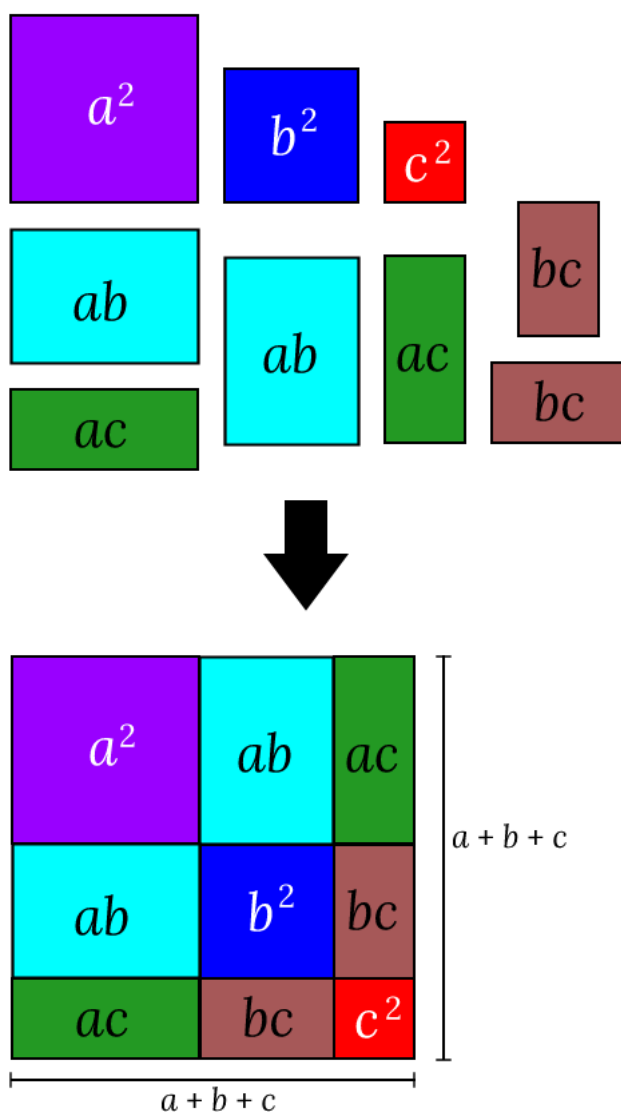
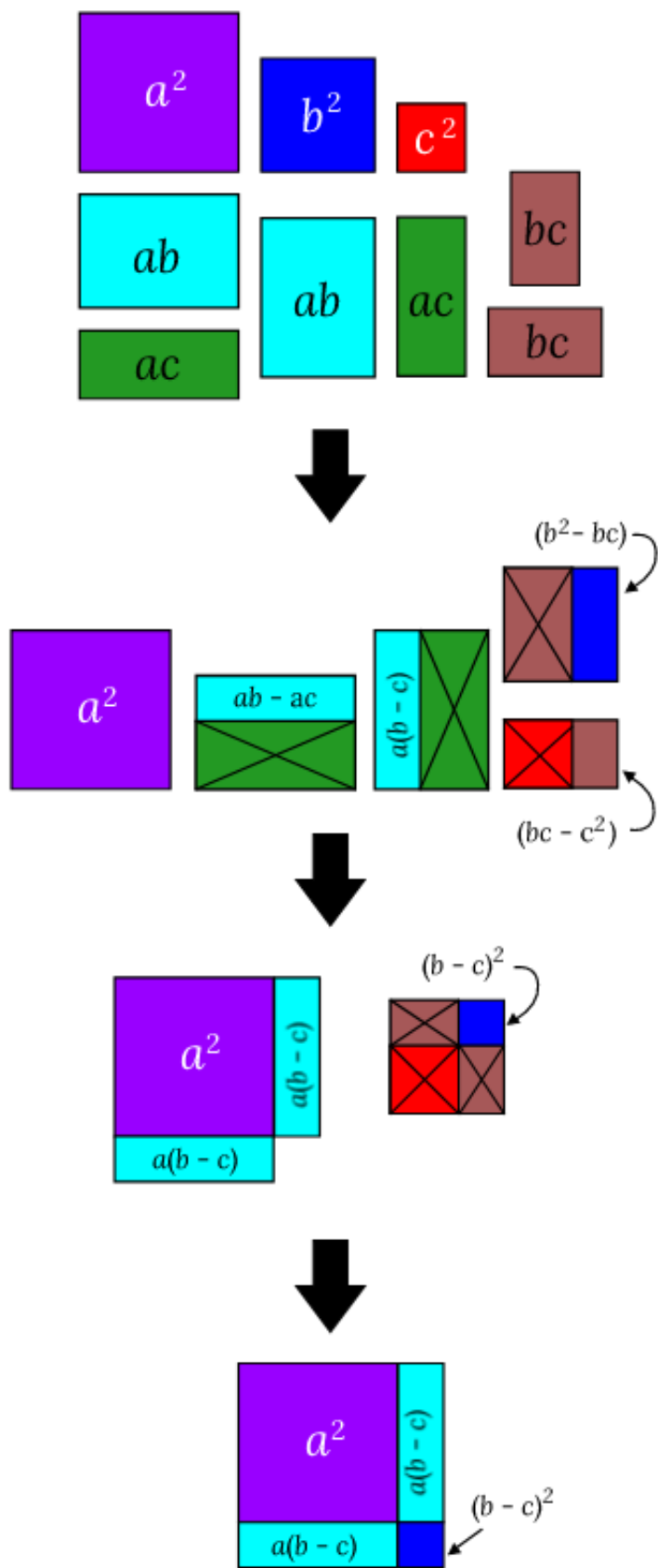

Proof Without Words: $(a+b+c)^2$, $(a+b-c)^2$, $(a+b+c)^2-(a+b-c)^2$

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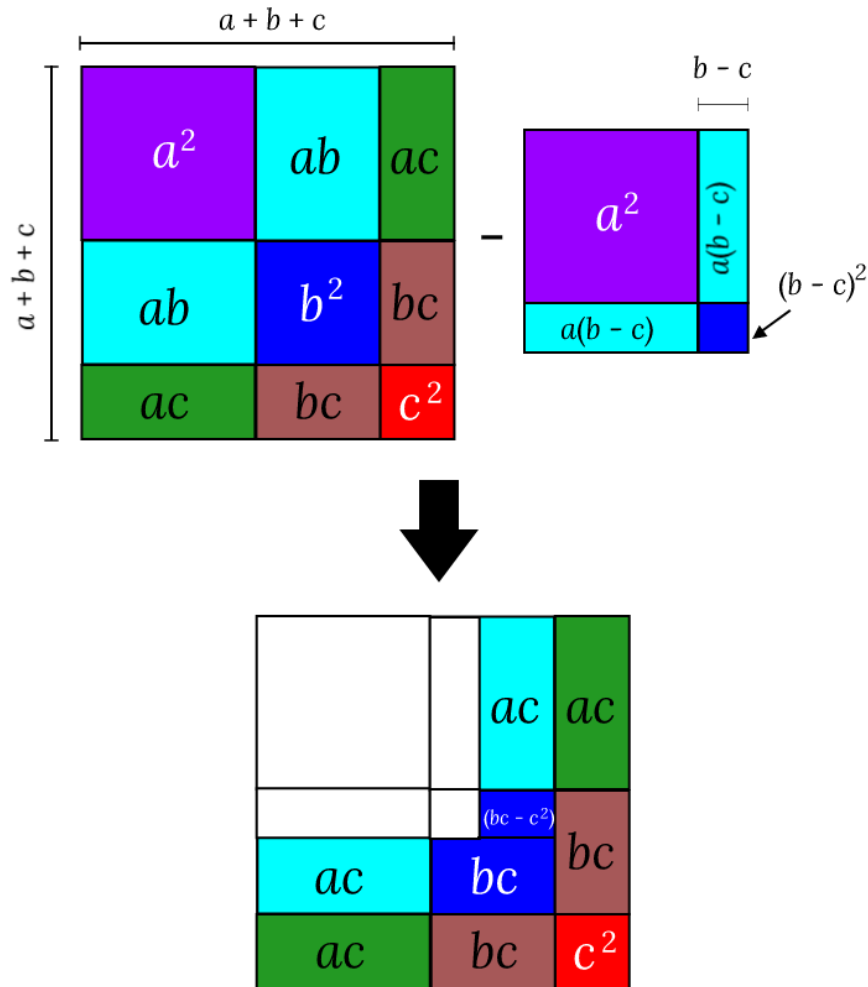
1 $(a + b + c)^2 = a^2 + b^2 + c^2 + 2ab + 2bc + 2ac$



$$2 \quad (a + b - c)^2 = a^2 + b^2 + c^2 + 2ab - 2bc - 2ac$$



$$3 \quad (a + b + c)^2 - (a + b - c)^2 = 4c(a + b)$$



References

- Love, J.B. (1977). Proof without words: Cubes and squares, *Mathematics Magazine* 50(2), 74.
- Nelsen, R.B. (1993). *Proofs without words: Exercise in visual thinking*. New York: The Mathematical Association of America.
- Nelsen, R.B. (2000). *Proofs without words II: More exercise in visual thinking*. New York: The Mathematical Association of America.
- Chakraborty, B. (2017). Proof without words: Sum of squares. *Mathematical Intelligencer*. <https://doi.org/10.1007/s00283-017-9727-9>

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