# COVERING SQUARE NUMBER WITH HEXAGONAL NUMBERS

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**Abstract :** This is a 'proof without words' representation of an observation on figurate numbers.
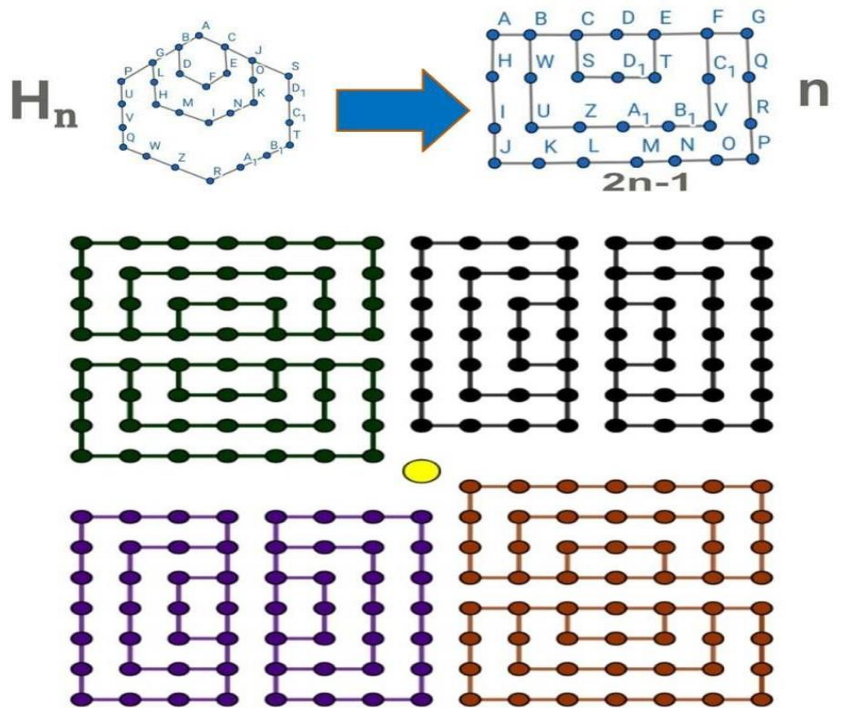
**Keywords :** Square Number ; Hexagonal Number.

**Proposition:** For $n \in N$ the following identity holds,

$$S_{4n-1} = 8H_n + 1$$

Where, $S_n$ is the $n^{th}$ Square Number and $H_n$ is the $n^{th}$ Hexagonal Number.

**Proof:** The proof is demonstrated for $n = 4$.



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Reference:

• Caglayan,G. 2020. Covering a Triangular Number with Pentagonal Numbers.Math Intelligencer 42,55.
http://doi.org/10.1007/s00283-019-09953-0