x-maths Bond

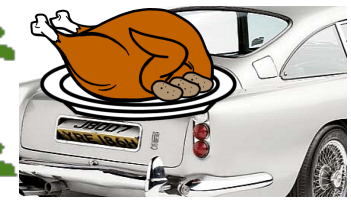
December 11th 2015 8:30am Moscow, Russia

"Quadratic Sequences? What are they Mrs Dalton?" There was a mixture of confusion, excitement and lethargy in room 149 as a Y10 Maths group settled down to their first lessson of the day. The school inspectre was amongst the excited.

Mrs Dalton revealed a Quadratic Expression. "Just find the first 3 terms of this expression using simple substitution," she directed, "and then explain the significance of the 3 numbers that you find?" The students were soon very busy.

$$n^2 - 2n + 12$$

Bond had been quick to respond. He had spent the last week visiting schools in Eastern Europe. Now, he sat in his Aston Martin opposite a Moscow school undergoing an inspection. A suspicious character with a stylish briefcase left the building. Bond followed him to a small cafe. The school inspectre drank coffee, read his newspaper and then wrote himself a Christmas card. He addressed the envelope, adding 'From Russia with Love' across the seal. When the inspectre left to post his card, Bond waited a moment and then moved to sit at the vacated table. He removed a blunt pencil form his jacket. Some careful shading over an imprint on the puzzle page of the inspectre's discarded newspaper revealed an address near Kendal, England.



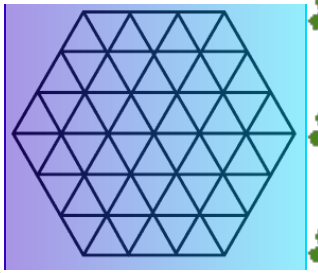
Number Plate

abcde is a 5-digit number.

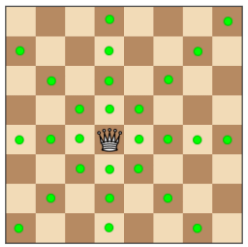
ab, bc, cd, de and e are all factors of 756.

Wrapping Shaper

How many regular hexagons?

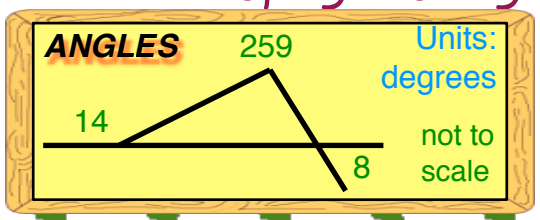


Chess Nuts



Find the minimum number of queens that can be placed on a chess board in such a way, that all squares on the board, **including occupied squares**, are attacked by at least one queen.

Display Dismay



Jangle Bells

9.48am precisely