

Domino Rectangles

We try to form various rectangles from domino tiles. As usual, a domino tile is a rectangle of size 1 by 2. We assume, that our domino set is unbounded...

1. Find **all** the sizes of the rectangles which can be obtained in this way.
2. When you are ready with the exercise 1. try to generalize it and consider similar questions for another domino tiles set: first for 1 by 3 size, then for 1 by 4, etc...
3. Is it true, that possessing two sets of tiles: 1 by 2 and 1 by 3, we can form n by m rectangle for **any** natural n and m with at least one of them ≥ 2 ?