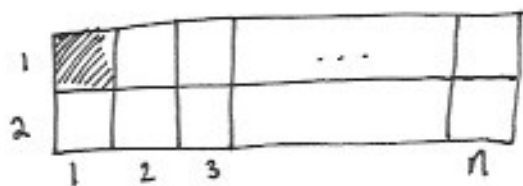


4 (a) Verify that  $f(n) = f(n-1) + f(n-2)$ .



Consider the top left corner square. It is either covered with a horizontal domino or a vertical domino. If it is a vertical domino then there are  $f(n-1)$  ways to cover the rest of the board. If it is horizontal then the only way to cover the bottom left square is also with a horizontal domino. Then there are  $f(n-2)$  ways to cover the rest of the board. So  $f(n-1) + f(n-2)$  ways total.