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Robert W. Vallin* (robert.vallin@lamar.edu), Department of Mathematics, Lamar University, P.O. Box 10047, Beaumont, TX 77710. *A Magic Trick That is Full of Induction.*

Mathematical induction is an extremely important device in every mathematician's toolkit. It is mostly taught via a succession of problems involving formulas or inequalities that seem to students either abstract or forced. This talk begins with a magic trick whose secret is shown via induction. We then exhibit some mathematical fallout from the trick and examine certain properties using mathematical induction, strong induction, and, finally, the proof of a summation formula done in the manner of Benjamin & Quinn. (Received September 13, 2016)