

The Row-Reduction Song

(by Ralph P. Boas)

Come gather round me and I'll show you how
We're solving simultaneous equations now;
Just write them out in a matrix way,
Set to work and row reduce—you cannot go astray.

Row reduction: add 'em and subtract 'em;
Row reduction: make the zeros grow;
Row reduction: it's the perfect system;
Get a lot of zeros and the rank will show.

First you find a pivot; you needn't make it 1
(Avoid the messy fractions until you're almost done).
Now get all the zeros in, above it and below,
Then you'll be all ready to begin another row.

Row reduction: that's the way to do it;
Row reduction: Gauss showed us the way;
Row reduction: Cramer never knew it;
But it's tomorrow's method and we're using it today.

If you supraugment, the inverse will appear,
But if you never find it, the fault is very clear.
When row reduction fails you, the reason's not bizarre:
The matrix you started with was singular.

Row reduction: now you have been shown it;
Row reduction: it's a clever trick.
Better check your answer, just in case you've blown it
After all those efforts with arithmetic.