

## Dustpan Volume Optimization

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The volume of a dustpan is maximized. The dustpan is constructed by folding up and joining flaps that are formed by removal of two equally-sized squares on the same side of a rectangular sheet of cardboard.

Keywords: calculus, volume, optimization



**Albert Natian** has been a professor of mathematics at Los Angeles Valley College for over 30 years. A collector of sorts, he holds Master's degrees in pure math, applied math, mathematical finance, and physics. His interests include combinatorics, applied probability, classical and modern physics, and philosophy. Albert enjoys mathematical puzzles, especially those involving probability. In his downtime, he does conceptual pen and ink drawings that involve patterns and objects in novel spatial relationships.