Math Tools: Fast-Array Drawings

When you solve a word problem involving an array, you can save time by making a Fast-Array drawing. This type of drawing shows the number of items in each row and column, but does not show every single item.

Here is how you might use a Fast-Array drawing for problem 1 on Student Activity Book page 235.

Show the number of rows and the number of columns.
Make a box in the center to show that you don't know the total.

Here are three ways to find the total:
• Find $5 \times 10$.
• Use 10s count-bys to find the total in 5 rows of 10: 10, 20, 30, 40, 50.
• Use 5s count-bys to find the total in 10 rows of 5: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50.

Here is how you might use a Fast-Array drawing for problem 4.

Show the number in each row and the total. Make a box to show that you don't know the number of rows.

Here are two ways to find the number of rows.
• Find $27 \div 9$ or solve $\square \times 9 = 27$.
• Count by 9s until you reach 27, 18, 27.

Math Journal  Make a Fast-Array Drawing to solve each problem.

5. Beth planted tulip bulbs in an array with 9 rows and 6 columns. How many bulbs did she plant?

6. The 36 students in the chorus stood in 4 rows for their school picture. How many students were in each row?