Question 1. *(5 marks)* Let A and B, be 3×4 matrices such that B is obtained from the matrix A using the following elementary row operations:

   a. Switch the first and 3rd row.

   b. Multiply the 2nd row by $\frac{1}{3}$

   c. Add twice the first row to the 3rd row.

Find a matrix C, such that $A = CB$.

Question 3. *(3 marks each)* Determine whether the following statement is true or false. If the statement is false provide a counterexample. If the statement is true provide a proof of the statement.

   a. Every elementary matrix is invertible.

   b. An expression of an invertible matrix as a product of elementary matrices is unique.