50 GREEN DOORS

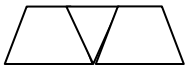
Introducing the Problem:

Tell students that they may have seen walls built out of stones or brick, but we are going to build a wall out of Pattern Blocks.

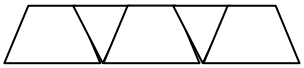
We are going to build a special wall and find out how many blocks it will take to build the wall.

Exploring with Pattern Blocks:

1. Tell the students to make a wall like this. Say, **A wall with one green door takes three blocks to build**.



2. Tell the students to put out more blocks so the wall looks like this. Say, **A wall with two green doors takes five blocks to build**.



3. Show them how to record the information in a table and explain that they are to record the information they collect in the table.

Number of Doors	Total Number of Blocks
1	3
2	5

4. Tell the students to put out more blocks so the wall will continue with the same pattern. Challenge them to figure out the total number of blocks in the wall when there are 50 green doors. (Students will not have enough blocks to actually build a long wall. They will need to use the pattern they see in order to generalize the number pattern and the rule the wall represents.)

5. Discussion: Ask students to share their results and strategies. If a general rule is not mentioned, ask **What if I picked another number of doors. Can you tell me what to do to find the total number of blocks?** (Multiply by two, add one. Or add one to your number, then add that to the first number.)

6. Provide 1 or more patterns for students to explore and challenge them to find terms other than 50.

[Adapted from: Connections: Linking Manipulatives to Mathematics, Grade 4, p. 13-14, 50 Green Doors, Creative Publications, Inc.]