

## QUIZ 7 : NINA CHALGERI

① Grandi

→ considered the case of his father who bequeathed a gem to his two sons who each may keep the bauble one year ~~after~~ in alternation. Belongs to each son for  $1/2$ .

②

~~Marin~~ Mirc Dú Châtelet translated  
Voltaire wrote the Letters

③

Lagrange

④

$$\begin{pmatrix} 1 & 9 \\ 9 & 1 \end{pmatrix} \begin{pmatrix} 2 & 8 \\ 8 & 2 \end{pmatrix} \begin{pmatrix} 3 & 7 \\ 7 & 5 \end{pmatrix} \begin{pmatrix} 4 & 5 & 6 \\ 5 & 6 & 4 \end{pmatrix}$$

$$\begin{matrix} (19) & (28) & (37) & (456) \\ \downarrow & \downarrow & \downarrow & \downarrow \\ 2 & 2 & 2 & 3 \end{matrix}$$

$$\hookrightarrow \text{luc}(2, 3) = 6$$

⑤

The taxicab distance ~~from~~ ~~to~~ of the bank spot is 4 which is an even number.

- In the final matrix, only the numbers 3 and 1 are switched which is ~~an~~ one inversion.
- The numbers 1 is odd and 4 is even. This means that ~~therefore~~ they have different parities.
- ~~Therefore~~ Using the lemma, the difference ~~of~~ parity means it is impossible to solve with legal moves.