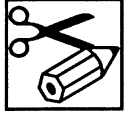


Checkers Anyone?

Leader



Find out how many squares are on a checkerboard.



You will need:

- Checkerboard (optional)



Do this:

- Help the student fill in the table to discover patterns.

	1	2	3	4	5	6	7	8	Total
1	1								1
2	4	1							5
3	9	4	1						14
4	16	9	4	1					30
5	25	16	9	4	1				55
6	36	25	16	9	4	1			91
7	49	36	25	16	9	4	1		140
8	64	49	36	25	16	9	4	1	204



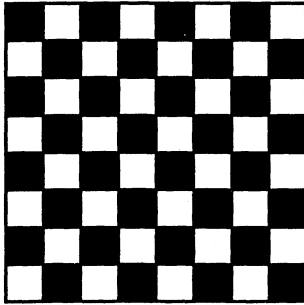
"Enrichment Activities," *Mathematics in Action Grade 8*. Macmillan/McGraw-Hill, 1990.

Student _____

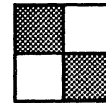


Do this:

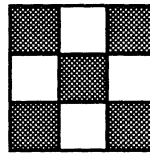
- Professor Chet Checkers, an expert checkers player, knows that there are 64 small 1×1 squares on a checkerboard. But how many squares of all sizes are there? By answering the following questions, you can solve the professor's problem.



1. How many different squares are on a 1×1 checkerboard? _____
2. On a 2×2 checkerboard,
 - a. How many 1×1 squares? _____
 - b. How many 2×2 squares? _____
 - c. How many squares in all are on a 2×2 checkerboard? _____



- On a 3×3 checkerboard,
 - a. How many 1×1 squares? _____
 - b. How many 2×2 squares? _____
 - c. How many 3×3 squares? _____
 - d. How many squares in all are on a 3×3 checkerboard? _____



- Use and extend the patterns you discovered to complete the table.

Size of Squares

Board Size	1×1	2×2	3×3	4×4	5×5	6×6	7×7	8×8	Total Squares
1×1									
2×2									
3×3									
4×4									
5×5									
6×6									
7×7									
8×8									

- How many different squares on a checkerboard? _____



WHAT I FOUND