Weekly Challenge

Solve the challenge, share your solution and summit the ranks of our Community!

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IDEAS WANTED

We're actively looking for ideas on how to improve Weekly Challenges and would love to hear what you think!

SUBMIT FEEDBACK

Weekly Challenge

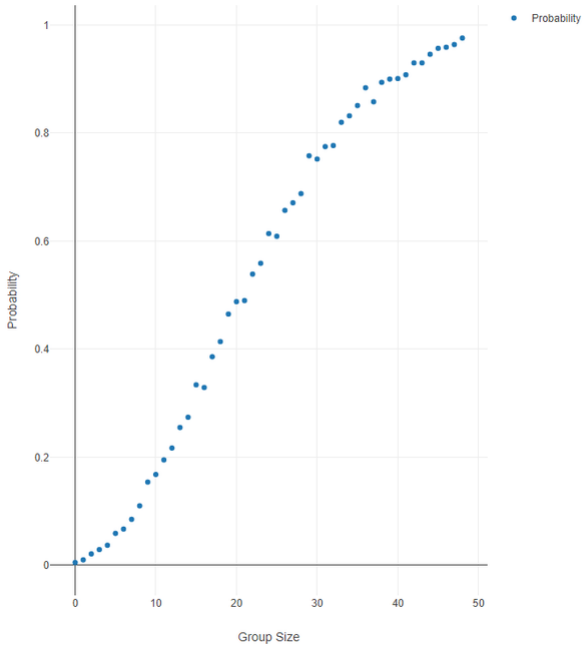
Challenge #140: Prove the Birthday Paradox!

JoeM
Alteryx Alumni (Retired)

This week we will run an anecdotal workflow to prove the Birthday Paradox! The Birthday paradox simply refers to the phenomenon that if you assembled 23 people into one room, the chances of two people having the same birthday are 50-50. We could 'math' this out, but why not just assembles 100s of thousands of people in the seconds to prove it?

In this challenge, your goal is to build a table that increment group sizes from 2 people all the way to 50 people. In each of those group sizes, run 1000 random trials and see what percent of groups had at least one set of people match. Why 1000? Theoretically, the more trials you run, the more likely you are to get a refined percent (e.g. flipping a coin four times may not a perfect 50-50 chance where it would be much closer after 1000 flips).

Due to the nature of this challenge, you will need to generate your own data! I have provided a sample output of mine, but since we are randomly assigning birthdays, you may find small differences in our answers. At what group size did it exceed 75% chance? 90% chance?



Looking to try the new interactive chart tool too?

challenge_140_start_file.yxmd

Data Analysis | Data Preparation | Intermediate | Preparation | Transform

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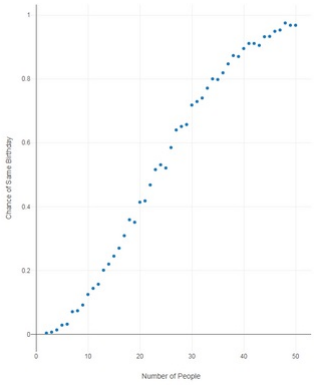
bdaniels
8 - Asteroid



Workflow:

Spoiler

challenge_140_BD.yxzp

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patrick_digan
17 - Castor

Spoiler

challenge_140_start_file.yxmd

Share 2 LIKES Reply

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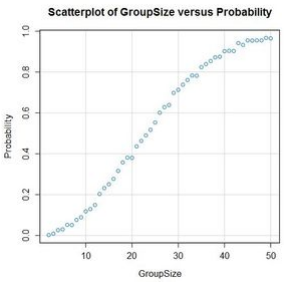
cgoodman3
13 - Pulsar

Started off with an iterative macro but just ended up with a brute force method.

Spoiler



Chris
Check out my collaboration with fellow ACE Joshua Burkhow at AlterTricks.com

challenge_140_solution.yxmd

Share 2 LIKES Reply

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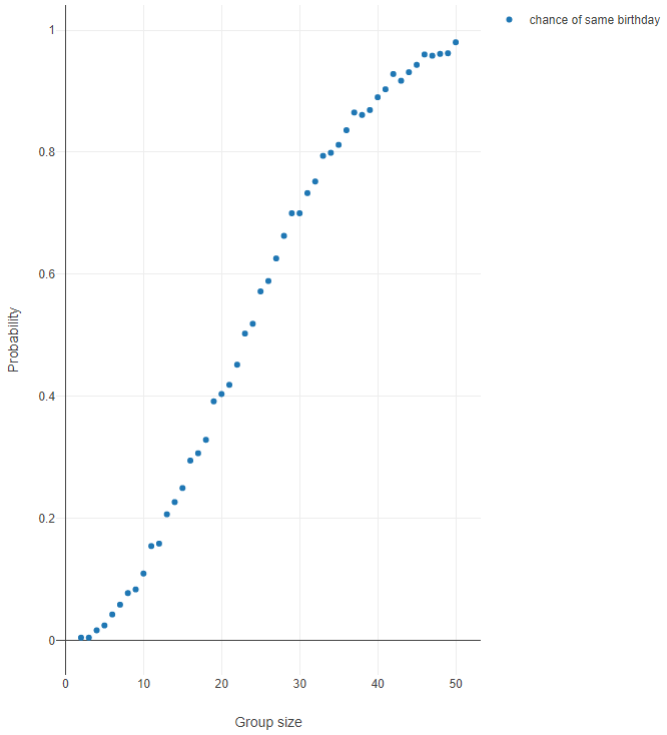
kat
12 - Quasar



Spoiler

Challenge #140.yxzp

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jasperlch
12 - Quasar

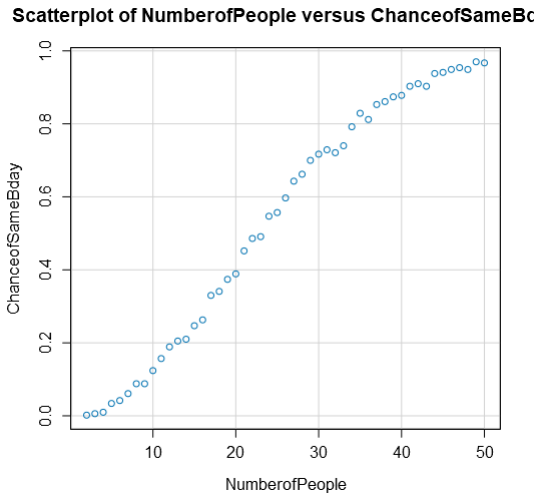
Solution attached.

challenge_140_JL.yxmd

Share 0 LIKES Reply

GarthG
7 - Meteor

Happy birthday to someone on here!



challenge_140_GG.yxmd

Share 0 LIKES Reply

CHarrison
8 - Asteroid

Spoiler

Studied this one as part of my degree :D

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JoBen
11 - Bolide

Cheers! That was a lot of fun!

Spoiler

challenge_140_Joben_Solution.yxzp

Share 1 LIKE Reply

sprodger
8 - Asteroid

challenge_140_solution_SP.yxmd

Share 1 LIKE Reply
