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**Name (*Last, First*): Carganico Mattia, ID: 301278358.**

**Name (*Last, First*): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, ID: \_\_\_\_\_\_\_\_\_\_\_\_\_\_.**

**For full marks, please provide complete solutions** in the space provided for each question. Late assignments will not be accepted.

1. For the following system of linear equations:

1. Find using elementary row operations [5 marks]
2. Use to solve the above system of equation. [2 marks]

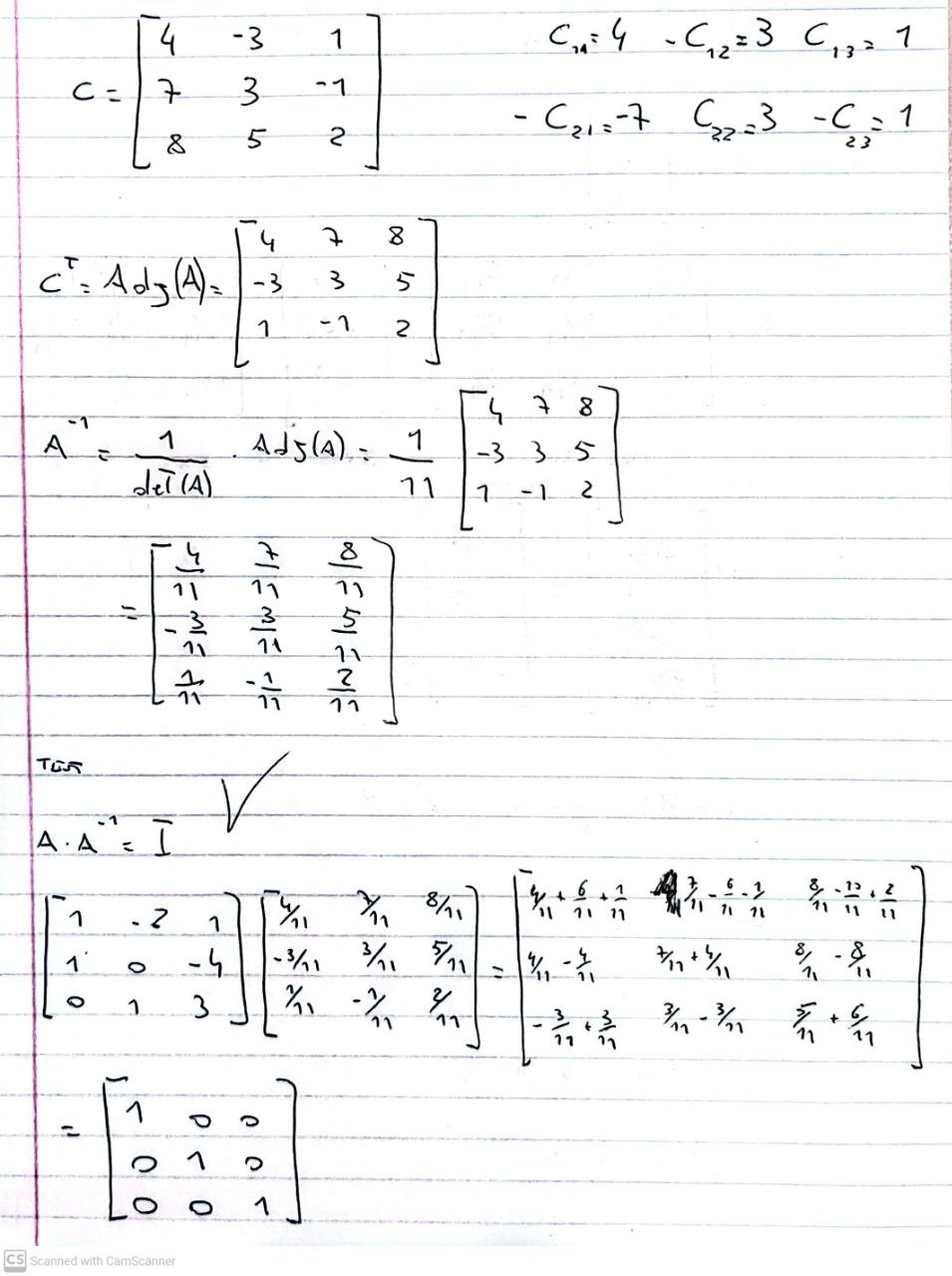
2. Solve using Cramer’s rule. A*ny other method of solving will not be awarded any marks*: [5.5 marks]

1. For the following system of linear equations:

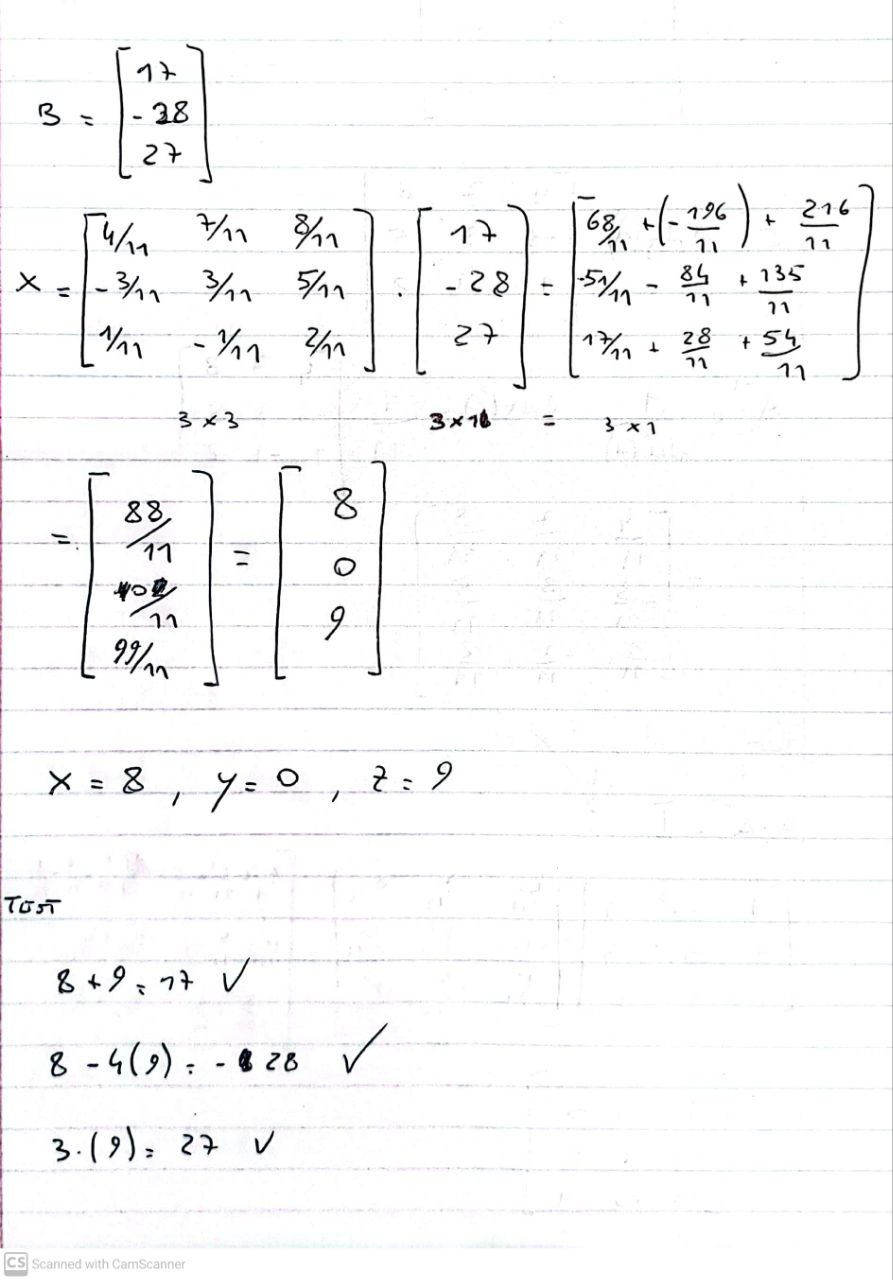
1. Find using adjoint theorem [6.5 marks]

A math problem with numbers and equations

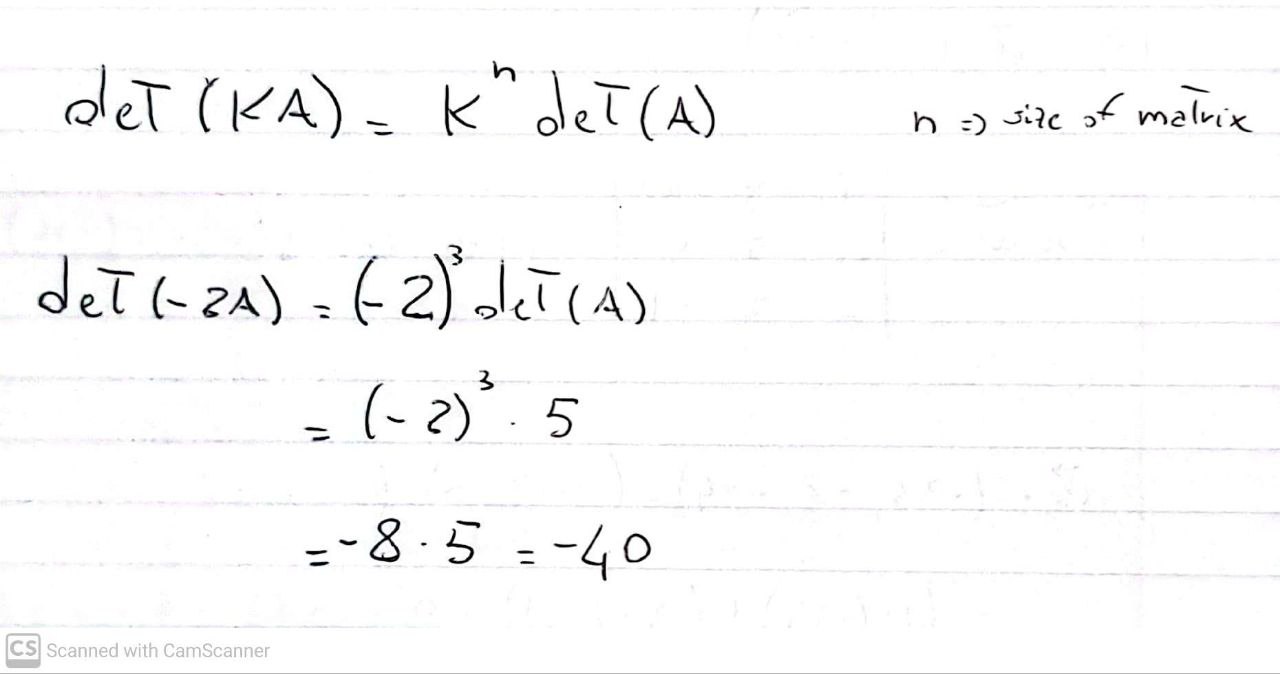
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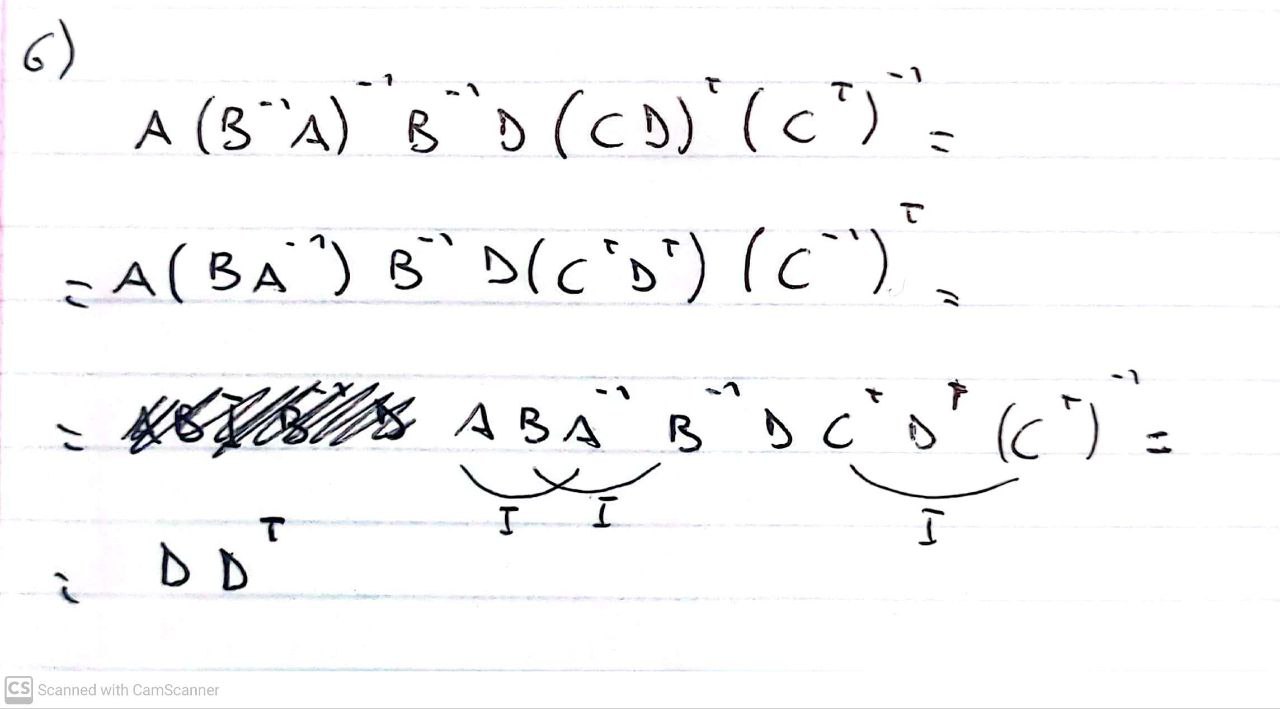
1. Use to solve the above system of equation. [2 marks]



1. Find if A is a **3 x 3** matrix and determinant of A is  *5.* [2 marks]



1. Given the matrix below, find ***c***so that the matrix is not invertible. [3 marks]
2. a) Simplify the expression below by using the algebraic properties of matrices. Show your work. [3 marks]



b) What special matrix is represented by the above simplified expression? [1 mark]

