Math Weeks 4 Assignment

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1. Using matrix operations, describe the solutions for the following family of equations:

x + 2y - 3z = 5

2x + y - 3z = 13

-x + y = -8

**Guassian-Jordan Elimination**

R2-2R1

R3 + R1

R2 /-3

R1-2R2

R3- 3R2

**x = 7**

**y = -1**

**z = 0**

**Augmented Matrix →**

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Matrix A ->

Matrix B ->

Matrix C ->

AB = C

B =( 1/A) \* (C) -> B= A’ \* C

**Minors of Matrix A**

1 -3 2- 3 2 1

1-3 -1 0 -1 1

2 -3 1-3 1 2

1 0 -1 0 -1 1

2-3 1-3 1 2

1-3 2-3 2 1

Cofactors of Matrix A

* 3 1 3

3 3 -3

-3 -3 -3

Adjoint of Cofactors

* 3 3 -3

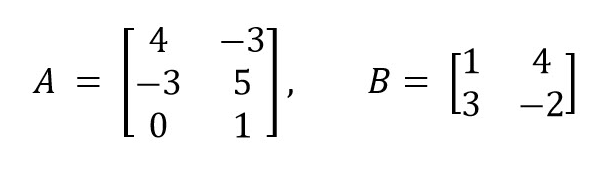
1 3 -3

3 -3 -3

Determinant of Matrix A = 0

Inverse of A = 1/determinant \* Adjoint (A)

2)



**Dimension of matrix A = (3x 2)**

**Dimension of matrix B = (2x2)**

**Final matrix C = (3 x 2)**

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