>> #Ricardo Lucas Fernandez

>>

>> #45135839H

>>

>> A = [4 5 1; 3 5 8; 3 9 0; 1 0 1]

A =

4 5 1

3 5 8

3 9 0

1 0 1

>> I = [ 1 0 0; 0 1 0; 0 0 1]

I =

1 0 0

0 1 0

0 0 1

>> AI = [A I]

error: horizontal dimensions mismatch (4x3 vs 3x3)

>> I = [ 1 0 0; 0 1 0 ; 1 0; 0 0 1 ]

error: vertical dimensions mismatch (2x3 vs 1x2)

>> I = [ 1 0 0; 0 1 0 ; 0 0 1 ]

I =

1 0 0

0 1 0

0 0 1

>> AI = [A I]

error: horizontal dimensions mismatch (4x3 vs 3x3)

>> I = [ 1 0 0; 0 1 0 ; 0 0 1 ; 0 0 0]

I =

1 0 0

0 1 0

0 0 1

0 0 0

>> AI = [A I]

AI =

4 5 1 1 0 0

3 5 8 0 1 0

3 9 0 0 0 1

1 0 1 0 0 0

>> rref(A)

ans =

1 0 0

0 1 0

0 0 1

0 0 0

>> rref(AI)

ans =

1 0 0 0 -3/20 1/12

0 1 0 0 1/20 1/12

0 0 1 0 3/20 -1/12

0 0 0 1 1/5 -2/3

>> #Por lo tanto nos queda la matriz canonica a la izq (3 primeras columnas) y a la dech la de paso

>> #AC = E \* A

>> E \* A

Ejercicio 2

>> #a)

>>

>> A = [4 4 4;]

A =

4 4 4

>> A = [4 4 4; 5 5 -5; 1 0 1; 3 0 3]

A =

4 4 4

5 5 -5

1 0 1

3 0 3

>> b = [24; 0; 4; 9]

b =

24

0

4

9

>> rank(A)

ans = 3

>> Ab = [A b]

Ab =

4 4 4 24

5 5 -5 0

1 0 1 4

3 0 3 9

>> rank(Ab)

ans = 4

>> #Sistema Incompatible

b)

콭>> A = [8 8 8 -24 16; 3 -6 -6 15 -6; 27 -9 -27 -9 36]

A =

8 8 8 -24 16

3 -6 -6 15 -6

27 -9 -27 -9 36

>> b = [32; -9; 36]

b =

32

-9

36

>> AB = [A b]

AB =

8 8 8 -24 16 32

3 -6 -6 15 -6 -9

27 -9 -27 -9 36 36

>> rank(A)

ans = 3

>> rank(AB)

ans = 3

>> # es un sistema compatible indeterminado, ya que los rangos son iguales pero distinto que el

>> #n\_incognitas

>> # 5 - 3 = 2 -parametros (depende de dos parametros)

>> # t = alpha

>> # w = beta

>>

>> #8x + 8y + 8z = 32 - 24alpha - 16beta)