

Corrections for First Edition, First Printing (2021)

Important corrections

On p. 19, last line: The condition **all entries under a pivot are zero** should be replaced by the condition **a pivot in a lower row is further to the right than a pivot in a higher row**.

Comment: In many cases, the conditions are equivalent. But there are examples where this is not the case, such as the following matrix (which is **not** in echelon form):

$$A = \begin{pmatrix} 0 & 1 \\ 1 & 0 \end{pmatrix}$$

On p. 75, in the proof of Prop. 3.11: The **first sentence in the proof** should be replaced by the following text: **Let r be the rank of A , and write $\text{Row}(A)$ for the row space of A , the vector space spanned by the row vectors of A . Since the row space is preserved under elementary row operations, and the row space of an echelon form has the non-zero rows as a base, it follows that $\dim \text{Row}(A) = r$. We can therefore find r linearly independent rows in A , and write I for any choice of r linearly independent rows, and J for the columns with pivot positions. In the second last line of the proof, the text **with s pivot positions** should be replaced by **with s linearly independent rows**.**

Comment: The original text give a correct argument in many cases, but not all. Note that elementary row operations may change which rows are linearly independent, for instance when two rows are interchanged.

On p. 99, first line of third paragraph: In the definition, the words **irreducible** and **primitive** should be interchanged.

Minor corrections

On p. 11, second line of first paragraph: The word **v//tgcqaribles** should be **variables**.

On p. 29, displayed line below the middle: In the set V of solutions, **(x, y, z)** should be **(x, y, z, w)** .

On p. 40, in the proof of Prop. 2.1: The text **formulas 2.1 - 2.1** should be **formulas on the previous page**.

On p. 96, first line of Section 4.4: The text **positive integer** should be **a positive integer**.

On p. 143, Problem 5.1: Part **e) and f)** should be omitted, as they are identical to **Problem 5.2**.
