Floor Tiling

Your task is to generate an explicit formula that can be used to determine the number of tiles necessary to build the nth step. To receive credit, you must relate each aspect of your formula to the physical attributes of the pictorial representation provided below.
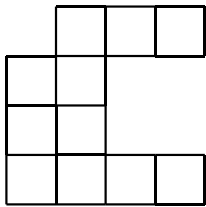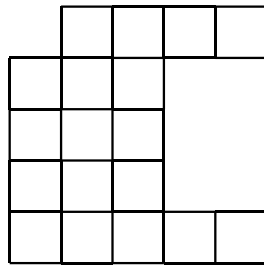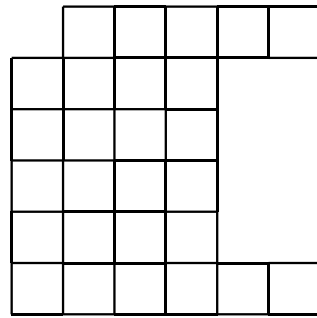

Figure 2   Figure 3   Figure 4

When you have solved this problem, go to Room 1066 to present your solution to the Master Teacher.