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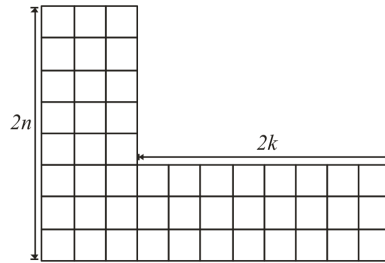
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This month's "free sample" is:

4128. *Proposed by Valcho Milchev and Tsvetelina Karamfilova.*

Let A_n be the number of domino tilings of a rectangular $3 \times 2n$ grid. Let $L(2n, 2k)$ be the number of domino tilings of the grid composed of two rectangular grids of dimensions $3 \times 2n$ and $3 \times 2k$ with $n \geq 2$ and $k \geq 1$ (depicted below):

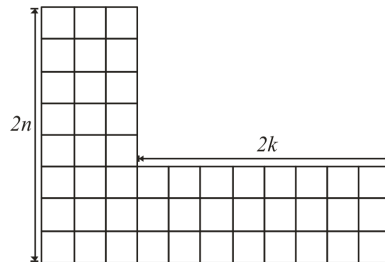


Prove that $L(2n, 2n) = A_{2n}$.

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4128. *Proposé par Valcho Milchev et Tsvetelina Karamfilova.*

Soit A_n le nombre de carrelages par dominos d'une grille $3 \times 2n$. Soit $L(2n, 2k)$ le nombre de carrelages par dominos d'une grille formée de deux grilles rectangulaires de tailles $3 \times 2n$ et $3 \times 2k$, pour $n \geq 2$ et $k \geq 1$, comme ci-bas:



Démontrer que $L(2n, 2n) = A_{2n}$.

