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Mechanical Engineering

Eng 281

16/ENG06/076

-
- Clear
- clc

- CODES:
    - 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]
    - det(A)
    - transpose(A)
    - inv(A)
    - 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]
```

- CODES:
    - 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]
- invar= inv(A)
- Answer=invar*B
- w=Answer(1,1)
- x=Answer(2,1)
- y=Answer(3,1)
- z=Answer(4,1)

OUTPUTS:

A =

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

B =

```
   -4
    2
    6
    4
```

invar =

```
   -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
```

Answer =

```
    4.0000
   -0.0000
```

2.0000
6.0000

w =

4

x =

-9.7145e-17

y =

2.0000

z =

6.0000