

Year 4 Auction. Session 98 (2008-2009 school year)

1. Dissect a square into the smallest possible number of acute triangles.
2. What is the minimum possible number of straight cuts necessary to split a $5 \times 5 \times 5$ cub into 125 unit cubes if the pieces can be rearranged arbitrarily between cuts?
3. There are 10 bricks, each 10 inches long. It is permitted to arrange them in a stable stack, and the bricks are not required to lie exactly over each other. What is the maximal possible horizontal distance between the right edges of the top and bottom bricks in the stack?
4. Get number 2009 with as few ones as possible (you can use four arithmetic operations, exponentiation and brackets).
5. What is the maximum number of figures shown below that can be placed without overlapping inside a 10 by 10 square.

