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Victoria Kofman* (drkofman@comcast.net), Vika School, 1067 Lake Cook Rd., Wheeling, IL 60090. *Chunking, Auxiliary Elements, and Commutation as a Topic for Math Circle.*

In the problems we design, students must apply several problem-solving techniques to find perimeter or area. They divide figures into several parts (chunking), move these parts around without changing the total area/perimeter (commutation), and/or draw additional lines and figures (auxiliary elements) onto the figure to reveal a path to the solution.

The students start with perimeter problems, and their solutions are discussed in terms of problem solving techniques applied. Then, students work with area problems that can only be solved by applying the same techniques.

Our unit provides two different types of geometry problems that teach problem solving terminology and techniques, while helping students to recognize similarities between different types of problems. (Received September 02, 2014)