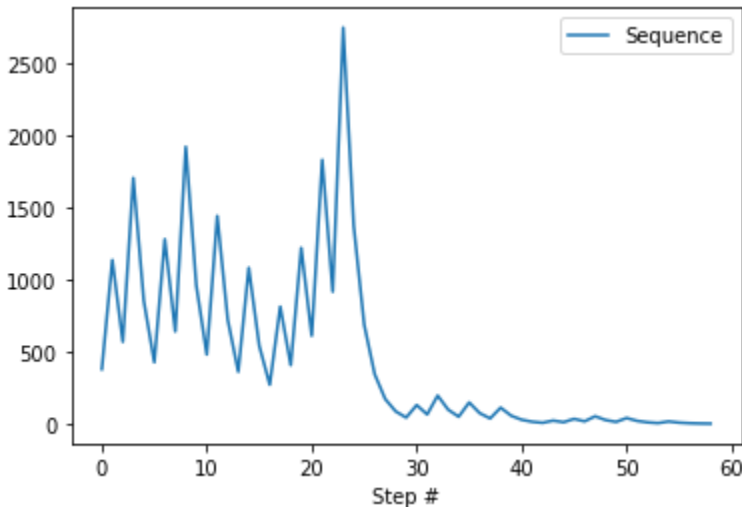
Length of this sequence: 64

Starting Value: 379

Hailstone Project Meeting Notes

Resources

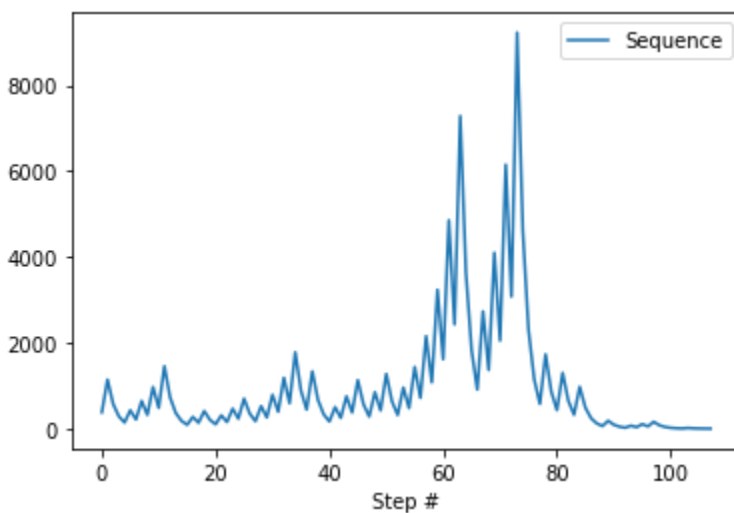
- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-



Odds: [379 569 427 641 481 361 271 407 611 917 43 65 49 37 7 11 17 13
5 1]

Length of this sequence: 59

Starting Value: 381



Odds: [381 143 215 323 485 91 137 103 155 233 175 263 395 593

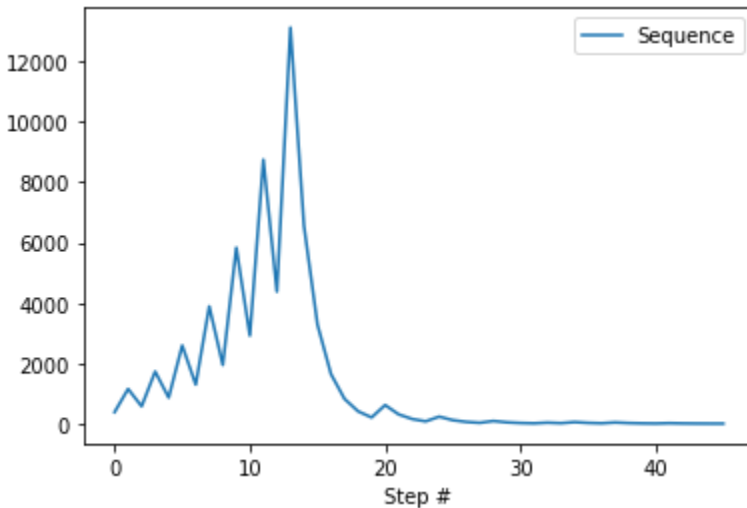
Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)

445 167 251 377 283 425 319 479 719 1079 1619 2429 911 1367
2051 3077 577 433 325 61 23 35 53 5 1]
Length of this sequence: 108

Starting Value: 383



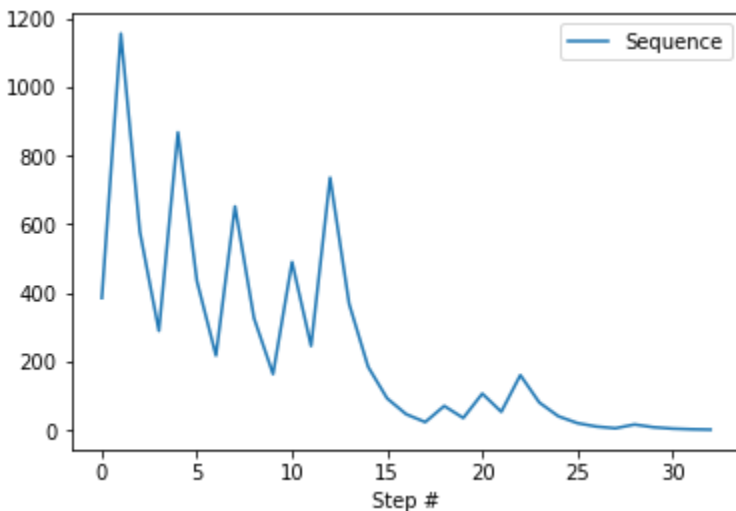
Odds: [383 575 863 1295 1943 2915 4373 205 77 29 11 17 13 5
1]
Length of this sequence: 46

Starting Value: 385

Hailstone Project Meeting Notes

Resources

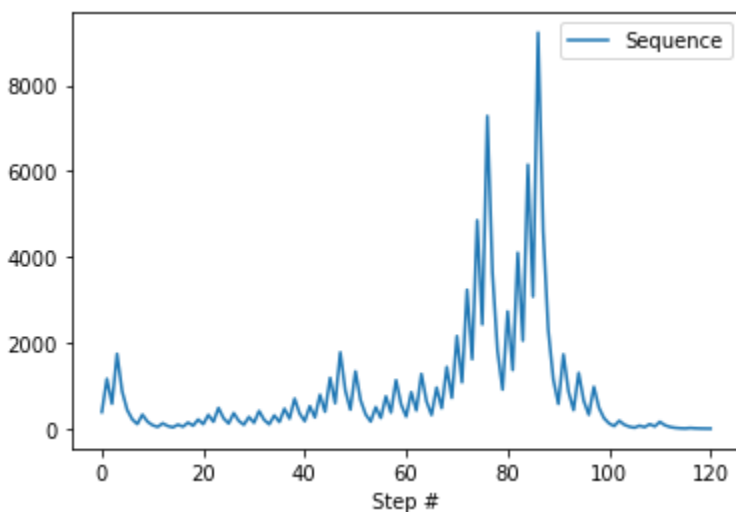
- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)



Odds: [385 289 217 163 245 23 35 53 5 1]

Length of this sequence: 33

Starting Value: 387



Odds: [387 581 109 41 31 47 71 107 161 121 91 137 103 155
233 175 263 395 593 445 167 251 377 283 425 319 479 719]

Hailstone Project Meeting Notes

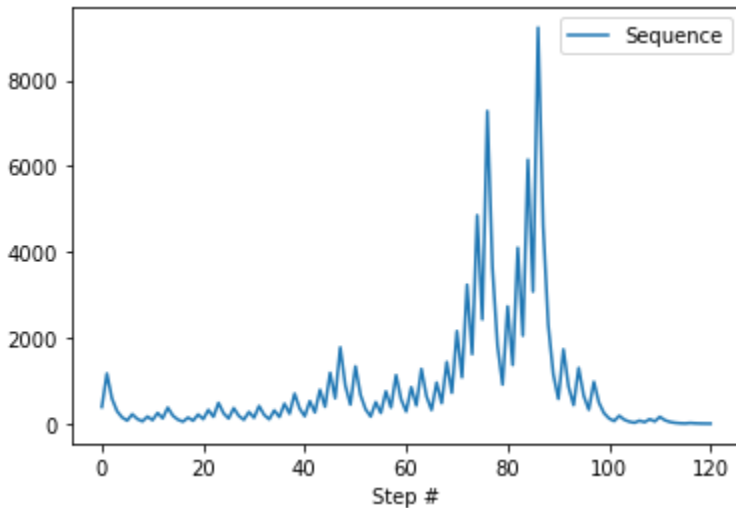
Resources

- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)

1079 1619 2429 911 1367 2051 3077 577 433 325 61 23 35 53
5 1]

Length of this sequence: 121

Starting Value: 389



Odds: [389 73 55 83 125 47 71 107 161 121 91 137 103 155
233 175 263 395 593 445 167 251 377 283 425 319 479 719
1079 1619 2429 911 1367 2051 3077 577 433 325 61 23 35 53
5 1]

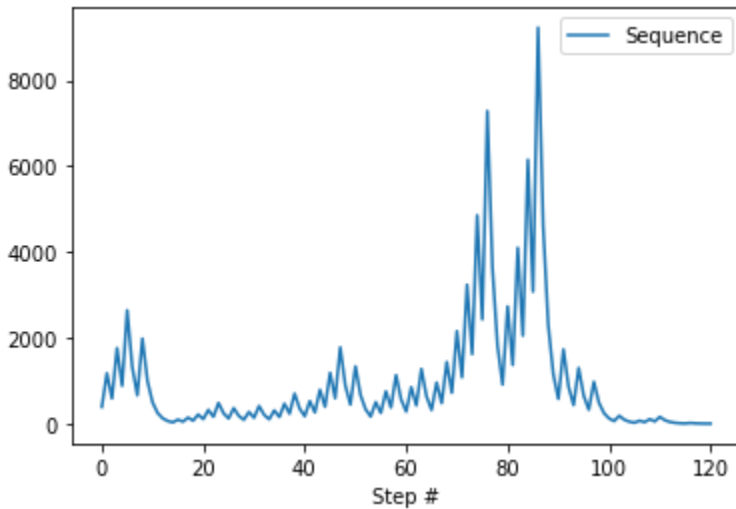
Length of this sequence: 121

Starting Value: 391

Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)



Odds: [391 587 881 661 31 47 71 107 161 121 91 137 103 155
233 175 263 395 593 445 167 251 377 283 425 319 479 719
1079 1619 2429 911 1367 2051 3077 577 433 325 61 23 35 53
5 1]

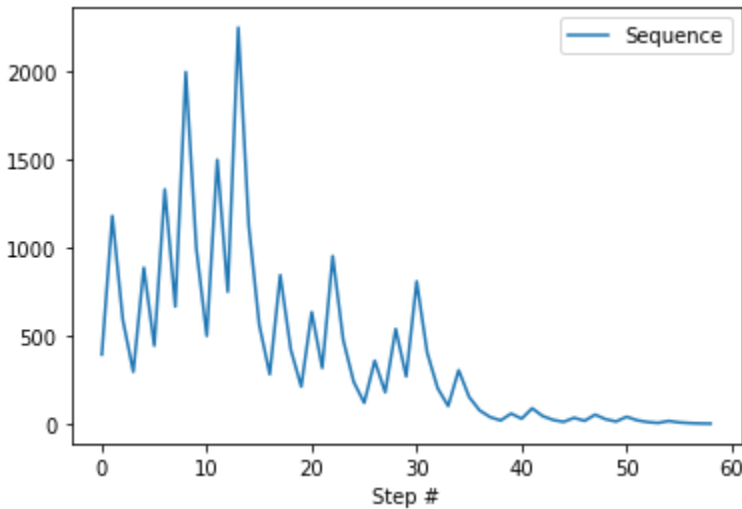
Length of this sequence: 121

Starting Value: 393

Hailstone Project Meeting Notes

Resources

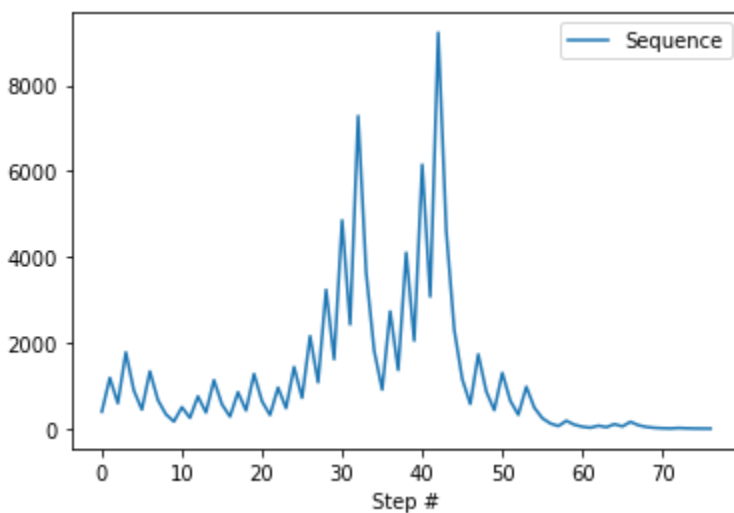
- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-



Odds: [393 295 443 665 499 749 281 211 317 119 179 269 101 19 29 11 17 13
5 1]

Length of this sequence: 59

Starting Value: 395



Odds: [395 593 445 167 251 377 283 425 319 479 719 1079 1619 2429

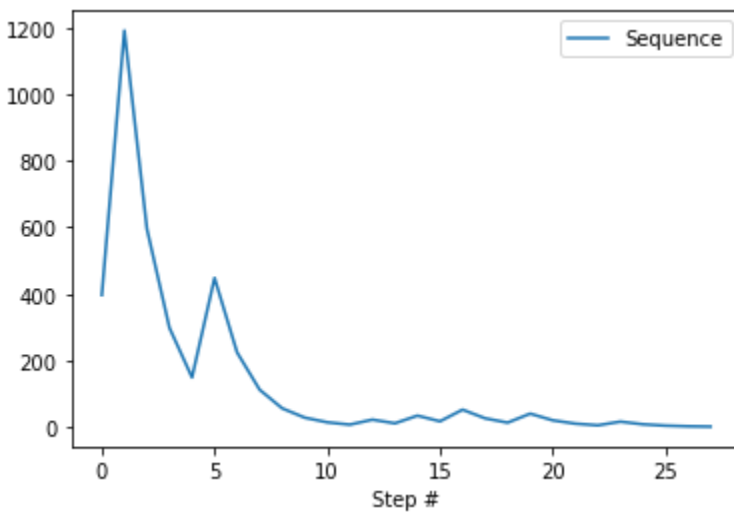
Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)

911 1367 2051 3077 577 433 325 61 23 35 53 5 1]
Length of this sequence: 77

Starting Value: 397



Odds: [397 149 7 11 17 13 5 1]
Length of this sequence: 28

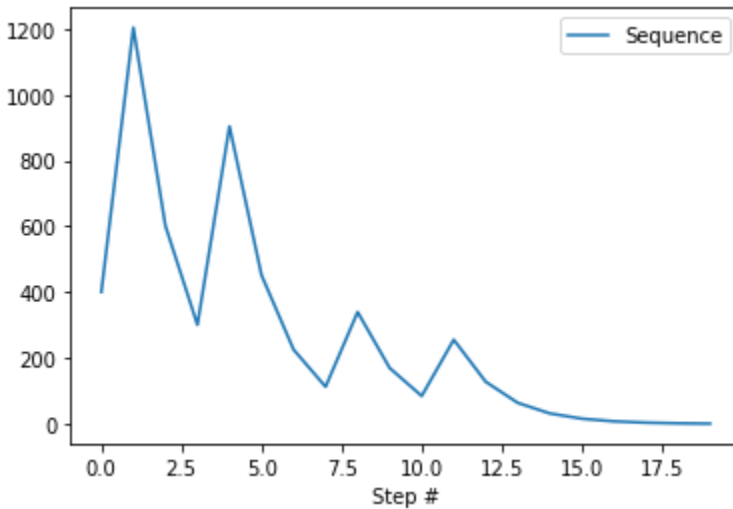
Starting Value: 399

Starting Value: 401

Hailstone Project Meeting Notes

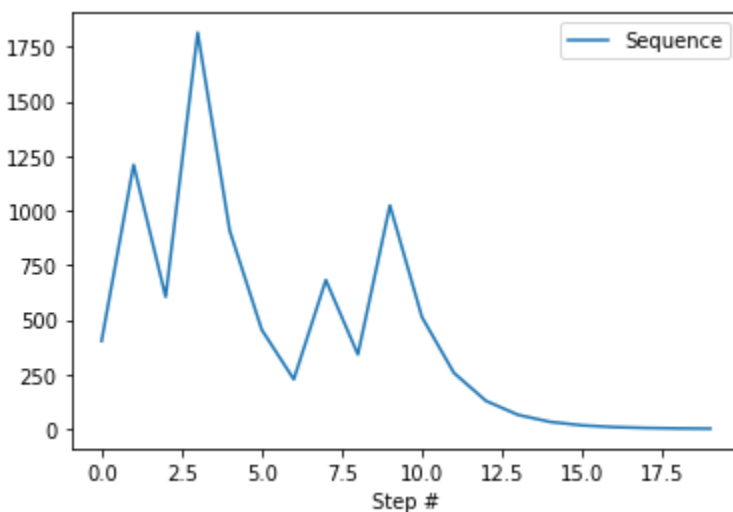
Resources

- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-



Odds: [401 301 113 85 1]
Length of this sequence: 20

Starting Value: 403



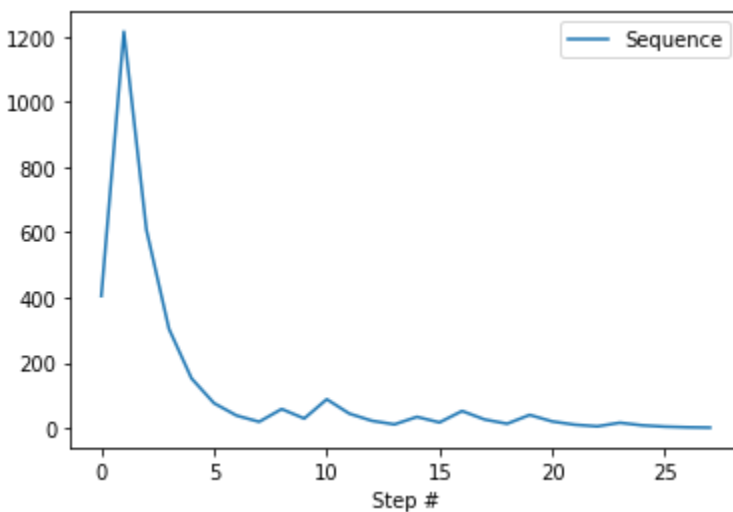
Odds: [403 605 227 341 1]
Length of this sequence: 20

Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-

Starting Value: 405



Odds: [405 19 29 11 17 13 5 1]

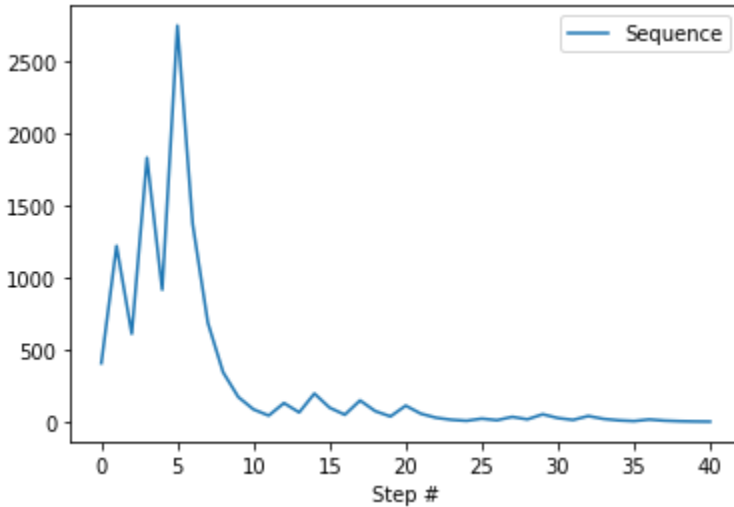
Length of this sequence: 28

Starting Value: 407

Hailstone Project Meeting Notes

Resources

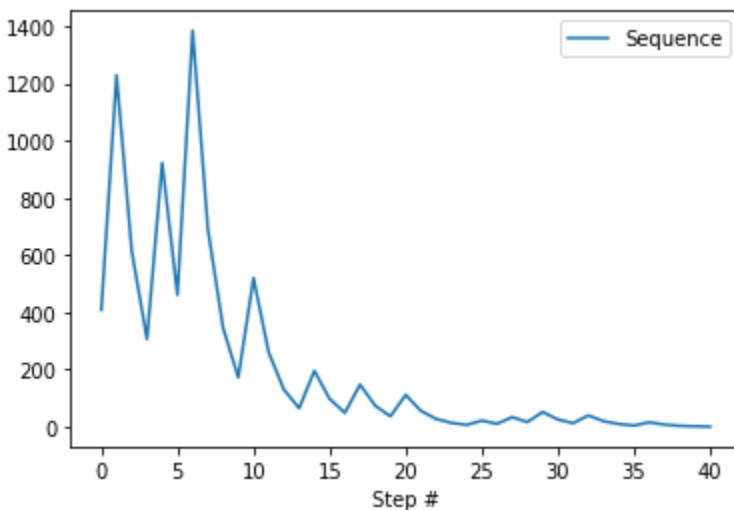
- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-



Odds: [407 611 917 43 65 49 37 7 11 17 13 5 1]

Length of this sequence: 41

Starting Value: 409



Odds: [409 307 461 173 65 49 37 7 11 17 13 5 1]

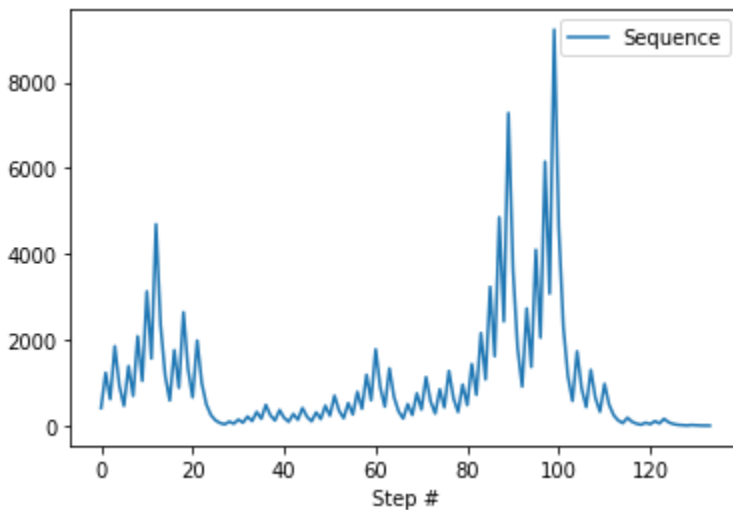
Length of this sequence: 41

Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-

Starting Value: 411



Odds: [411 617 463 695 1043 1565 587 881 661 31 47 71 107 161
121 91 137 103 155 233 175 263 395 593 445 167 251 377
283 425 319 479 719 1079 1619 2429 911 1367 2051 3077 577 433
325 61 23 35 53 5 1]

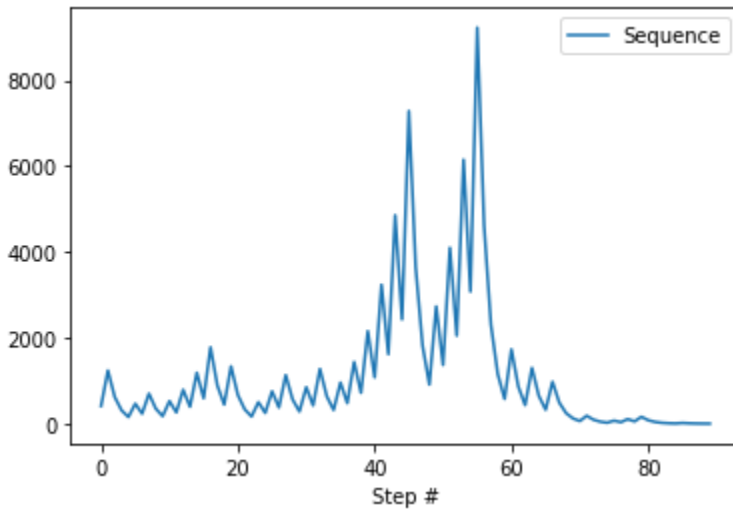
Length of this sequence: 134

Starting Value: 413

Hailstone Project Meeting Notes

Resources

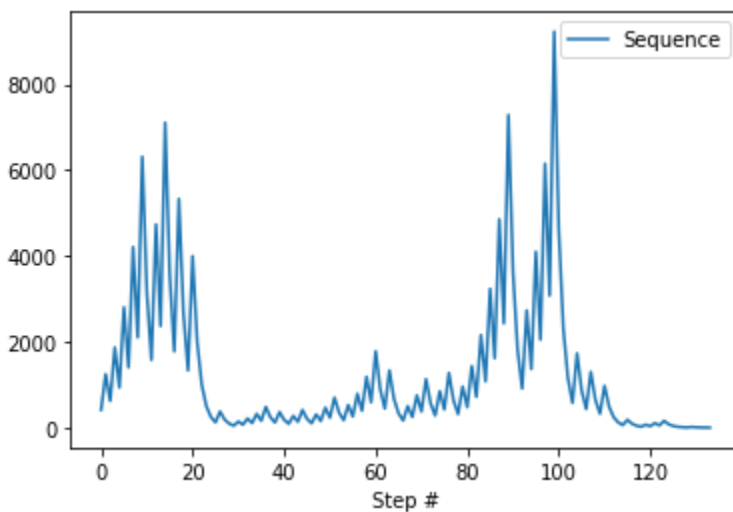
- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-



Odds: [413 155 233 175 263 395 593 445 167 251 377 283 425 319
479 719 1079 1619 2429 911 1367 2051 3077 577 433 325 61 23
35 53 5 1]

Length of this sequence: 90

Starting Value: 415



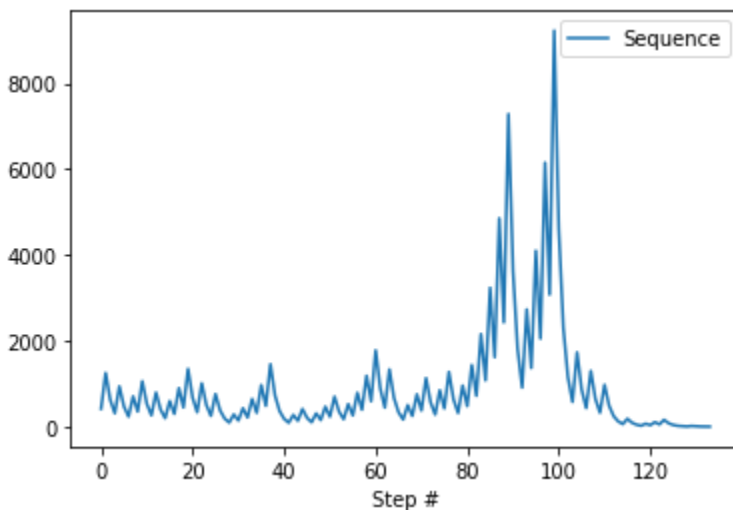
Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)

Odds: [415 623 935 1403 2105 1579 2369 1777 1333 125 47 71 107 161
121 91 137 103 155 233 175 263 395 593 445 167 251 377
283 425 319 479 719 1079 1619 2429 911 1367 2051 3077 577 433
325 61 23 35 53 5 1]
Length of this sequence: 134

Starting Value: 417



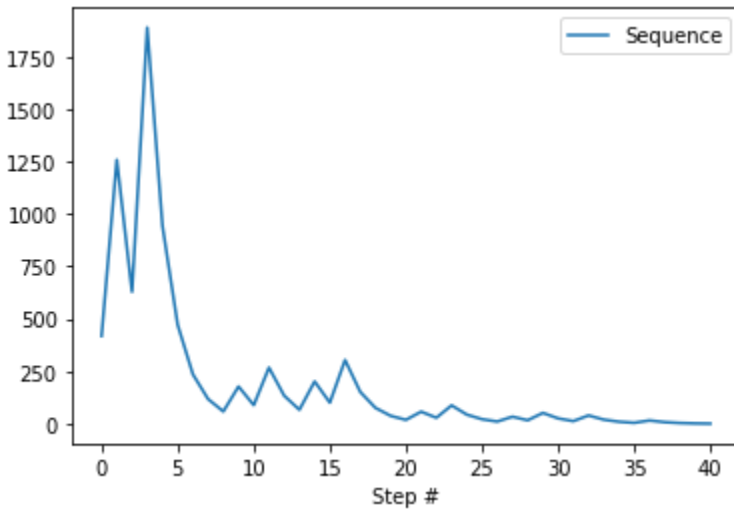
Odds: [417 313 235 353 265 199 299 449 337 253 95 143 215 323
485 91 137 103 155 233 175 263 395 593 445 167 251 377
283 425 319 479 719 1079 1619 2429 911 1367 2051 3077 577 433
325 61 23 35 53 5 1]
Length of this sequence: 134

Starting Value: 419

Hailstone Project Meeting Notes

Resources

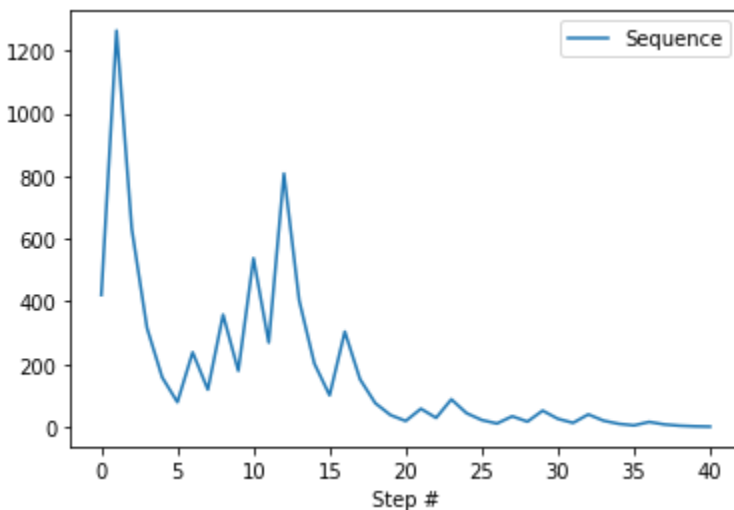
- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-



Odds: [419 629 59 89 67 101 19 29 11 17 13 5 1]

Length of this sequence: 41

Starting Value: 421



Odds: [421 79 119 179 269 101 19 29 11 17 13 5 1]

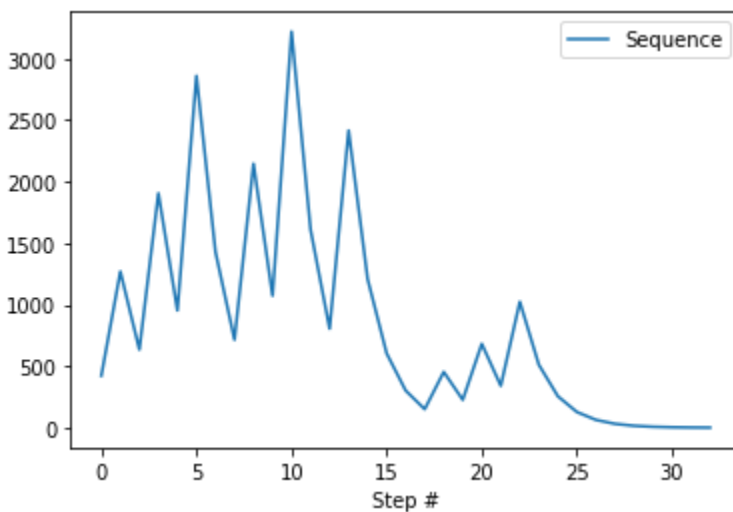
Length of this sequence: 41

Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-

Starting Value: 423



Odds: [423 635 953 715 1073 805 151 227 341 1]

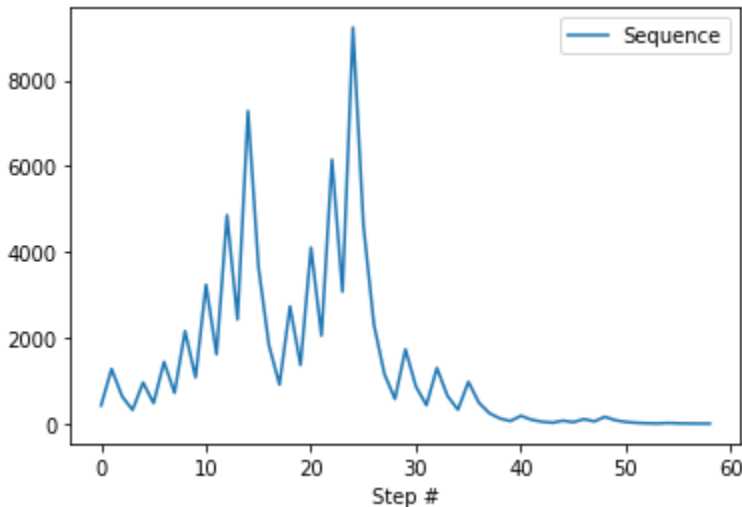
Length of this sequence: 33

Starting Value: 425

Hailstone Project Meeting Notes

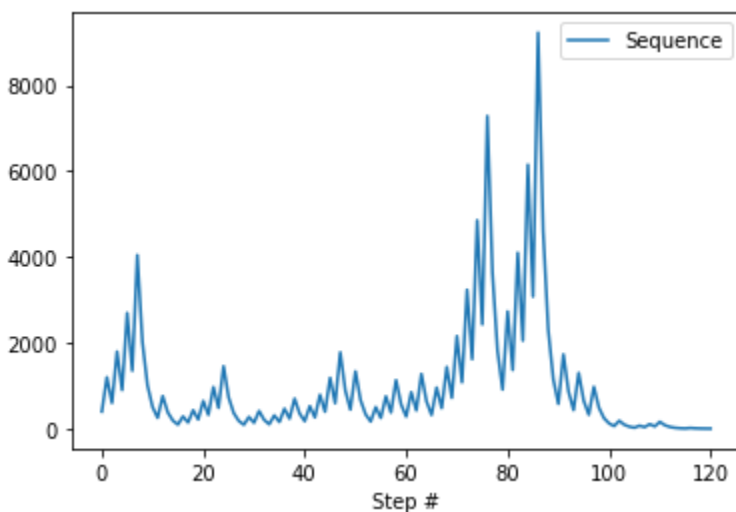
Resources

- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-



Odds: [425 319 479 719 1079 1619 2429 911 1367 2051 3077 577 433 325
61 23 35 53 5 1]

Length of this sequence: 59



Odds: [399 599 899 1349 253 95 143 215 323 485 91 137 103 155
233 175 263 395 593 445 167 251 377 283 425 319 479 719

Hailstone Project Meeting Notes

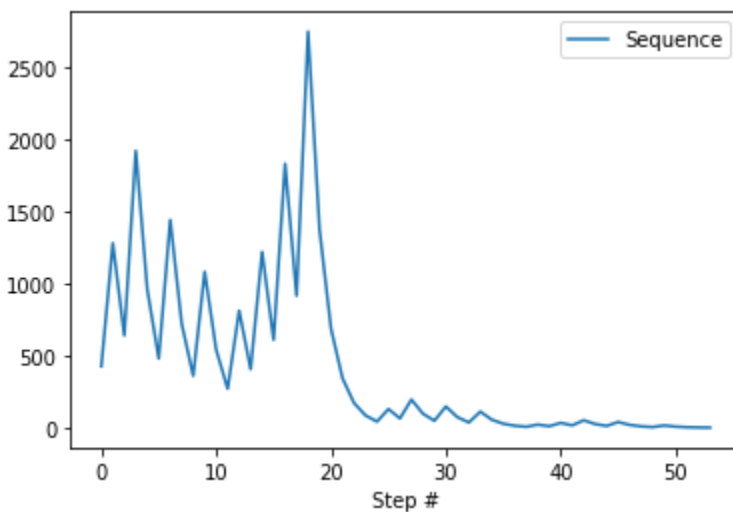
Resources

- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)

1079 1619 2429 911 1367 2051 3077 577 433 325 61 23 35 53
5 1]

Length of this sequence: 121

Starting Value: 427



Odds: [427 641 481 361 271 407 611 917 43 65 49 37 7 11 17 13 5 1]

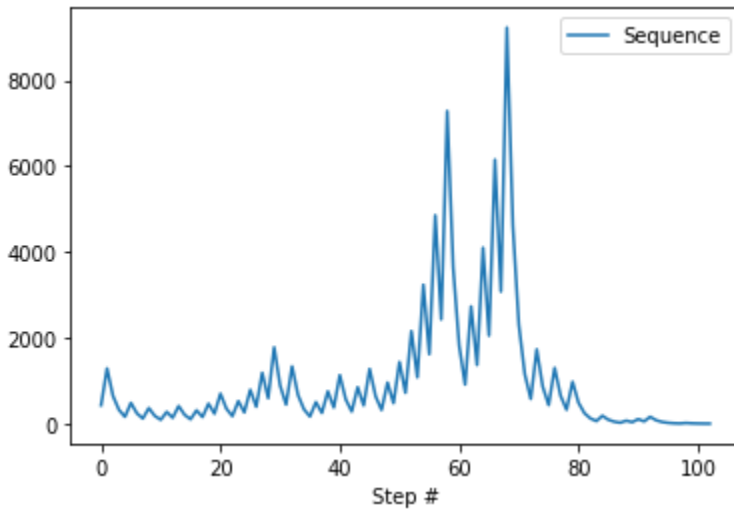
Length of this sequence: 54

Starting Value: 429

Hailstone Project Meeting Notes

Resources

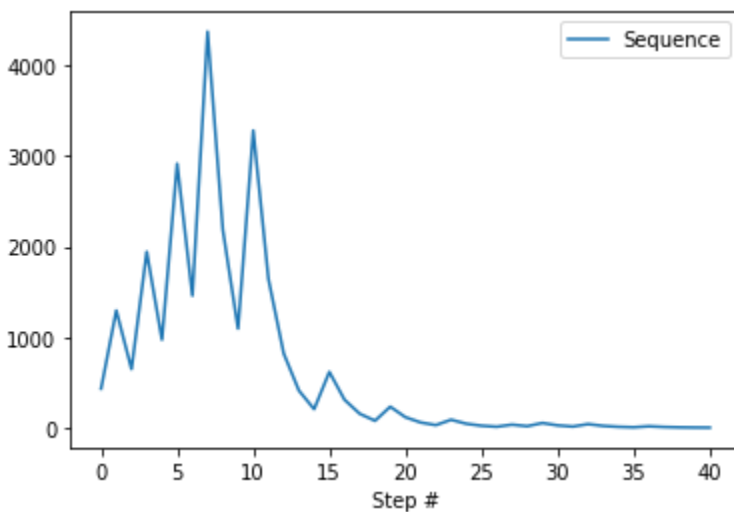
- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-



Odds: [429 161 121 91 137 103 155 233 175 263 395 593 445 167
251 377 283 425 319 479 719 1079 1619 2429 911 1367 2051 3077
577 433 325 61 23 35 53 5 1]

Length of this sequence: 103

Starting Value: 431



Hailstone Project Meeting Notes

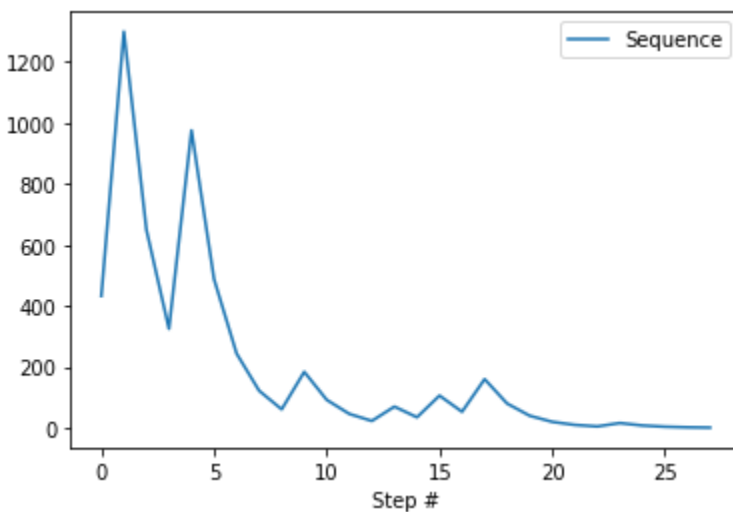
Resources

- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)

Odds: [431 647 971 1457 1093 205 77 29 11 17 13 5 1]

Length of this sequence: 41

Starting Value: 433



Odds: [433 325 61 23 35 53 5 1]

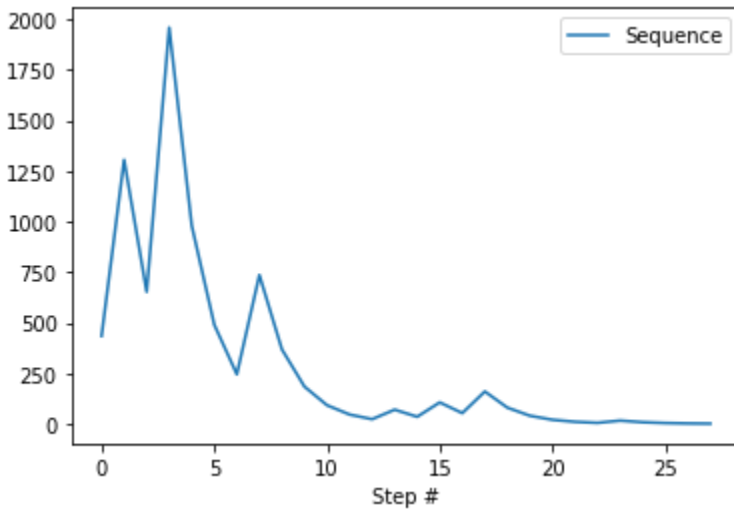
Length of this sequence: 28

Starting Value: 435

Hailstone Project Meeting Notes

Resources

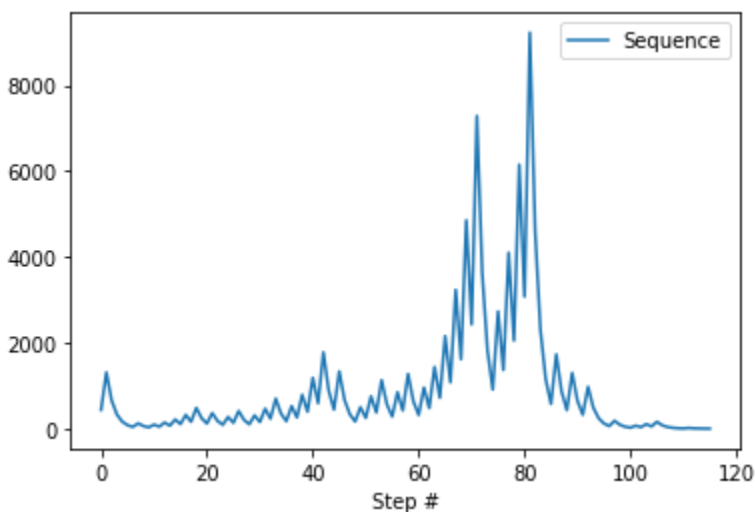
- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)



Odds: [435 653 245 23 35 53 5 1]

Length of this sequence: 28

Starting Value: 437



Odds: [437 41 31 47 71 107 161 121 91 137 103 155 233 175
263 395 593 445 167 251 377 283 425 319 479 719 1079 1619]

Hailstone Project Meeting Notes

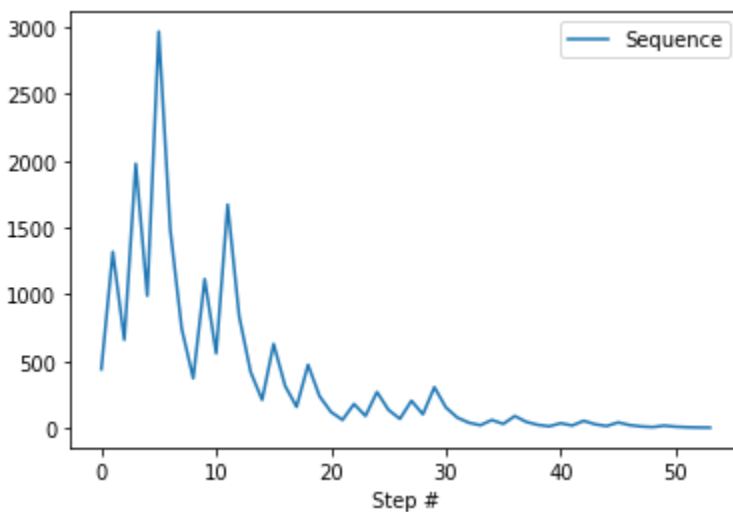
Resources

- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)

2429 911 1367 2051 3077 577 433 325 61 23 35 53 5 1]

Length of this sequence: 116

Starting Value: 439



Odds: [439 659 989 371 557 209 157 59 89 67 101 19 29 11 17 13 5 1]

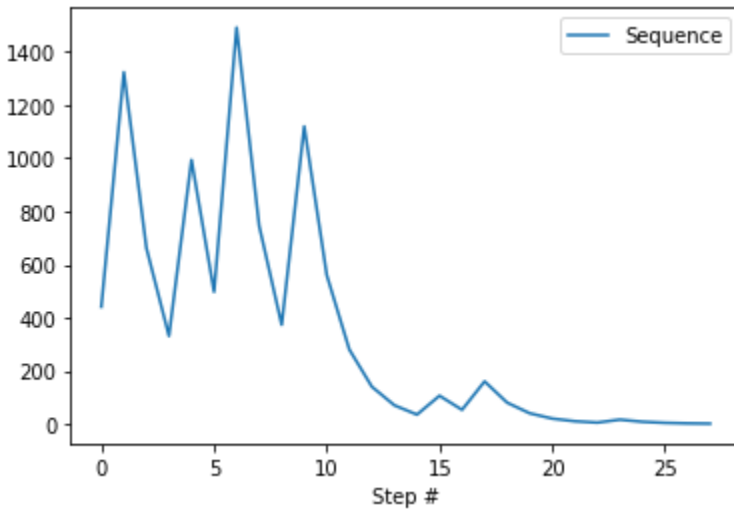
Length of this sequence: 54

Starting Value: 441

Hailstone Project Meeting Notes

Resources

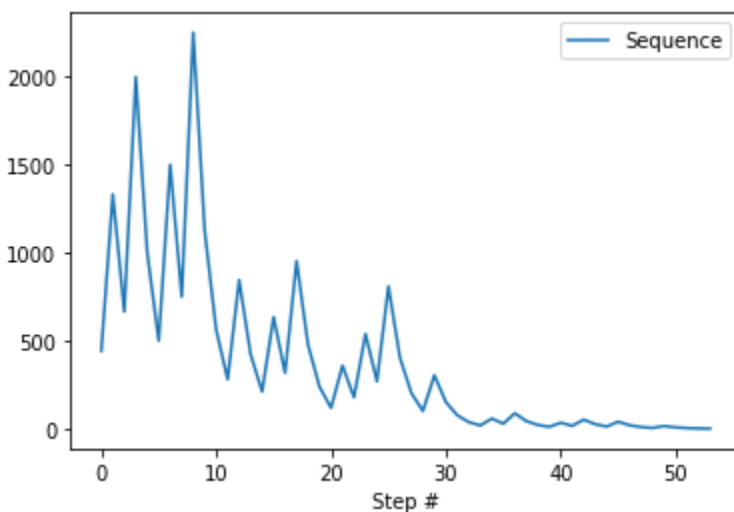
- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-



Odds: [441 331 497 373 35 53 5 1]

Length of this sequence: 28

Starting Value: 443



Odds: [443 665 499 749 281 211 317 119 179 269 101 19 29 11 17 13 5 1]

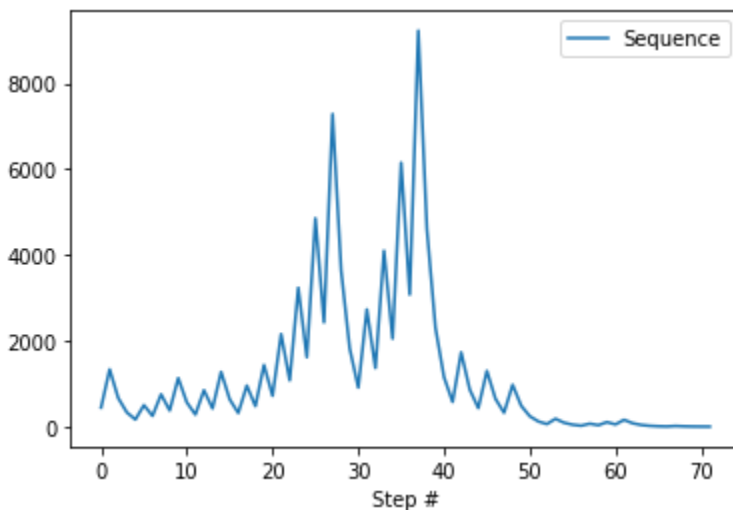
Length of this sequence: 54

Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-

Starting Value: 445



Odds: [445 167 251 377 283 425 319 479 719 1079 1619 2429 911 1367
2051 3077 577 433 325 61 23 35 53 5 1]

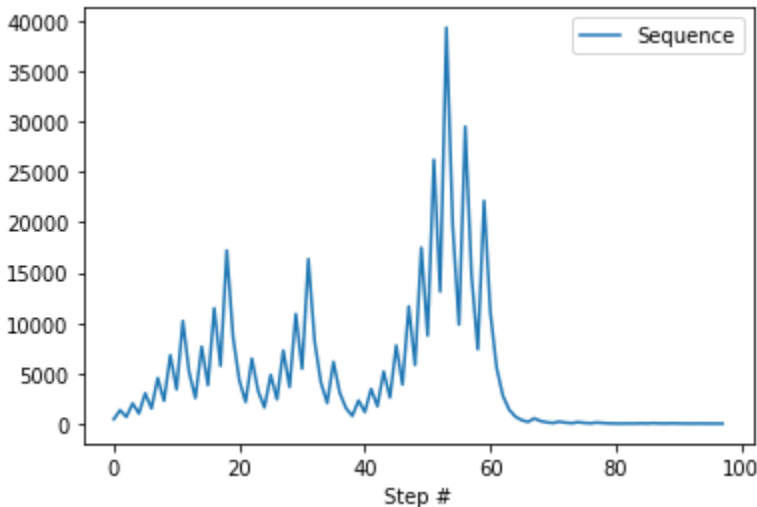
Length of this sequence: 72

Starting Value: 447

Hailstone Project Meeting Notes

Resources

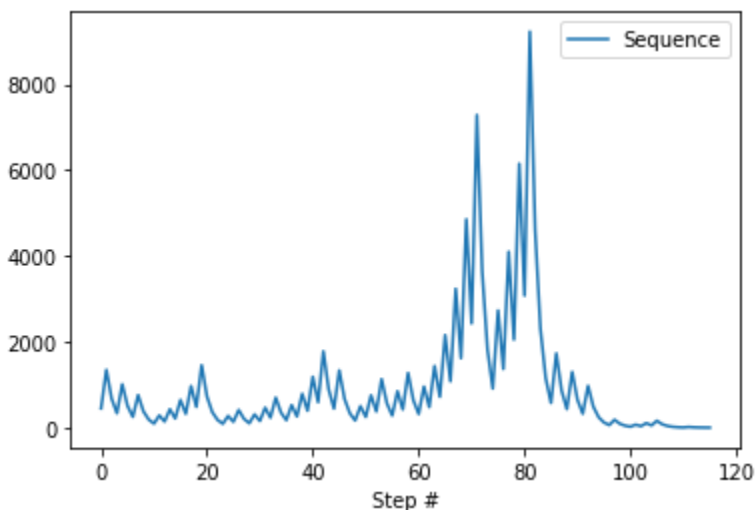
- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)



Odds: [447 671 1007 1511 2267 3401 2551 3827 5741 2153 1615 2423
3635 5453 2045 767 1151 1727 2591 3887 5831 8747 13121 9841
7381 173 65 49 37 7 11 17 13 5 1]

Length of this sequence: 98

Starting Value: 449



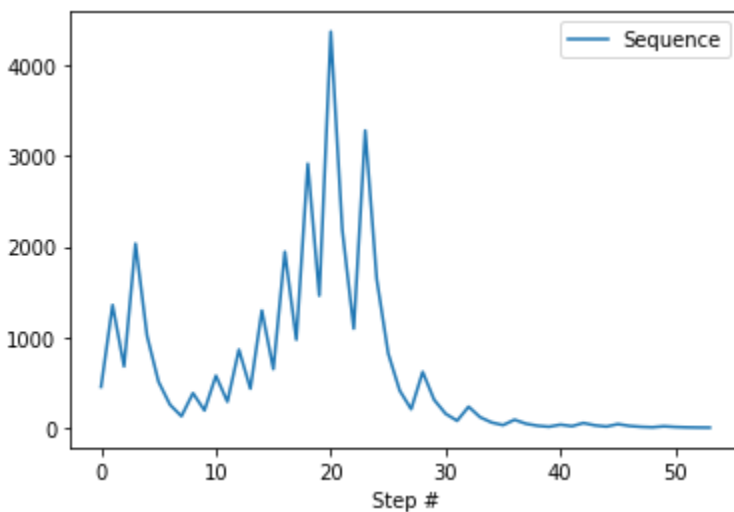
Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)

Odds: [449 337 253 95 143 215 323 485 91 137 103 155 233 175
263 395 593 445 167 251 377 283 425 319 479 719 1079 1619
2429 911 1367 2051 3077 577 433 325 61 23 35 53 5 1]
Length of this sequence: 116

Starting Value: 451



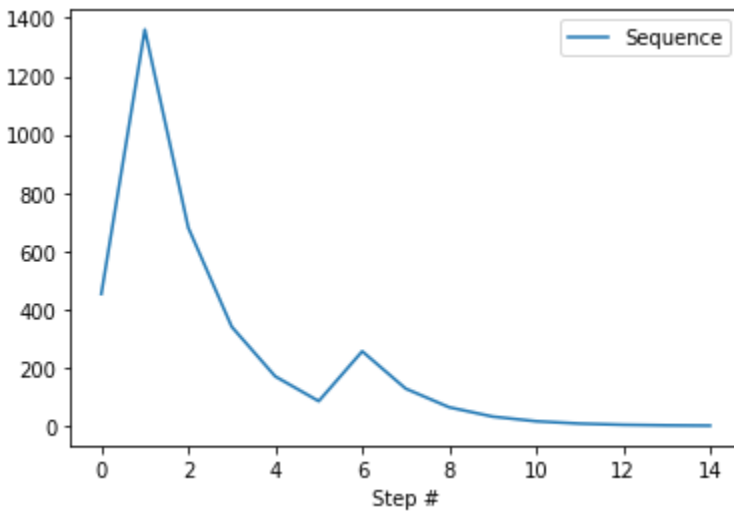
Odds: [451 677 127 191 287 431 647 971 1457 1093 205 77 29 11
17 13 5 1]
Length of this sequence: 54

Starting Value: 453

Hailstone Project Meeting Notes

Resources

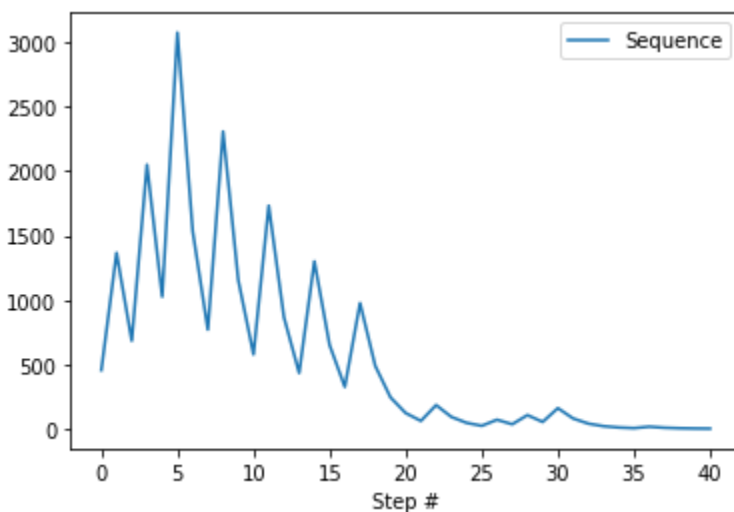
- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)



Odds: [453 85 1]

Length of this sequence: 15

Starting Value: 455



Odds: [455 683 1025 769 577 433 325 61 23 35 53 5 1]

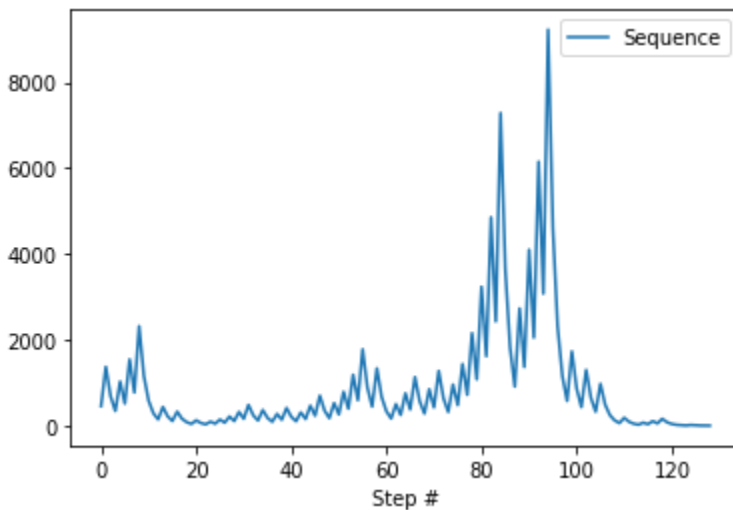
Length of this sequence: 41

Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-

Starting Value: 457



Odds: [457 343 515 773 145 109 41 31 47 71 107 161 121 91
137 103 155 233 175 263 395 593 445 167 251 377 283 425
319 479 719 1079 1619 2429 911 1367 2051 3077 577 433 325 61
23 35 53 5 1]

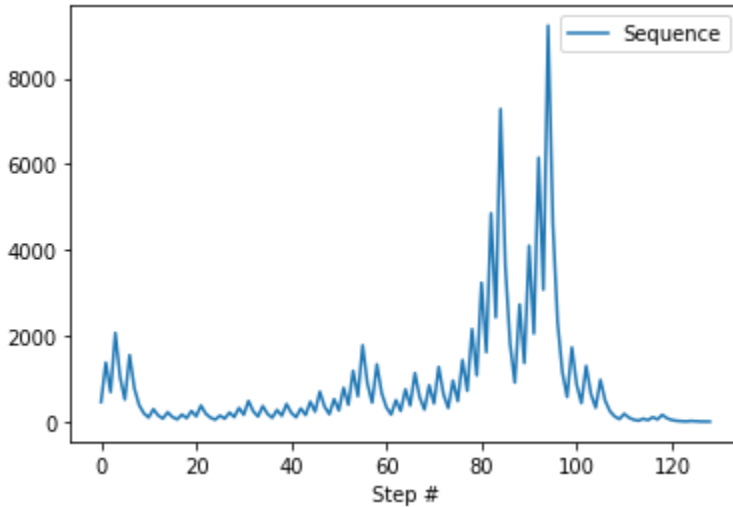
Length of this sequence: 129

Starting Value: 459

Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)



Odds: [459 689 517 97 73 55 83 125 47 71 107 161 121 91
137 103 155 233 175 263 395 593 445 167 251 377 283 425
319 479 719 1079 1619 2429 911 1367 2051 3077 577 433 325 61
23 35 53 5 1]

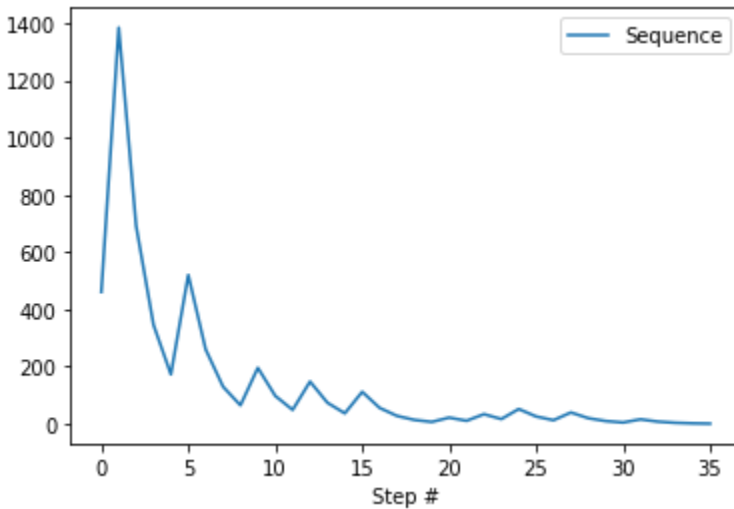
Length of this sequence: 129

Starting Value: 461

Hailstone Project Meeting Notes

Resources

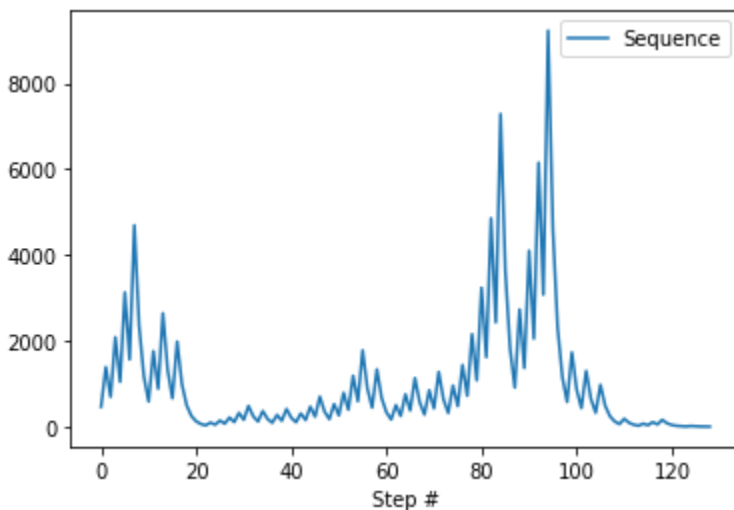
- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)



Odds: [461 173 65 49 37 7 11 17 13 5 1]

Length of this sequence: 36

Starting Value: 463



Odds: [463 695 1043 1565 587 881 661 31 47 71 107 161 121 91

137 103 155 233 175 263 395 593 445 167 251 377 283 425

Hailstone Project Meeting Notes

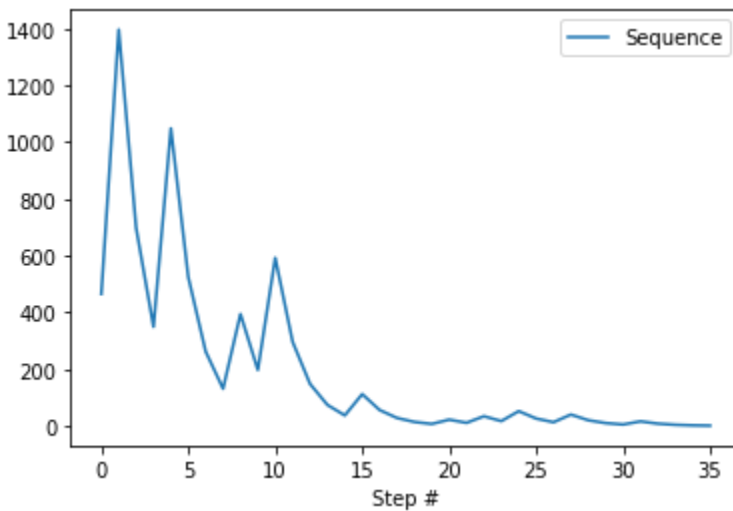
Resources

- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)

319 479 719 1079 1619 2429 911 1367 2051 3077 577 433 325 61
23 35 53 5 1]

Length of this sequence: 129

Starting Value: 465



Odds: [465 349 131 197 37 7 11 17 13 5 1]

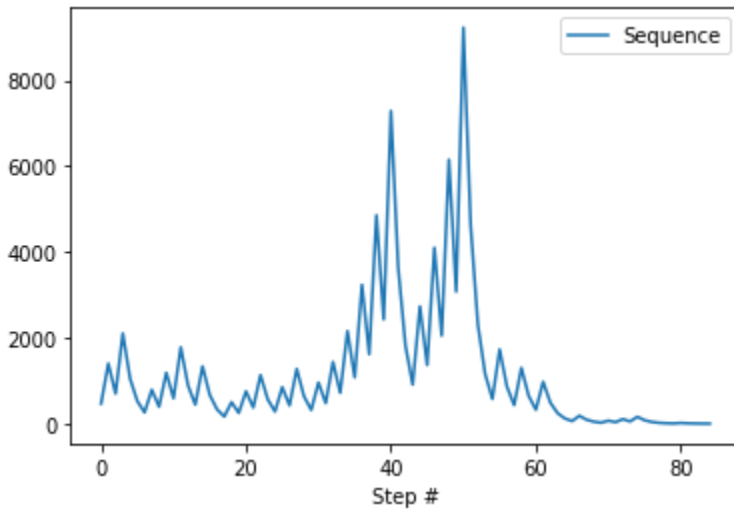
Length of this sequence: 36

Starting Value: 467

Hailstone Project Meeting Notes

Resources

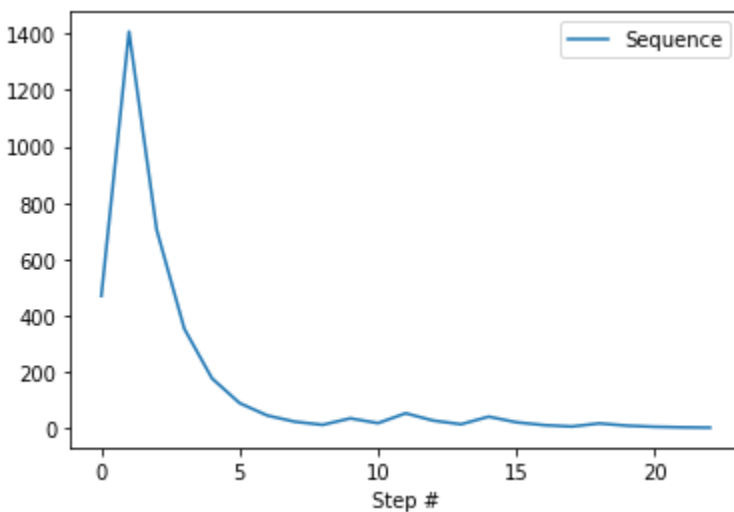
- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-



Odds: [467 701 263 395 593 445 167 251 377 283 425 319 479 719
1079 1619 2429 911 1367 2051 3077 577 433 325 61 23 35 53
5 1]

Length of this sequence: 85

Starting Value: 469



Hailstone Project Meeting Notes

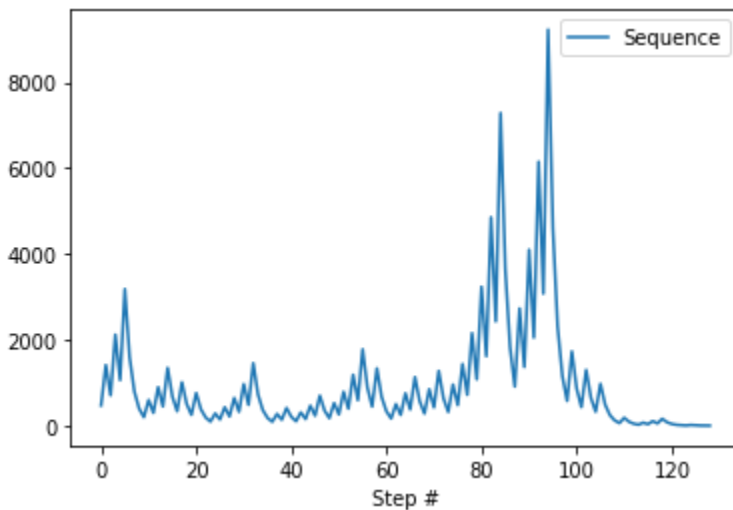
Resources

- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-

Odds: [469 11 17 13 5 1]

Length of this sequence: 23

Starting Value: 471



Odds: [471 707 1061 199 299 449 337 253 95 143 215 323 485 91
137 103 155 233 175 263 395 593 445 167 251 377 283 425
319 479 719 1079 1619 2429 911 1367 2051 3077 577 433 325 61
23 35 53 5 1]

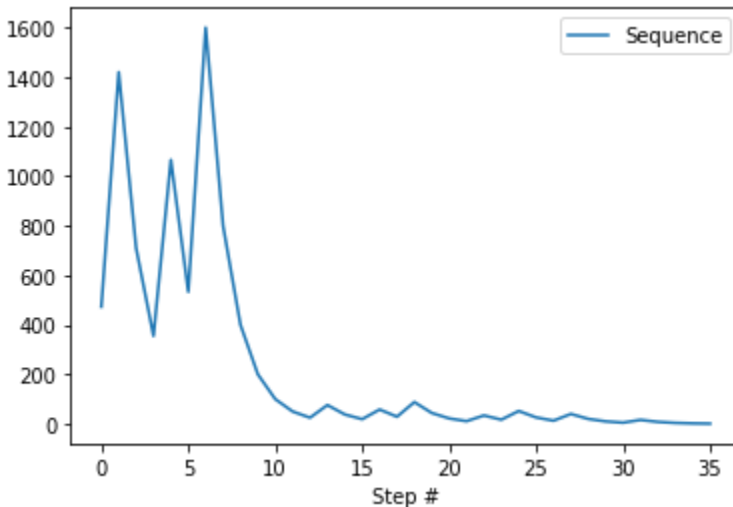
Length of this sequence: 129

Starting Value: 473

Hailstone Project Meeting Notes

Resources

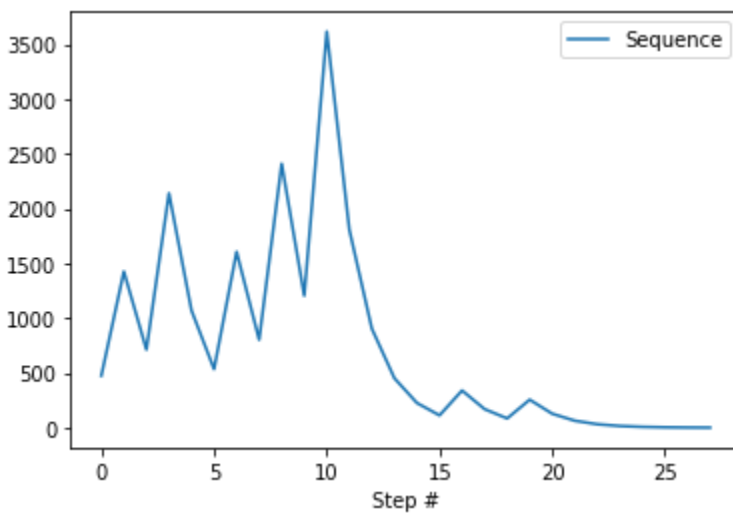
- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
 - Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
 - [Batches Database](#)
-



Odds: [473 355 533 25 19 29 11 17 13 5 1]

Length of this sequence: 36

Starting Value: 475



Odds: [475 713 535 803 1205 113 85 1]

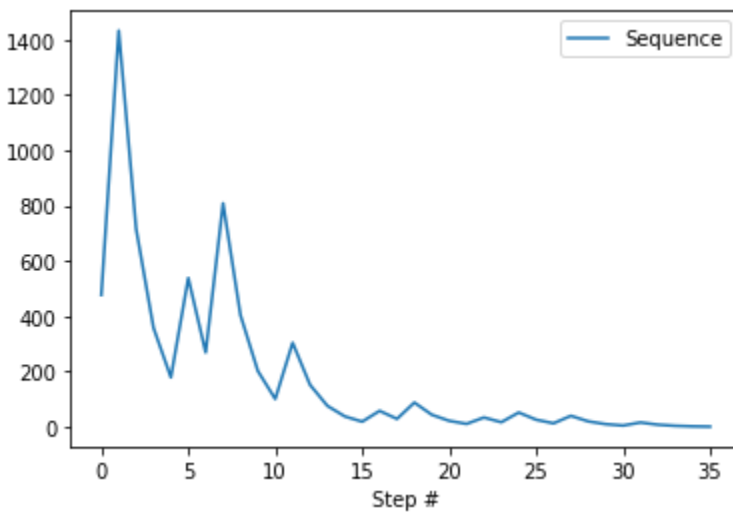
Hailstone Project Meeting Notes

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- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
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Length of this sequence: 28

Starting Value: 477



Odds: [477 179 269 101 19 29 11 17 13 5 1]

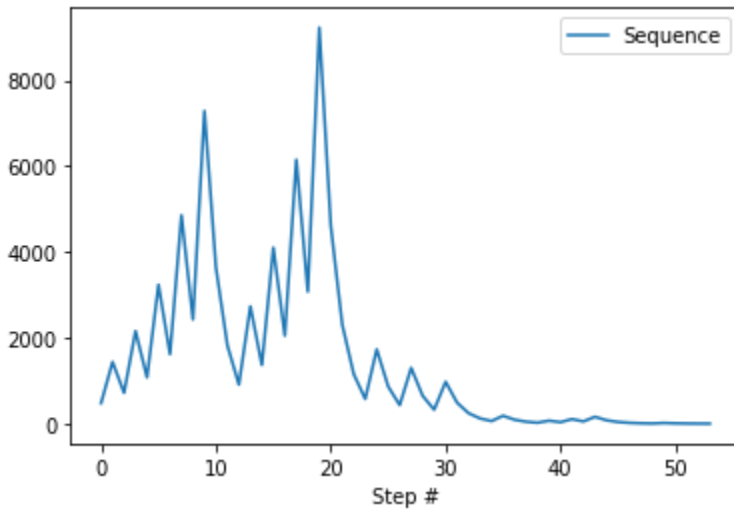
Length of this sequence: 36

Starting Value: 479

Hailstone Project Meeting Notes

Resources

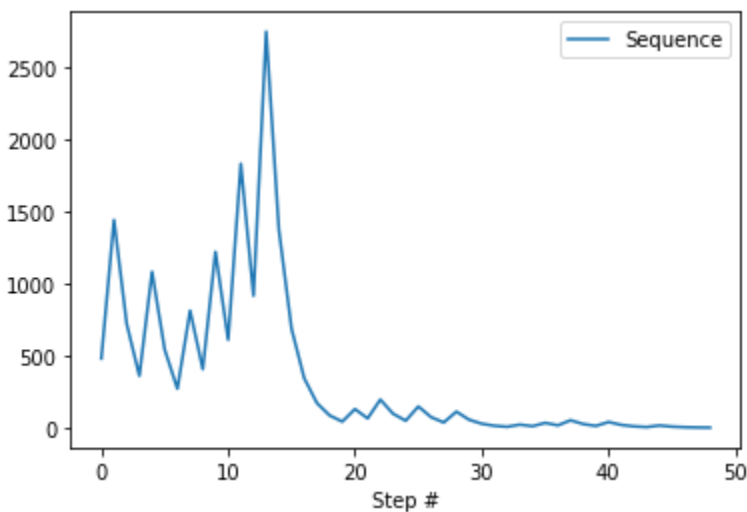
- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
 - [Hailstone Code](#) (Contains Hailstone Batches from Above)
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 - [Batches Database](#)
-



Odds: [479 719 1079 1619 2429 911 1367 2051 3077 577 433 325 61 23
35 53 5 1]

Length of this sequence: 54

Starting Value: 481



Odds: [481 361 271 407 611 917 43 65 49 37 7 11 17 13 5 1]

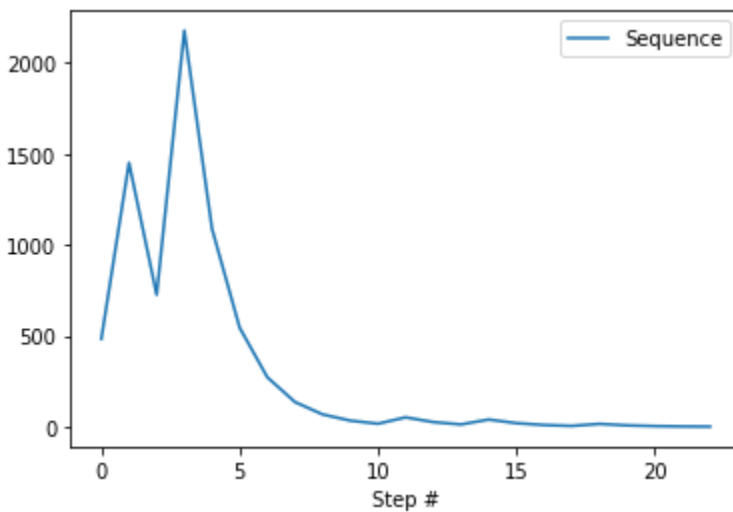
Hailstone Project Meeting Notes

Resources

- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
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- Overview from Terry Tao: <https://terrytao.files.wordpress.com/2020/02/collatz.pdf>
- [Batches Database](#)

Length of this sequence: 49

Starting Value: 483



Odds: [483 725 17 13 5 1]

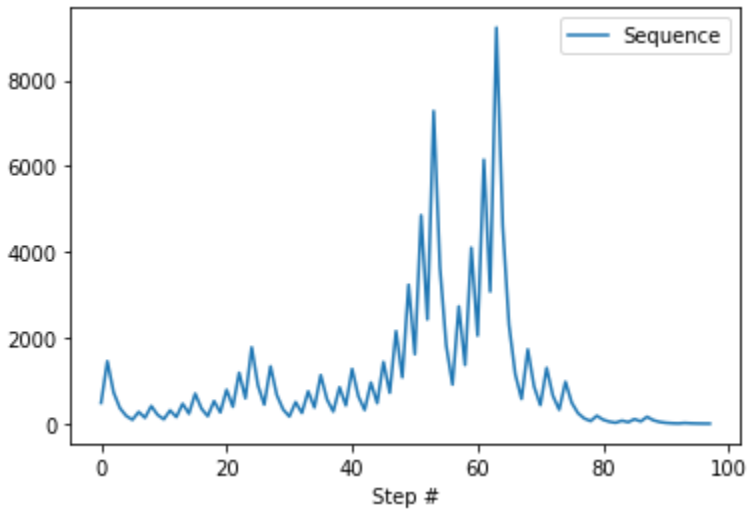
Length of this sequence: 23

Starting Value: 485

Hailstone Project Meeting Notes

Resources

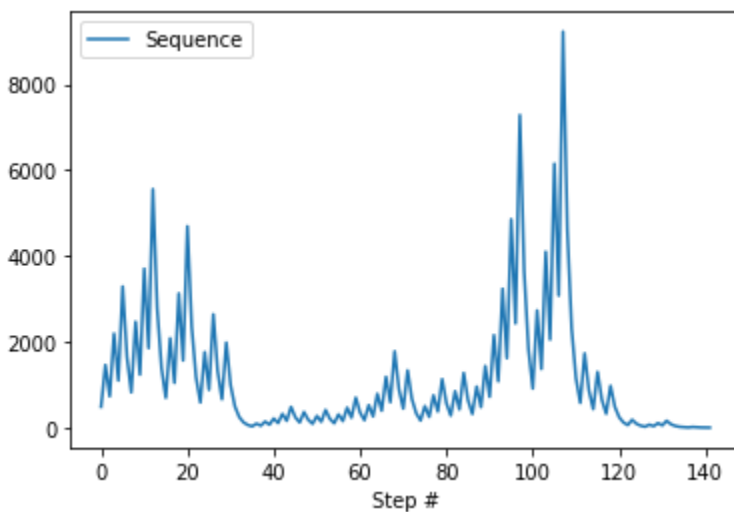
- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
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Odds: [485 91 137 103 155 233 175 263 395 593 445 167 251 377
283 425 319 479 719 1079 1619 2429 911 1367 2051 3077 577 433
325 61 23 35 53 5 1]

Length of this sequence: 98

Starting Value: 487



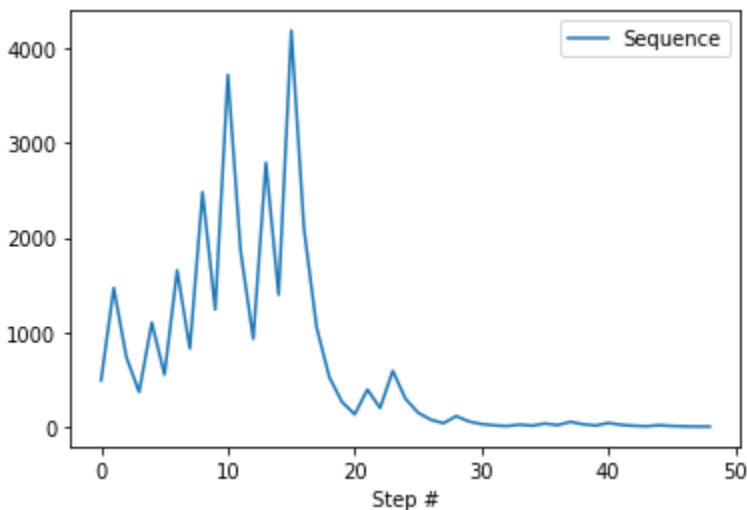
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- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
- [Hailstone Code](#) (Contains Hailstone Batches from Above)
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Odds: [487 731 1097 823 1235 1853 695 1043 1565 587 881 661 31 47
71 107 161 121 91 137 103 155 233 175 263 395 593 445
167 251 377 283 425 319 479 719 1079 1619 2429 911 1367 2051
3077 577 433 325 61 23 35 53 5 1]
Length of this sequence: 142

Starting Value: 489



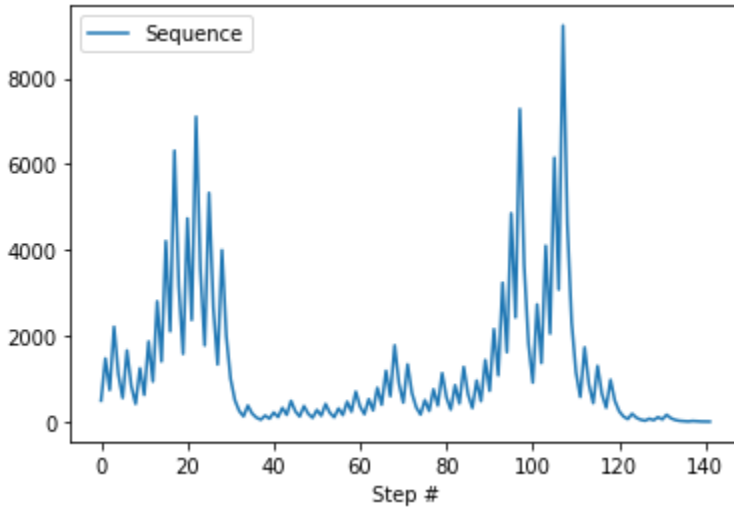
Odds: [489 367 551 827 1241 931 1397 131 197 37 7 11 17 13
5 1]
Length of this sequence: 49

Starting Value: 491

Hailstone Project Meeting Notes

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- [Hailstone Hypothesis](#)
- [Updated Hailstone Batches](#)
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- [Batches Database](#)



Odds: [491 737 553 415 623 935 1403 2105 1579 2369 1777 1333 125 47
71 107 161 121 91 137 103 155 233 175 263 395 593 445
167 251 377 283 425 319 479 719 1079 1619 2429 911 1367 2051
3077 577 433 325 61 23 35 53 5 1]

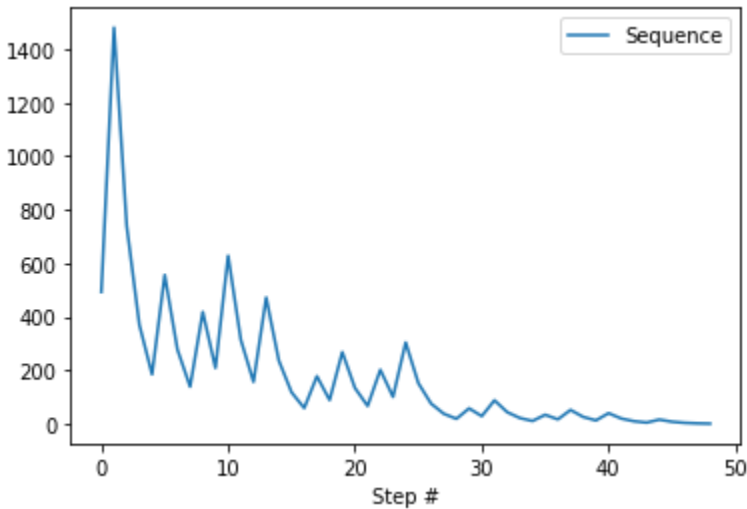
Length of this sequence: 142

Starting Value: 493

Hailstone Project Meeting Notes

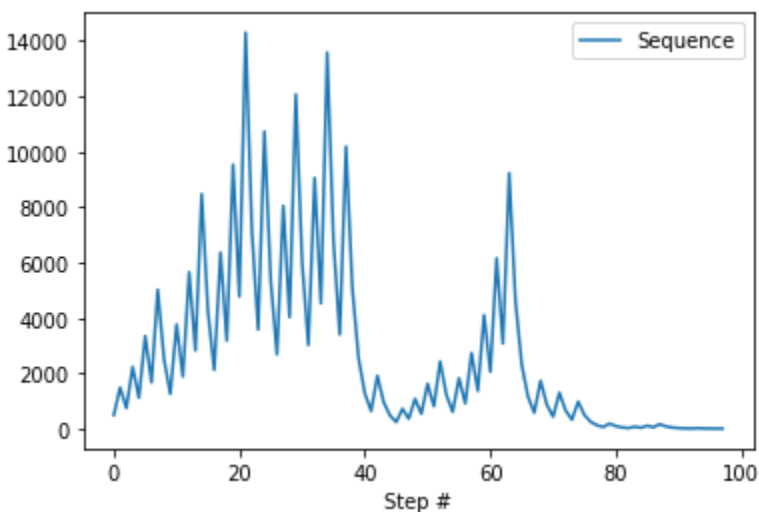
Resources

- [Hailstone Hypothesis](#)
 - [Updated Hailstone Batches](#)
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 - [Batches Database](#)
-



Odds: [493 185 139 209 157 59 89 67 101 19 29 11 17 13 5 1]
Length of this sequence: 49

Starting Value: 495



Odds: [495 743 1115 1673 1255 1883 2825 2119 3179 4769 3577 2683 4025 3019
4529 3397 637 239 359 539 809 607 911 1367 2051 3077 577 433

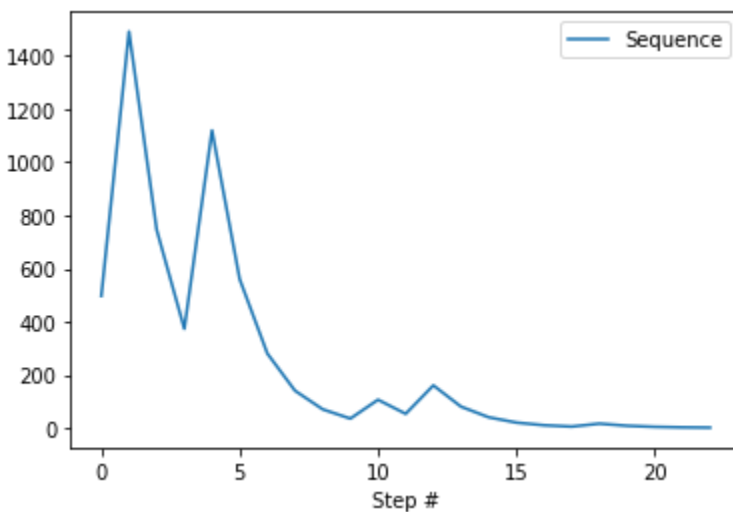
Hailstone Project Meeting Notes

Resources

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- [Batches Database](#)

325 61 23 35 53 5 1]
Length of this sequence: 98

Starting Value: 497



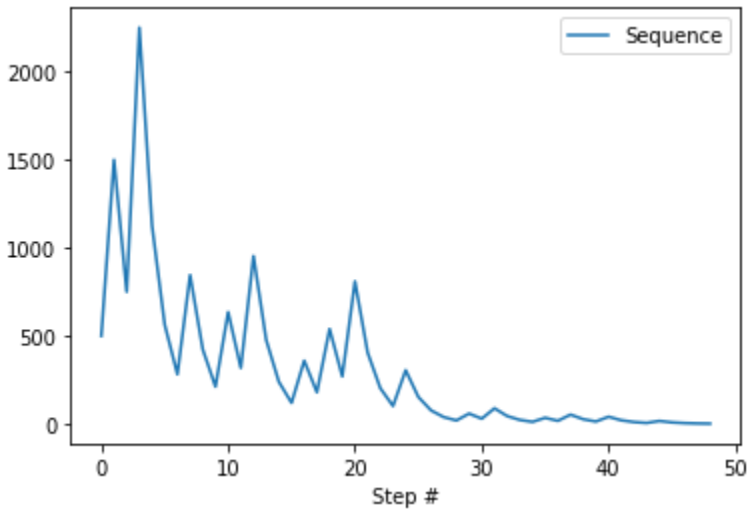
Odds: [497 373 35 53 5 1]
Length of this sequence: 23

Starting Value: 499

Hailstone Project Meeting Notes

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- [Updated Hailstone Batches](#)
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Odds: [499 749 281 211 317 119 179 269 101 19 29 11 17 13 5 1]

Length of this sequence: 49

Hailstone Project Meeting Notes

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Literature Review