Proof Without Words:
Sums of Octagonal Numbers

\[ Q_k = 1 + 7 + 13 + \cdots + (6k - 5) = k(3k - 2) \Rightarrow \sum_{k=1}^{n} Q_k = \frac{n(n + 1)(2n - 1)}{2} \]

For \( k = 4 \):

For \( n = 4 \):

REFERENCE


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