A3 *Scientific Notation* Activity

Activity

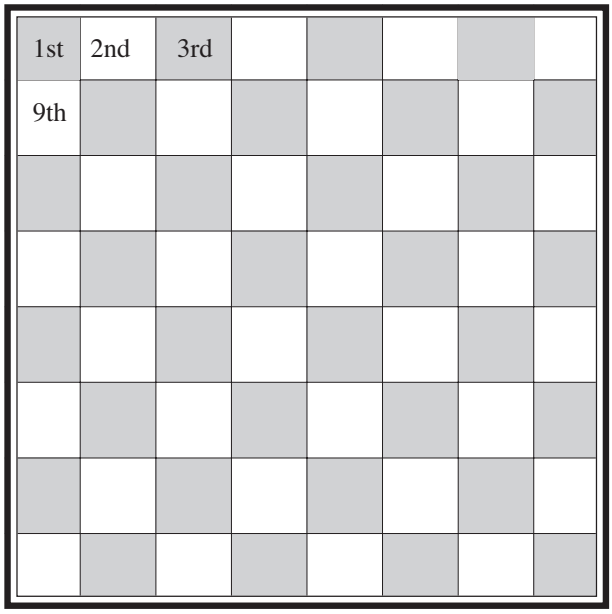
A3.1 Chess Towers

Notes and Solutions
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ACTIVITY A3.1 *Chess Towers*

A chess board has 8×8 squares, as shown below.



1. If 1 coin is placed on the 1st square
   2 coins are placed on the 2nd square
   4 coins are placed on the 3rd square
   8 coins are placed on the 4th square
   etc.

   how many coins will there be on the 64th square?

2. If all the coins are 1 pence coins, how much money is on the 64th square?
   Express your answer in standard form.

3. If the thickness of a 1 pence coin is 1 mm, and the coins are placed one on top of the other, how tall is the tower on the 64th square (assuming it does not collapse!)?
   Give your answer in km in standard form.

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ACTIVITY A3.1 *Notes and Solutions*

Notes and solutions are given only where appropriate.

A3.1 2. £9.22×10^{16}

3. 9.22×10^{18} mm $= 9.22 \times 10^{12}$ km

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