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16/ENG01/008
CHEMICAL ENGINEERING
ENG 281

1.

```
commandwindow
clear
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]
B=det (A)
C=transpose (A)
D=inv (A)
E=rats(D)
```

```
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


B =

 -765.0000


C =

     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


D =

    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


E =

  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    '

>>
```

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]
X=inv (A)*B
```

A =

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

B =

```
  -4
```

```
     2
     6
     4


X =


    4.0000
   -0.0000
    2.0000
    6.0000

>>
```