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16/ENG02/047

COMPUTER ENGINEERING

ENG281

SOLUTION TO ASSIGNMENT QUESTIONS

1)'clear and clc'

2)

```
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]
```

```
Determinant=det(A)
```

```
Transpose=A'
```

```
Inverse=inv(A)
```

```
Sym(Inverse)
```

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

Determinant =

-765.0000

Transpose =

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

Inverse =

```
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
```

ans =

```
[ 1447/765, -1073/765, -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]
[ -1444/765, 1121/765, 8/765, -31/51, 101/255]
[  -28/45,  17/45,  11/45, -1/3, 2/15]
```

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]
```

```
Inverse=inv(A)
```

```
X=A^-1*B
```

A =

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

B =

```
-4
2
6
4
```

Inverse =

```
-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

X =

4.0000
-0.0000
2.0000
6.0000

>>