Problem-Solving Investigation: Make a Model

EXAMPLE **Use the Make a Model Strategy**

MAIN IDEA

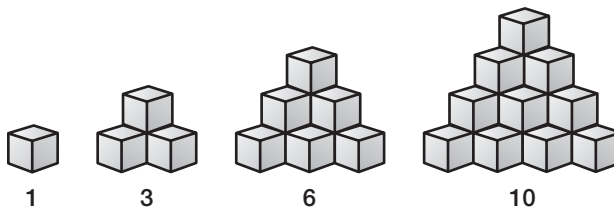• Solve problems by making a model.

SOUP CANS **Soup cans in a grocery store display are arranged in the shape of a triangle. The top row has one can, and each row below it has one more can than the previous row. How many rows are there in the display if 28 cans are used?**

UNDERSTAND You need to know how many rows are in the display. There is ☐ can in the top row and each row below it has ☐ can than the previous row. You have used ☐ cans.

PLAN Make a model using blocks to find the number of rows in the display.

SOLVE Begin with 30 blocks. Place one block to represent the one can in the top row. For the next row, place two blocks under the first block. For each consecutive row, continue adding one block to the amount of blocks in the previous row.

1   3   6   10

By continuing this pattern, $1 + 2 + 3 + 4 + 5 + 6 + 7$ or ☐ soup cans will be needed to make ☐ rows.

CHECK $28 − 7 − 6 − 5 − 4 − 3 − 2 − 1$ leaves no extra soup cans.

Check Your Progress **CHAIRS** Sandy is setting up chairs for the school band concert. If she places 5 chairs in the front row and each row behind the front row has two more chairs than the previous row, how many rows of chairs will be needed to seat 147 people?

HOMEWORK ASSIGNMENT

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