

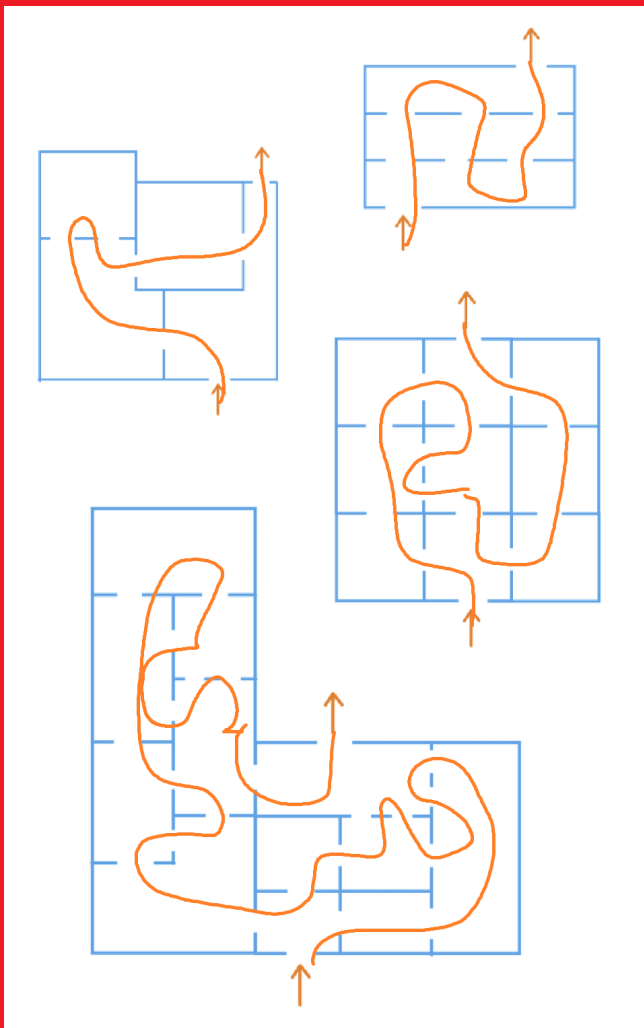
Math and Rooms PUZZLE SOLUTIONS

Here are the answers to the puzzles from last time. The question was:

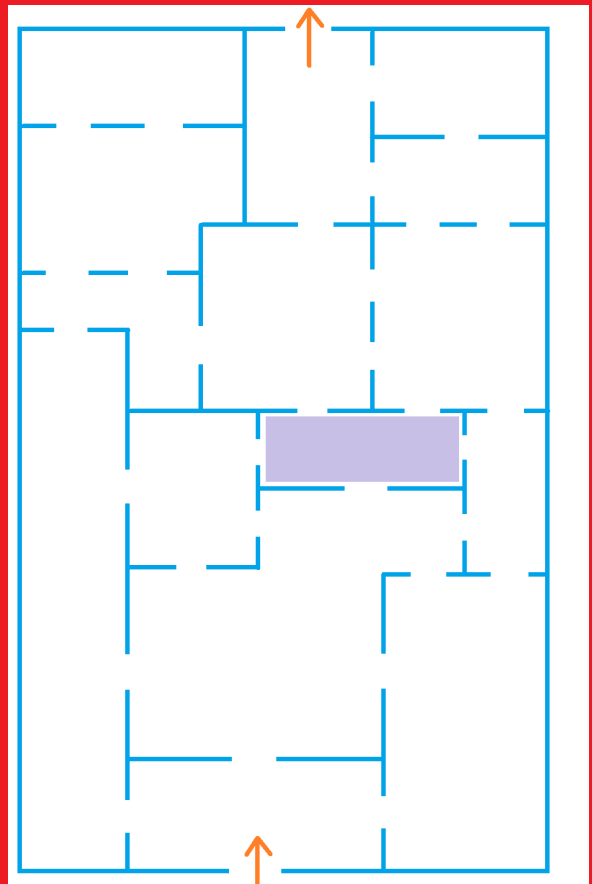
Is it possible to go in the front door and walk through each-and-every interior door exactly once, and exit through the back door?

puzzle #1

Here are the solutions:



This one is impossible!

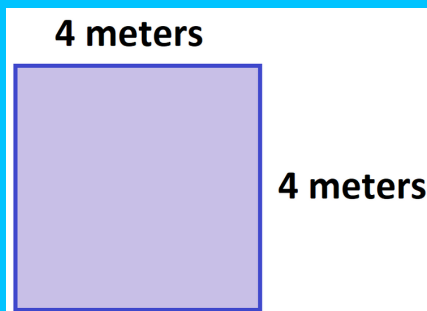


It has a room with five doors. This means you will enter the room, then exit it, later enter it and then exit it, and then later enter it ... and be stuck! (There is also a second room with five doors.)

puzzle #2

Instead of 3 meter by 6 meter room, you could do a 6 meter by 3 meter room. (But that is really just the same room turned ninety degrees!)

There's also a 4 meter by 4 meter room.



It has area 16 meters squared and perimeter 16 meters -- the same numerical value 16!

COMMENT: These are the only two rectangles with this property with whole number dimensions. If you are willing to work with fractions, there are infinitely many more examples!



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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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