## [The King of Persia]

There is a fabled story about the inventor of chess and the King of Persia. The story goes that the King of Persia liked the game so much that he called in the inventor to reward him.

The chess inventor said something along the lines of,
"Dear King, as I am a humble man, I will ask only for a portion of rice according to the 64 squares of the chess board.

If you would give a single grain for the first square, two grains for the second square, four grains for the third square, 8 grains for the fourth square, and so on until the squares have been allocated, I would be most grateful."

The King seemed bemused, so far that was only 15 grains, which is hardly anything to a King that rules all the lands of Persia, so quickly set his servants to calculating the total amount.

Of course, what began as only a few grains kept on doubling and doubling and at the point of the $24^{\text {th }}$ square, the number of grains (for that square only) had reached close to 8.4 million and it soon became apparent that the total portion of grain might be enough to cover Persia to a depth of 3 feet or so. Of course, the King didn't have this much grain, and his fondness of the inventor of chess had quickly worn off so he had him beheaded.

