SUMMARY OF SECTION 1.2

A MATRIX IS IN REDUCED ROW-ECHELON FORM IF

1) IF A ROW DOES NOT CONSIST ENTIRELY OF ZEROS, THEN THE FIRST NON-ZERO NUMBER IS A 1.

2) ALL ROWS CONSISTING ENTIRELY OF ZEROS ARE GROUPED AT THE BOTTOM OF THE MATRIX.

3) IN ANY TWO SUCCESSIVE ROWS THAT DO NOT CONSIST ENTIRELY OF ZEROS, THE LEADING 1 IN THE LOWER ROW OCCURS FARTHER TO THE RIGHT THAN THE LEADING 1 IN THE HIGHER ROW.

4) EACH COLUMN THAT CONTAINS A LEADING 1 HAS ZEROS EVERY WHERE ELSE.

A MATRIX WITH THE FIRST 3 PROPERTIES IS SAID TO BE IN ROW-ECHELON FORM.

THE FOLLOWING ALGORITHm WILL REDUCE ANY MATRIX TO REDUCED ROW-ECHELON FORM. IT IS CALLED GAUSS-JORDAN ELIMINATION. IF ONLY THE FIRST FIVE STEPS ARE FOLLOWED, THEN THE PROCESS IS CALLED GAUSSIAN ELIMINATION AND A ROW-ECHELON