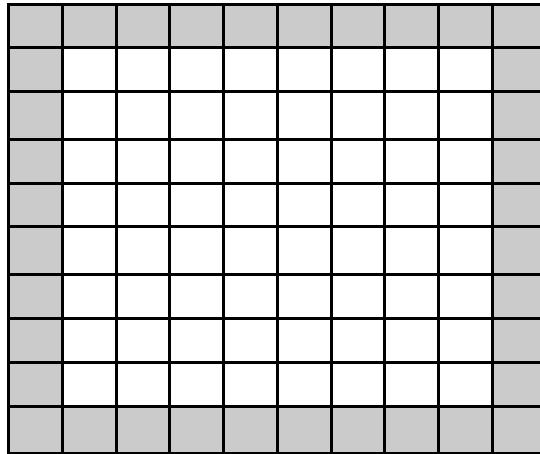


Methods for Solving the Border Problem

Group Responsibilities:

- Make sure that everyone participates by sharing and listening.
- Make sure that everyone connects his or her ideas to the geometric model.

On your own: Without talking, without writing, and without counting one by one, figure out how many unit squares are in the shaded portion of the 10 by 10 grid:



(Figure **not** to scale)

Group Task: Share out different methods for solving the Border Problem

- Share out ONE method for solving the Border Problem with your group. Describe your strategy in words and link it to the geometric model.
- Going around clockwise, each group member should share out one method.
- Continue sharing out one method at a time until all methods have been shared.
- Discussion: Ask questions or make comments about any of the methods that you would like to better understand.

Final Product:

- Represent at least 2 of your group's methods on a "stand alone" poster.
- Your representation should clearly communicate how your methods connect to the diagram. Use color, arrows, or other techniques to show your thinking.

Norms:

- Play your role
- Question each other
- Strive to understand each other's ideas

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Adapted from: Boaler, J., & Humphreys, C. (2005). *Connecting mathematical ideas: Middle school video cases to support teaching and learning*. Portsmouth, NH: Heinemann.