Reducing a Matrix A to Row-Echelon form H

1. Look at the *first column* of A. If it contains only zeros, cross it off mentally. Then look at the *second column* of A. If it contains only zeros, cross it off mentally. Continue until the left column of the remaining matrix has a nonzero entry or until you have gone through all of the columns.

2. Use row interchange, if necessary, to obtain a nonzero entry (a **pivot**) p in the *top row* of the first column of the remaining matrix.

3. Use elementary row operations to create *zeros below p* in the entire first column of the remaining matrix.

4. Mentally cross off this first column and first row of the matrix, to obtain a smaller matrix.

5. Go back to step 1, and repeat the process until either no rows or no columns remain.