

Gauss Jordan Elimination

I. Row Operations

1. May interchange any two rows at any given time.
2. May multiply (or divide) any row by a nonzero number.
3. May add (or subtract) a multiple of a row to another row.

II. Reduced Row Echelon Form

1. An entire row of zeros is placed at the bottom of the matrix.
2. The first nonzero number must be a 1 in each row (called the leading one)
3. The Leading 1's must be in a stair step design.
4. There must be 0's above and/or below the leading 1's.

III. How To Get A Matrix in Reduced Row Echelon Form.

1. Get a 1 in (1, 1) position.
2. Get 0's in column 1.
3. Get a 1 in (2, 2) position.
4. Get 0's in column 2.
5. Get a 1 in (3, 3) position.
6. Get 0's in column 3.
7. Follow this pattern listed as above.