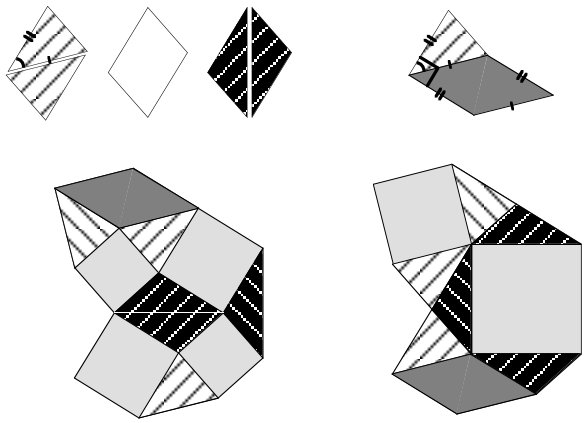
Proof without Words:
A generalization from Pythagoras[1]

1991 Mathematics Subject Classification: 51M25 primary; 03F20 secondary.

Theorem: The sum of the areas of two squares, whose sides are the lengths of the two diagonals of a parallelogram, is equal to the sum of the areas of four squares, whose sides are its four sides.

Proof:



Corollary: Pythagoras's theorem (when the parallelogram is a rectangle.)

Nelsen [1] reproduces a famous proof that uses tessellation similarly.

References

[1] R. B. Nelsen. *Proofs without Words,* Mathematical Association of America (1993) §1.

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