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Proving matrix equations. (English) [Zbl 1050.15015](#)
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The author presents a method for determining the truth of symbolic matrix equations where 0 or more such equations are given as true. One writes the equation to be proved in terms of independent variables only removing the dependent ones. Example: given $A_\lambda = (\lambda - A)^{-1}$ and $A_\mu = (\mu - A)^{-1}$, prove that $(\lambda - \mu)A_\lambda A_\mu = A_\mu - A_\lambda$. Here $\lambda, \mu \in \mathbb{C}$ and the $n \times n$ -matrices A, A_λ, A_μ are invertible. The independent variables are λ, μ, A , the dependent ones are A_λ, A_μ .

Reviewer: [Vladimir P. Kostov \(Nice\)](#)

MSC:

[15A24](#) Matrix equations and identities

Keywords:

[symbolic matrix equation](#); [\(in\)dependent variable](#); [primitive number](#); [normal form](#)

Full Text: [EuDML](#) [EMIS](#)