

Let h be the maximum number of penny-to-penny connections on the vertices of a hexagonal lattice, and let $t(n)$ be the analogous sequence on the vertices of a triangular lattice.

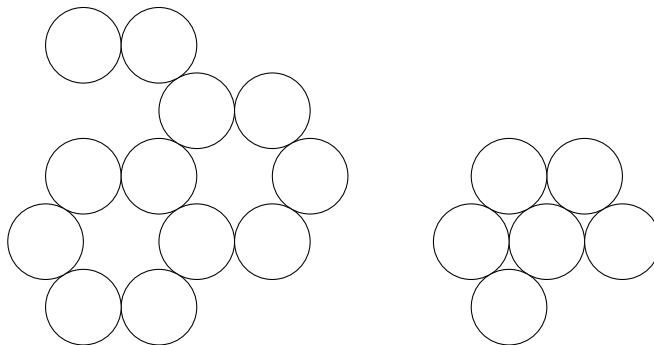


Figure 1: An example for $h(12) = 13$ and $t(6) = 9$

Question. What is a combinatorial proof that $h(2n) - t(n) = A216256(n)$.

Note. A216256 is

$$\underbrace{1}_1, \underbrace{2}_1, \underbrace{3, 3}_2, \underbrace{4, 4, 4}_3, \underbrace{5, 5, 5}_3, \underbrace{6, 6, 6, 6}_4, \underbrace{7, 7, 7, 7, 7}_5, \underbrace{8, 8, 8, 8, 8}_5, \underbrace{9, 9, 9, 9, 9, 9}_6, \dots$$