IBE AMARACHI SHEILA

MECHANICAL ENGINEERING

16/ENG06/028

ENG 281

ANSWERS TO ASSITGNMENT IV

QUESTION 1

1. clc
2. clear

QUESTION 2(i)

```
commandwindow
clear
clc
A = [2 3 7 9 4; 3 7 9 12 5; 4 8 5 6 9; 5 9 2 4 5; 6 2 3 7 8]
aima= det(A)
```

A =

2	3	7	9	4
3	7	9	12	5
4	8	5	6	9
5	9	2	4	5
6	2	3	7	8

aima =

-765.0000

QUESTION 2(ii)

```
commandwindow
clear
clc
A = [2 3 7 9 4; 3 7 9 12 5; 4 8 5 6 9; 5 9 2 4 5; 6 2 3 7 8]
sheila= transpose(A)
```

A =

2	3	7	9	4
3	7	9	12	5
4	8	5	6	9
5	9	2	4	5
6	2	3	7	8

sheila =

2	3	4	5	6
3	7	8	9	2
7	9	5	2	3
9	12	6	4	7
4	5	9	5	8

QUESTION 2(iii)

```
commandwindow
clear
clc
A = [2 3 7 9 4; 3 7 9 12 5; 4 8 5 6 9; 5 9 2 4 5; 6 2 3 7 8]
rhurhu= inv(A)
```

A =

2	3	7	9	4
3	7	9	12	5
4	8	5	6	9
5	9	2	4	5
6	2	3	7	8

rhurhu =

1.8915	-1.4026	-0.3124	0.7843	-0.2078
-0.4379	0.3268	0.0523	-0.0392	-0.0196
2.5725	-1.8392	-0.0863	0.7647	-0.5176
-1.8876	1.4654	0.0105	-0.6078	0.3961
-0.6222	0.3778	0.2444	-0.3333	0.1333

```
commandwindow
clear
clc
A = [2 3 7 9 4; 3 7 9 12 5; 4 8 5 6 9; 5 9 2 4 5; 6 2 3 7 8]
rhurhu= inv(A)
john= rats(rhurhu)
```

```
A =

     2     3     7     9     4
     3     7     9    12     5
     4     8     5     6     9
     5     9     2     4     5
     6     2     3     7     8


rhurhu =

    1.8915   -1.4026   -0.3124    0.7843   -0.2078
   -0.4379    0.3268    0.0523   -0.0392   -0.0196
    2.5725   -1.8392   -0.0863    0.7647   -0.5176
   -1.8876    1.4654    0.0105   -0.6078    0.3961
   -0.6222    0.3778    0.2444   -0.3333    0.1333


john =

  5×70 char array

    '    401/212      -108/77      -239/765       40/51       -53/255   '
    '    -67/153       50/153        8/153       -2/51       -1/51    '
    '    656/255     -469/255      -22/255       13/17       -44/85    '
    '   -319/169      148/101        3/287      -31/51       101/255   '
    '    -28/45        17/45        11/45        -1/3         2/15    '
```

QUESTION 3

```
commandwindow
clear
clc
A= [0 10 4 -2; -3 -17 1 2; 1 1 1 0; 8 -34 16 -10]
```

B= [-4; 2; 6; 4]
L= inv(A)
M= L*B

A =

```
    0    10     4    -2
   -3   -17     1     2
    1     1     1     0
    8   -34    16   -10
```

B =

```
   -4
    2
    6
    4
```

L =

```
  -0.1786   -0.1020    0.5714    0.0153
   0.0357   -0.0153    0.0357   -0.0102
   0.1429    0.1173    0.3929   -0.0051
  -0.0357    0.1582    0.9643   -0.0612
```

M =

```
   4.0000
  -0.0000
   2.0000
   6.0000
```