Quiz 7

(1) Grandi: considered his father who bequeathes a gem to his two sons who each may keep the bauble one alternating year. Each has it for 1/2

(2) Châtelet translated
Voltaire wrote the letters sur les Anglais

(3) Lagrange

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

$(19)\ (28)\ (37)\ (456)$
$2 \quad 2 \quad 2 \quad 3$
$\operatorname{lcm}(2,3) = 6$

π^i = identity permutation if $i = 6$

(5) In every legal move the number of inversions changes by an odd integer. The taxicab distance is 4. With each inversion it always changes by 2 or 0. Thus, it is not possible.