

# Applied Linear Algebra Notes

Joe Hollander

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## 1. 1.1 Elementary Row Operations

- (a) Interchange two rows
- (b) Multiply the elements of a row by a nonzero constant
- (c) Add a multiple of the elements of one row to the corresponding elements of another

Gauss-Jordan elimination is a systematic way to eliminate variables to arrive at a solution matrix. The equation is solved when the matrix is diagonalized. Create zeros in each column until finished. Finally, normalize the final element ((3,3) for a 3x3 matrix, etc.). Interchange rows if a diagonal element is zero. Final matrix is called the reduced echelon form.