

Spin Object in Space as Knight on Infinite Chessboard

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Abstract: Spin object in space as a knight on infinite chessboard was noticed..

Keywords: Ratio of spin object energy to its delocalization energy on the elliptic surface, number 277

1. INTRODUCTION

In the previous article the ratio of spin object energy (whole) to its absolute value of delocalization energy (part of a whole) was counted on the elliptic surface in the amount of $n = 277$. [1] This result equals the number of squares on infinite chessboard that a knight can reach in six moves from a fixed square. [2]

2. CALCULATION

Number of squares $f(n)$ on infinite chessboard that a knight can reach in n moves from a fixed square is given with the help of next relations [2]:

$$f(n) = \begin{cases} 1 & n = 0 \\ 8 & n = 1 \\ 33 & n = 2 \\ 1 + 4n + 7n^2 & n \geq 3 \end{cases} \quad (1)$$

Yielding 277 squares for six moves since:

$$f(6) = 1 + 4 \times 6 + 7 \times 6^2 = 277. \quad (2)$$

3. CONCLUSION

A knight jumping on 277 squares of infinite chessboard resembles to a spin object in the space confirming its identity in 277 counts. In the world to which they belong both possess the same ratio of the whole to the part of whole. After all, six moves on the chessboard could represent three-dimensional space with six directions at zero time.



Figure1. White knight on the chessboard [3]

DEDICATION

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