

UJUNWA FATIMA

16/ENG02/057

commandwindow

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syms t t1 t2 t3 t4 t5 t6

A = [1 1 -2 1 3 -1

2 -1 1 2 1 -3

1 3 -3 -1 2 1

5 2 -1 -1 2 1

-3 -1 2 3 1 3

4 3 1 -6 -3 -2]

B = [4; 20; -15; -3; 16; -27]

F21= A(2,1)/A(1,1);

F31= A(3,1)/A(1,1);

F41= A(4,1)/A(1,1);

F51= A(5,1)/A(1,1);

F61= A(6,1)/A(1,1);

A = [1 1 -2 1 3 -1

A(2,1)-(F21*A(1,1)) A(2,2)-(F21*A(1,2)) A(2,3)-(F21*A(1,3)) A(2,4)-(F21*A(1,4)) A(2,5)-(F21*A(1,5))
A(2,6)-(F21*A(1,6))

A(3,1)-(F31*A(1,1)) A(3,2)-(F31*A(1,2)) A(3,3)-(F31*A(1,3)) A(3,4)-(F31*A(1,4)) A(3,5)-(F31*A(1,5))
A(3,6)-(F31*A(1,6))

A(4,1)-(F41*A(1,1)) A(4,2)-(F41*A(1,2)) A(4,3)-(F41*A(1,3)) A(4,4)-(F41*A(1,4)) A(4,5)-(F41*A(1,5))
A(4,6)-(F41*A(1,6))

$A(5,1)-(F51*A(1,1))$ $A(5,2)-(F51*A(1,2))$ $A(5,3)-(F51*A(1,3))$ $A(5,4)-(F51*A(1,4))$ $A(5,5)-(F51*A(1,5))$
 $A(5,6)-(F51*A(1,6))$

$A(6,1)-(F61*A(1,1))$ $A(6,2)-(F61*A(1,2))$ $A(6,3)-(F61*A(1,3))$ $A(6,4)-(F61*A(1,4))$ $A(6,5)-(F61*A(1,5))$
 $A(6,6)-(F61*A(1,6))$]

$B = [B(1,1); B(2,1)-F21*B(1,1); B(3,1)-F31*B(1,1); B(4,1)-F41*B(1,1); B(5,1)-F51*B(1,1); B(6,1)-F61*B(1,1)]$

$F32 = A(3,2)/A(2,2);$

$F42 = A(4,2)/A(2,2);$

$F52 = A(5,2)/A(2,2);$

$F62 = A(6,2)/A(2,2);$

$A = [A(1,1) A(1,2) A(1,3) A(1,4) A(1,5) A(1,6)$

$A(2,1) A(2,2) A(2,3) A(2,4) A(2,5) A(2,6)$

$A(3,1) A(3,2)-(F32*A(2,2)) A(3,3)-(F32*A(2,3)) A(3,4)-(F32*A(2,4)) A(3,5)-(F32*A(2,5)) A(3,6)-$
 $(F32*A(2,6))$

$A(4,1) A(4,2)-(F42*A(2,2)) A(4,3)-(F42*A(2,3)) A(4,4)-(F42*A(2,4)) A(4,5)-(F42*A(2,5)) A(4,6)-$
 $(F42*A(2,6))$

$A(5,1) A(5,2)-(F52*A(2,2)) A(5,3)-(F52*A(2,3)) A(5,4)-(F52*A(2,4)) A(5,5)-(F52*A(2,5)) A(5,6)-$
 $(F52*A(2,6))$

$A(6,1) A(6,2)-(F62*A(2,2)) A(6,3)-(F62*A(2,3)) A(6,4)-(F62*A(2,4)) A(6,5)-(F62*A(2,5)) A(6,6)-$
 $(F62*A(2,6))]$

$B = [B(1,1); B(2,1); B(3,1)-F32*B(2,1); B(4,1)-F42*B(2,1); B(5,1)-F52*B(2,1); B(6,1)-F62*B(2,1)]$

$F43 = A(4,3)/A(3,3);$

$F53 = A(5,3)/A(3,3);$

$F63 = A(6,3)/A(3,3);$

$A = [A(1,1) A(1,2) A(1,3) A(1,4) A(1,5) A(1,6)$

$A(2,1) A(2,2) A(2,3) A(2,4) A(2,5) A(2,6)$

$A(3,1) A(3,2) A(3,3) A(3,4) A(3,5) A(3,6)$

$$\begin{aligned}
& A(4,1) A(4,2) A(4,3)-(F43*A(3,3)) A(4,4)-(F43*A(3,4)) A(4,5)-(F43*A(3,5)) A(4,6)-(F43*A(3,6)) \\
& A(5,1) A(5,2) A(5,3)-(F53*A(3,3)) A(5,4)-(F53*A(3,4)) A(5,5)-(F53*A(3,5)) A(5,6)-(F53*A(3,6)) \\
& A(6,1) A(6,2) A(6,3)-(F63*A(3,3)) A(6,4)-(F63*A(3,4)) A(6,5)-(F63*A(3,5)) A(6,6)-(F63*A(3,6))] \\
B = & [B(1,1); B(2,1); B(3,1); B(4,1)-F43*B(3,1); B(5,1)-F53*B(3,1); B(6,1)-F63*B(3,1)]
\end{aligned}$$

$$F54 = A(5,4)/A(4,4);$$

$$F64 = A(6,4)/A(4,4);$$

$$\begin{aligned}
A = & [A(1,1) A(1,2) A(1,3) A(1,4) A(1,5) A(1,6) \\
& A(2,1) A(2,2) A(2,3) A(2,4) A(2,5) A(2,6) \\
& A(3,1) A(3,2) A(3,3) A(3,4) A(3,5) A(3,6) \\
& A(4,1) A(4,2) A(4,3) A(4,4) A(4,5) A(4,6) \\
& A(5,1) A(5,2) A(5,3) A(5,4)-(F54*A(4,4)) A(5,5)-(F54*A(4,5)) A(5,6)-(F54*A(4,6)) \\
& A(6,1) A(6,2) A(6,3) A(6,4)-(F64*A(4,4)) A(6,5)-(F64*A(4,5)) A(6,6)-(F64*A(4,6))] \\
B = & [B(1,1); B(2,1); B(3,1); B(4,1); B(5,1)-F54*B(4,1); B(6,1)-F64*B(4,1)]
\end{aligned}$$

$$F65 = A(6,5)/A(5,5)$$

$$\begin{aligned}
A = & [A(1,1) A(1,2) A(1,3) A(1,4) A(1,5) A(1,6) \\
& A(2,1) A(2,2) A(2,3) A(2,4) A(2,5) A(2,6) \\
& A(3,1) A(3,2) A(3,3) A(3,4) A(3,5) A(3,6) \\
& A(4,1) A(4,2) A(4,3) A(4,4) A(4,5) A(4,6) \\
& A(5,1) A(5,2) A(5,3) A(5,4) A(5,5) A(5,6) \\
& A(6,1) A(6,2) A(6,3) A(6,4) A(6,5)-(F65*A(5,5)) A(6,6)-(F65*A(5,6))] \\
B = & [B(1,1); B(2,1); B(3,1); B(4,1); B(5,1); B(6,1)-(F65*B(5,1))]
\end{aligned}$$

$$T6 = B(6,1)/A(6,6)$$

$$T5 = (B(5,1)-(A(5,6)*T6))/A(5,5)$$

$$T4 = (B(4,1)-(A(4,5)*T5)-(A(4,6)*T6))/A(4,4)$$

$$T3 = (B(3,1)-(A(3,4)*T4)-(A(3,5)*T5)-(A(3,6)*T6))/A(3,3)$$

$$T2 = (B(2,1)-(A(2,3)*T3)-(A(2,4)*T4)-(A(2,5)*T5)-(A(2,6)*T6))/A(2,2)$$

$$T1 = (B(1,1)-(A(1,2)*T2)-(A(1,3)*T3)-(A(1,4)*T4)-(A(1,5)*T5)-(A(1,6)*T6))/A(1,1)$$

A =

1	1	-2	1	3	-1
2	-1	1	2	1	-3
1	3	-3	-1	2	1
5	2	-1	-1	2	1
-3	-1	2	3	1	3
4	3	1	-6	-3	-2

B =

4
20
-15
-3
16
-27

A =

1	1	-2	1	3	-1
0	-3	5	0	-5	-1
0	2	-1	-2	-1	2
0	-3	9	-6	-13	6
0	2	-4	6	10	0
0	-1	9	-10	-15	2

B =

4

12

-19

-23

28

-43

A =

1	1	-2	1	3	-1
0	-3	5	0	-5	-1
0	0	2.3333	-2	-4.3333	1.3333
0	0	4	-6	-8	7
0	0	-0.66667	6	6.6667	-0.66667
0	0	7.3333	-10	-13.333	2.3333

B =

4

12

-11

-35

36

-47

A =

1	1	-2	1	3	-1
0	-3	5	0	-5	-1
0	0	2.3333	-2	-4.3333	1.3333
0	0	0	-2.5714	-0.57143	4.7143
0	0	0	5.4286	5.4286	-0.28571
0	0	0	-3.7143	0.28571	-1.8571

B =

4
12
-11
-16.143
32.857
-12.429

A =

1	1	-2	1	3	-1
0	-3	5	0	-5	-1
0	0	2.3333	-2	-4.3333	1.3333
0	0	0	-2.5714	-0.57143	4.7143

0	0	0	0	4.2222	9.6667
0	0	0	0	1.1111	-8.6667

B =

4
12
-11
-16.143
-1.2222
10.889

F65 =

0.26316

A =

1	1	-2	1	3	-1
0	-3	5	0	-5	-1
0	0	2.3333	-2	-4.3333	1.3333
0	0	0	-2.5714	-0.57143	4.7143
0	0	0	0	4.2222	9.6667
0	0	0	0	0	-11.211

B =

4

12

-11

-16.143

-1.2222

11.211

T6 =

-1

T5 =

2

T4 =

4

T3 =

3

T2 =

-2

T1 =

1

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