



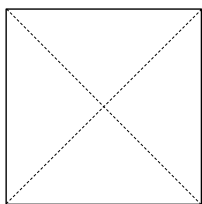
Problem of the Week

Problem A

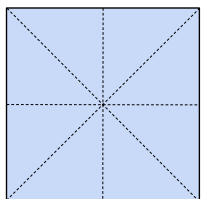
Origami

Laila likes to do origami which is the art of paper folding. Just by folding paper in a particular way, she can make all sorts of different animals. Many of the animals start with the same steps.

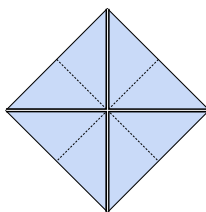
Laila starts with a square piece of paper. She folds it in half to form a triangle. Then she opens up the paper to start with a square again. She folds it in the opposite direction and also forms a triangle. When she opens it up again she can see creases on the paper that look like this:



Then she turns the paper over and folds it in half to form a rectangle. She opens up the paper and folds it in the opposite direction to form another rectangle. When she opens up the paper this time, she sees creases in the paper that look like this:



The centre of the square is the point where all of the creases intersect. Now, she takes each corner of the square and folds the paper so that each corner touches the centre of the square. Folding all four corners in this way forms another square.



What fraction of the area of the original square is the area of the smaller square? Justify your answer.

STRANDS GEOMETRY AND SPATIAL SENSE, NUMBER SENSE AND NUMERATION

