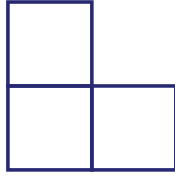


Staircase

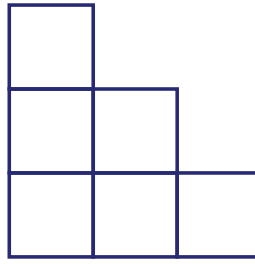
The first four stages of a pattern are shown below.



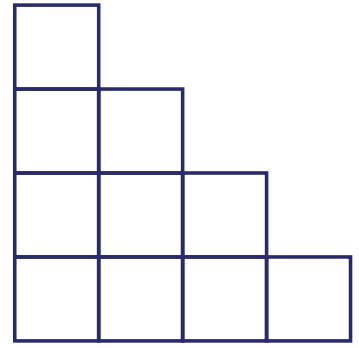
Stage 1



Stage 2



Stage 3



Stage 4

1. Determine the number of small squares in each of the first four stages.
2. Draw the fifth stage and determine the number of small squares in that stage.
3. Determine the number of small squares in the tenth stage without drawing or building it.
4. What function describes the relationship between the total number of small squares and the stage number? Explain how you know.