

1102-05-45

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Proof of Blum's conjecture on hexagonal dungeons.

Matt Blum conjectured that the number of tilings of the hexagonal dungeon of sides $a, 2a, b, a, 2a, b$ (where $b \geq 2a$) is $13^{2a^2} 14^{\lfloor \frac{a^2}{2} \rfloor}$. We present a proof for this conjecture using Kuo's Graphical Condensation Theorem. (Received July 09, 2014)