I’ve recently purchased some tiles. Some of which are 1m x 2 m and striped, others which are 2m x 2m and solid. I wish to tile my 2m x 10m hallway with these tiles, but am uncertain which tiling I prefer. If I were to look at all the possibilities, how many different tilings would I have to look through to decide on the one I like best?

Here’s an example of a tiling of a 2x6 hallway to get you started.

You might find it easier to work with the generalization: How many tilings of a 2 by n hallway are there by these tiles? And then apply it to the case n = 10.

The Problem of the Week is open to all undergraduate students, regardless of major. Submit your written solution, along with your name and e-mail address, to the Math Department office (Founders Hall Room 2006) by 2:00 p.m. on Friday, March 18, 2016. The person who submits the best solution will win a $10.00 gift certificate to the Barista’s Daily Grind. There will be prizes for the 3 participants with the greatest number of correct solutions throughout the semester. So even if your solution isn’t ‘nice’, you should turn it in for a chance to add to your tally of correct solutions.

http://www.unk.edu/academics/math/problem-of-the-fortnight.php