

??? **PROBLEM CORNER** ???

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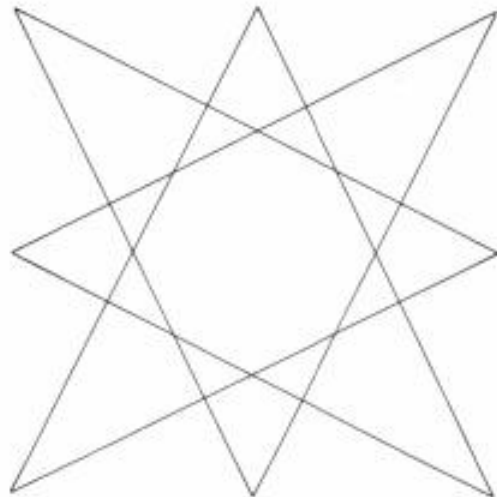
Problems suggested here are aimed at students of both the junior and senior high schools of Alberta. Solutions are solicited and a selection will be made for publication in the next issue of *delta-k*. Names of participants will be included. All solutions must be received (preferably in typewritten form) within 30 days of publication of the problem in *delta-k*. *Mail solutions to:*

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PROBLEM 1:

An 8-point star is formed in a square region of side S units by drawing two lines from each mid-point of a side of the square to opposite corners of the square. Note that these lines also form two identical smaller squares as well as one octagon.

- If the star is cut out of the square region, what fraction of the square is wasted?
- In terms of S , what is the area of one of the smaller square regions?
- In terms of S , what is the area of the octagonal region?



(submitted by William J. Bruce, University of Alberta)