

Exam 1 Redux

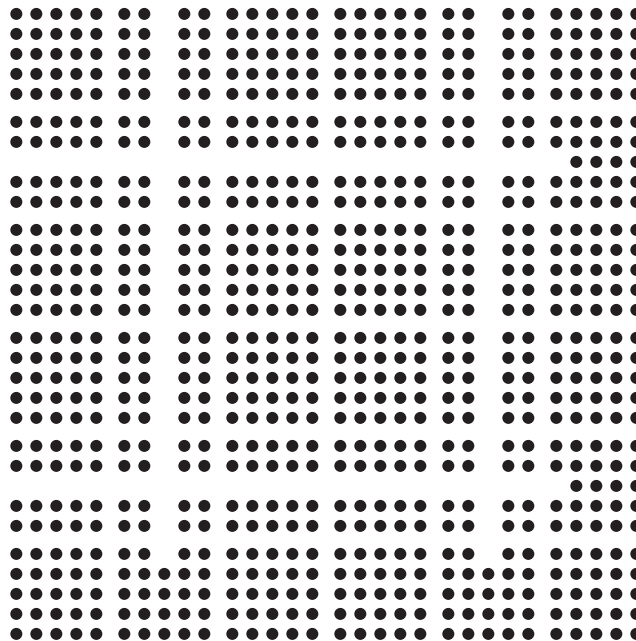
Combinatorics, Dave Bayer, February 14, 2014

Name: _____ Uni: _____

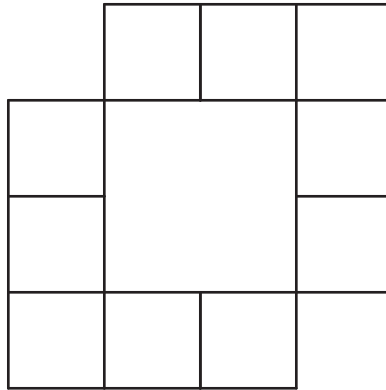
[1]	[2]	[3]	[4]	[5]	Total

For each problem that you did not solve correctly on our exam, please provide two independent solutions to the corresponding problem here.

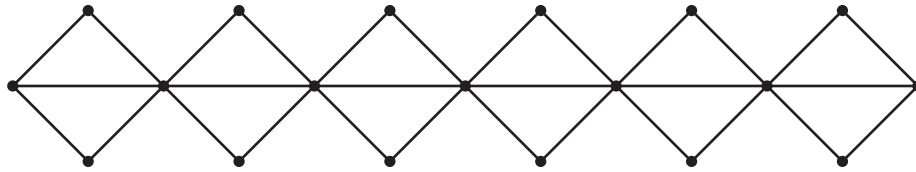
[1] How many dots?



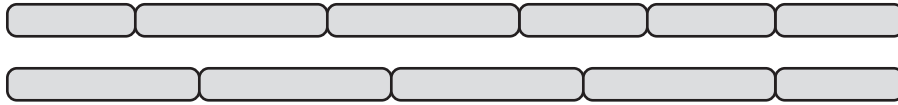
[2] How many paths are there from the lower left corner to the upper right corner of this grid, moving only up or to the right?



[3] How many paths are there of length 7 from the leftmost vertex to the rightmost vertex? Ignore paths that visit a vertex twice.



[4] How many ways can one fill a tube of length 14, using sticks of length 2 and 3? Two of the possibilities are shown below:



[5] There are 21 ways to cut a hexagon into three pieces. How many ways are there to cut a 7-gon into three pieces?

