

1)

a) Clear - to clear variables in workspace.

b) clc – to clear variables in command window.

2) CODES:

1. commandwindow
2. clear
3. clc
4. 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]
5. determinant=det(A)
6. tran=transpose(A)
7. inverse=inv(A)
8. sym(inverse)

OUTPUTS:

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

tran =

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

inverse =

[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) CODES:

1. commandwindow
2. clear
3. clc
4. A=[0 10 4 -2;-3 -17 1 2;1 1 1 0;8 -34 16 -10]
5. B=[-4;2;6;4]
6. invar= inv(A)
7. Answer=invar*B
8. w=Answer(1,1)
9. x=Answer(2,1)
10. y=Answer(3,1)
11. z=Answer(4,1)

OUTPUTS:

A =

$$\begin{bmatrix} 0 & 10 & 4 & -2 \\ -3 & -17 & 1 & 2 \\ 1 & 1 & 1 & 0 \\ 8 & -34 & 16 & -10 \end{bmatrix}$$

B =

$$\begin{bmatrix} -4 \\ 2 \\ 6 \\ 4 \end{bmatrix}$$

invar =

$$\begin{bmatrix} -0.1786 & -0.1020 & 0.5714 & 0.0153 \\ 0.0357 & -0.0153 & 0.0357 & -0.0102 \\ 0.1429 & 0.1173 & 0.3929 & -0.0051 \\ -0.0357 & 0.1582 & 0.9643 & -0.0612 \end{bmatrix}$$

Answer =

4.0000

-0.0000

2.0000

6.0000

W =

4

x =

-9.7145e-17

y =

2.0000

z =

6.0000