

MAZES: Solutions

puzzle #1

Can you draw a maze that fills up the whole page of paper you are using?

Can you draw a maze that uses BOTH sides of a piece of paper?

Can you put holes in your paper and draw a maze that has you following those holes back and forth between the two sides of the paper?

ANSWER TO PUZZLE 1:

Did you try one or more of these ideas?
Did you have success? Was it fun?

ANSWER TO PUZZLE 2:

There are 8 paths starting from the center square.
There are 0 paths starting from the edge cell!

(Care to count paths from different starting cells in a 4x4 grid? For example, there are 52 different paths starting from a given corner.)

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The NMF Weekly is written by mathematician Dr. James Tanton as a resource for friends and fans of the 2021 National Math Festival.



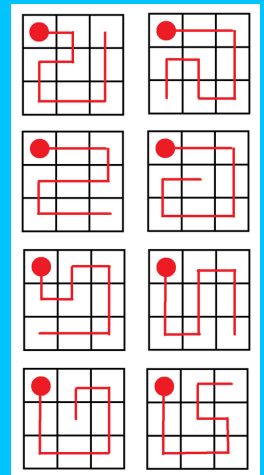
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puzzle #2

The maze I drew on the previous page has a number of different solutions. Counting how many would be hard! (Don't include solutions that repeat a section of path.)

But here is a counting puzzle that is manageable.

There are 8 ways to walk through a 3x3 grid of squares starting at the top left corner and taking only vertical and horizontal steps. (Each path visits each and every square exactly once.)



How many different ways are there to walk through the grid starting at the middle square? How many starting at an edge square different from a corner?

