Section 1.1:

**Exercise 7**

*consider the augmented matrix*

*…….*

*The corresponding system of equation is*

*X1+ 7x2 + 3x3 = -4*

*X2-x3= 3*

*0=1*

*X3-2*

*Third equation no have solution , based on that the given system has no solution*

**Exercise 11**

Interchange R1,R2 → R3 → -3R1 +R3 →

R3 → 2R2 + R3; R1 → -3R2 + R1 →

In R3 have 0= -10 → system is inconsistent

**Exercise 19**

R2 → -3R1 + R2 →

Tim dieu kien chi ma tran -3h+6 khac 0

Solve -3h + 6 = -4 → 10= 3h → h= 3/10

**Exercise 25**

R3 → 2R1 + R3 → R3 → R3+ R2 →

→ System is consistent ↔2g+k +h =0

**Exercise 29**

Transforms the first matrix into the second: Swap row 1 and row 2

Transforms the second matrix into the first: Swap row 1 and row 2

**Section 1.2**

**Exercise 7**

→ → →

X1= -5-3X2, X2 is free , X3= 3

**Ex11**

→ →

X1= 4/3 X2 – 2/3X2, X2 : free , X3: free

**Ex 13**

→

X1= (x5-5)/3 , X2= 4-9X1 , X3: free , X4: 1+ 4X1, x5: free

**Ex 17**

→ →

Solve -2h+7=0 → h= 7/2

Ex 19

Giam ma tran ve dang bac thang

→ → →

1. No solution : 8-k 0 and h-2 =0
2. Unique solution : h-2 0
3. Many solution : 8-k=0 and h-2 =0

**Ex23**

Yes. The system is consistent because with three pivots, there must be a pivot in the third (bottom) row of the coefficient matrix. The reduced echelon form cannot contain a row of the form(0 0 0 0 0 )

Ex 24: linear system is consistent if and only if the rightmost column of its associated augmented matrix not is a pivot column

→ inconsistent

**Ex 25**

If the coefficient matrix has a pivot position in every row, then there is a pivot position in the bottom row, and there is no room for a pivot in the augmented column. So, the system is consistent, by Theorem 2.

Ex 28: the last column cannot contain the pivot column and each column must be contain a pivot column









