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# Matrix Tricks for Linear Statistical Models

## Our Personal Top Twenty

- A valuable source of information for graduate studies whenever the matrix analysis and/or linear statistics is involved
- Useful to the researchers utilizing matrices to deal with problems originating in various sciences, not only statistics
- Collected 'Top Twenty' favorite matrix tricks for linear statistical models

In teaching linear statistical models to first-year graduate students or to final-year undergraduate students there is no way to proceed smoothly without matrices and related concepts of linear algebra; their use is really essential. Our experience is that making some particular matrix tricks very familiar to students can substantially increase their insight into linear statistical models (and also multivariate statistical analysis). In matrix algebra, there are handy, sometimes even very simple "tricks" which simplify and clarify the treatment of a problem—both for the student and for the professor. Of course, the concept of a trick is not uniquely defined—by a trick we simply mean here a useful important handy result. In this book we collect together our Top Twenty favourite matrix tricks for linear statistical models.

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