PARADOX of a vanishing square inch (experimental geometry)

Take a 8x8 square and cut it as shown in Fig A.
Then, re-arrange the pieces as shown in Fig. B.

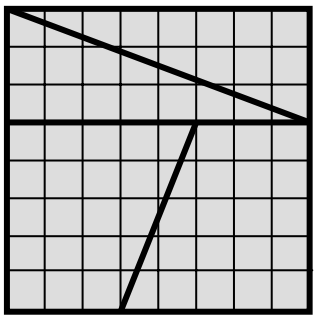
So far so good. But now – here is the problem:

the square is $8 \times 8 = 64$ in^2

the rectangle is $5 \times 13 = 65$ in^2

Where does the extra square inch come from? Can you find the flaw in the construction?

A



B

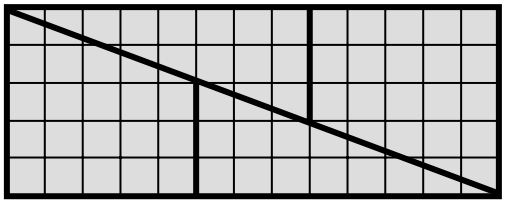


Figure: By regrouping you seem loose or gain one square inch. A paradox first presented by Sam Lloyd about 1900.

Exercise: (i) Can you see Fibonacci numbers hidden in the figures?
(ii) On which property of the Fibonacci numbers is this trick based?
(iii) Design a similar construction with different proportions.