

1) The problem of stacking cubes can obviously be generalized asking for stacking “suitable” prisms; where, obviously, suitable means that the base of the prism can tile the plane.

Formula  $C_2(1) \leq 4$  still holds true when the base is the isosceles right triangle (figure “tria.gif”) and the hexagon (figure “hexa.gif”); while I was not able to prove the formula when the base is the equilateral triangle.

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2) Another (very weak) generalization is concerned with figure “fake.gif”: in the sentence “the boundary of level  $i + 1$  is contained within the interior of the boundary of level  $i$ ” the term “contained” is weakened in the form “contained but a finite number of points”.

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3) Some results can be proved in a lot of ways; e.g., with respect to the pictures presented on August 2<sup>nd</sup>, we can somewhere suppress the topmost floor thus getting:

$C_3(1) \leq 10$  gives a second solution for  $C_2(3) \leq 9$

$C_3(2) \leq 13$  gives a second solution for  $C_2(4) \leq 11$

$C_4(1) \leq 20$  gives a second solution (and  $C_3(3) \leq 19$  gives a third) for  $C_2(6) \leq 16$

$C_3(7) \leq 31$  gives a second solution for  $C_2(10) \leq 24$

while suppressing the bottom-floor we have e.g.:

$C_3(4) \leq 21$  gives a second solution for  $C_2(4) \leq 11$

$C_4(2) \leq 24$  gives a second solution for  $C_3(4) \leq 13$

In some cases the second solution looks nicer than the original one; on the other hand, in my opinion, double and triple solutions can be useful. . .