**【例9-22】**求下面非齐次线性方程的通解。



解: 增广矩阵 =

1 1 1 3 1 7

3 1 2 1 -3-2

0 2 1 2 623

8 3 4 3 -1 12

r2-3r1,r4-8r1

1 1 1 3 1 7

0 -2 -1 -8 -6 -23

0 21 2 6 23

0 -5 -4-21 -9 -44

r3+r2,r4-2r2

1 11 3 1 7

0 -2-1 -8 -6 -23

0 00 -6 0 0

0 -1 -2-5 3 2

r3\*(-1/6),r1-3r3,r2+8r3,r4+5r3

1 11 0 1 7

0 -2-1 0 -6 -23

0 00 1 0 0

0 -1 -2 0 3 2

r1+r4,r2+2r4,r4\*(-1)

1 0-1 0 49

0 0 3 0 -12 -27

0 0 0 1 0 0

0 1 2 0 -3 -2

r2\*(1/3),r1+r2,r4-2r2

1 0 0 0 0 0

0 0 1 0 -4 -9

0 0 0 1 0 0

0 1 0 0 5 16

交换行

1 0 0 0 0 0

0 1 0 0 5 16

0 0 1 0 -4 -9

0 0 0 1 0 0

通解为: (0,16,-9,0,0)^T+c(0,-5,4,0,1)^T.