

Lab Exercise 1 – chess board

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1. Specification – chess board

A certain monarch of a rich and fertile country has been presented with an interesting game - chess. He liked that game so much that he decided to reward the creator of the game. Creator asked for a game of chess and won. The Lord had to fulfill his wish - and it was as follows: in every field of the board he has to place twice as many grains of corn than the preceding one, namely the first one grain, two grains on the second, four grains on the third, etc. The Lord agreed.

Did he act correctly?

Write a program that will read from the standard input the size of the board (one positive integer) and return the number of grains placed on the last field and the total number of grains placed on the board.

How big board can you handle without overflow?

Check how big number can be stored by INT variable. (use limits.h to find out this number)

Sample run of the program:

```
red 422 % ./a.out
```

```
Please enter the size of the chess board:2
```

```
last=8, total=15
```

2. Modifications

Play around with other numerical types like double and float. Check how big board can you handle.