THE MYTH OF SISSA or The invention of chess



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A Barry4kids story



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The Myth of Sissa History? Maths? Or both?

This story and its Maths problem is about a mythical character from India – Sissa ibn Dahir – who is believed to have invented Chaturanga, the Indian predecessor of chess. The original story is narrated in an old parchment, and the Wheat and Chessboard Problem he would have presented to the king when he was asked what reward he'd like for that invention makes us understand that things are not always what they seem.

Once upon a time in India there was a very rich king who did not know what to do during the day; he was so bored that he ended up falling ill. The best doctors were consulted, who advised him to distract himself with something interesting. Now the king had heard of Sissa's great wisdom, and sent for him. When Sissa came to the king's presence, he asked him to invent a game that could put an end to his annoyance and cure him.

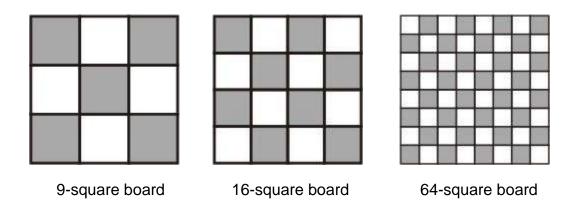
After a while, Sissa introduced himself to the king with the game of chess. The king was very pleased and liked the game so much that he decided to give Sissa anything he wanted. Sissa said that he did not want anything, but the king insisted and Sessa ended up making a strange proposal to the king involving the newly created chessboard. He told the king to pay him in wheat, placing one grain of wheat on the first square of the chessboard, then doubling it on the second, then doubling it again for the third, and so on for every square of the board.

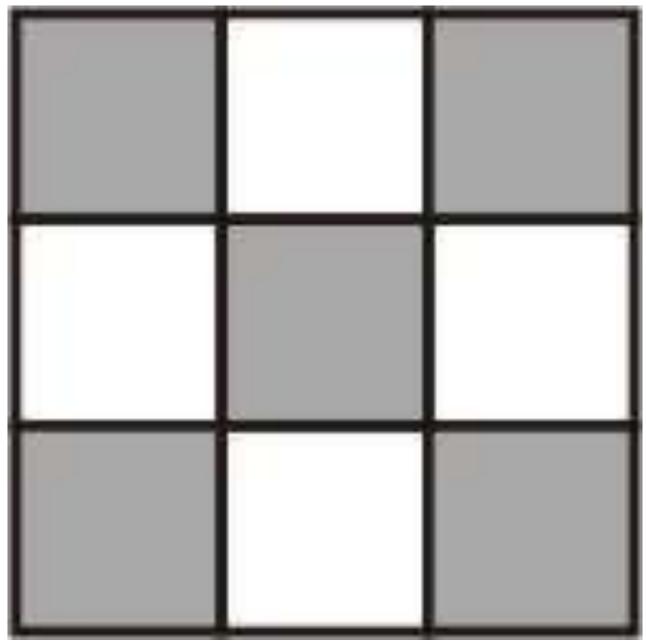
The king was very much astonished at the wise man's request, but agreed to this, thinking he was not giving Sissa very much at all. He then called the vizier and told him to give Sissa the due amount of wheat.

When the vizier heard of Sissa's request, he was very upset and told the king that he could not pay what was asked of him, for there would not be enough wheat in the kingdom for that. A chessboard has 64 individual squares. As you may have guessed, the single grain of wheat, after being doubled 63 times for every remaining square of the chessboard, quickly turned into a number so large that giving someone such an amount of wheat would be impossible. The total number of grains of wheat would be an astronomical number:

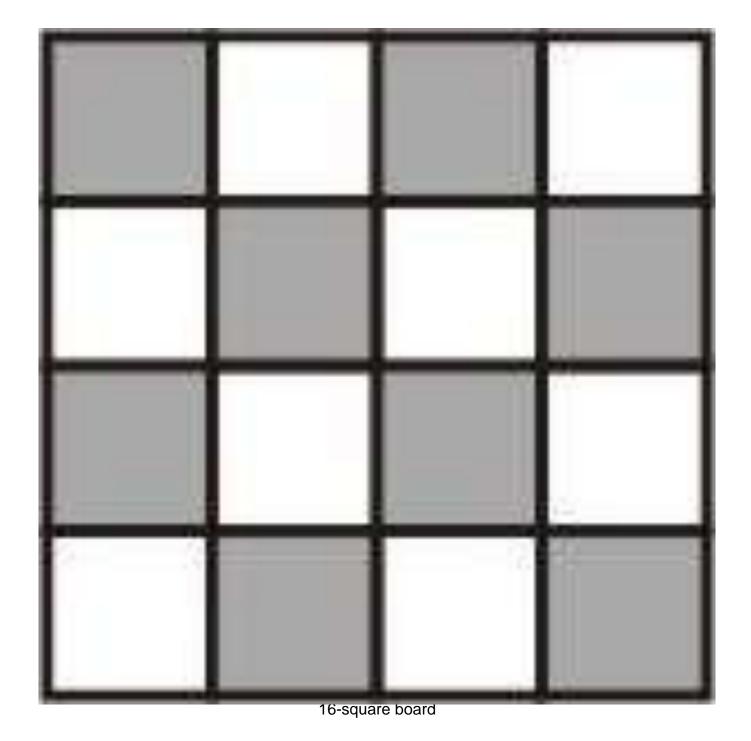
18 446 744 073 709 551 615! This is the power of geometric growth.

So that you understand Sissa's request well, use a reduced size chess board (with 9 or 16 squares) and fill all the squares on that board with grains of rice, according to the proposal of the wise man.





9-square board



About the Author

Dulce Rodrigues was born in Lisbon, Portugal. After a professional career that took her to other cities and countries, she now spends her life either travelling or among books; writing for children is for her a rewarding challenge and an engaging act of creation.

Following the publication some years ago in Belgium of her first book for children, now also published in English, German, and Portuguese, Dulce Rodrigues created the educational project www.barry4kids.net that opened the way to collaborations in different European countries, namely France, Belgium, Luxembourg, Portugal, and even Romania.

Dulce Rodrigues has university courses in the field of science as well as languages and literatures, and she was awarded scholarships in Germany and Belgium. A few of her children's tales and stories were awarded literary prizes in France at European level contests. She also received Honorary Mentions in the United States, in Brazil, and in the United Kingdom. She speaks six living languages and writes regularly in at least three.

Her books have been published in several languages and countries, and performances of her children's play "Penguin and the Fig Tree" have already taken place in Romania and Luxembourg. The Portuguese version of "Father Christmas has the Flu" was performed in Portugal, and her other play "Le Ciel est en Fête" was also performed in Luxembourg.

In addition to writing she enjoys travelling, gardening, photography, music, and pets. She also has a passion for History and for all forms of Art that transmit Beauty. Dulce Rodrigues is a member of international cultural and literary associations and she collaborates regularly with <u>Journal Bom Dia</u> (Luxembourg), <u>ACPS</u> (Strasbourg) and <u>Short Kid Stories</u> (Ireland). Please visit her at <u>www.dulcerodrigues.info</u>.

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