```
In [166]: AEChelon = forwardElimination(np.array([[1.0,2.0,3.0,-14.0],
[5.0,4.0,6.0,-37.0],[10.0,9.0,8.0,-41.0]]))

In [167]: inconsistentSystem(AEChelon)
Out[167]: False

In [168]: backsubstitution(AEChelon)
Out[168]:
array([[ 1.,  0.,  0., -3.],
       [ 0.,  1., -0.,  5.],
       [ 0.,  0.,  1., -7.]])
```

```
In [170]: A = np.loadtxt('h2m1.txt')

In [171]: AEChelonA = forwardElimination(A)

In [172]: inconsistentSystem(AEChelonA)
Out[172]: False

In [173]: backsubstitution(AEChelonA)
Out[173]:
array([[ 1.,  0.,  0.,  0.,  0.,  0.,  1.],
       [ 0.,  1., -0., -0., -0., -0.,  1.],
       [ 0.,  0.,  1.,  0.,  0.,  0.,  2.],
       [ 0.,  0.,  0.,  1.,  0.,  0.,  3.],
       [ 0.,  0.,  0.,  0.,  1., -0.,  5.],
       [ 0.,  0.,  0.,  0.,  0.,  1.,  8.]])
```

```
In [175]: B = np.loadtxt('h2m2.txt')

In [176]: AEChelonB = forwardElimination(B)

In [177]: inconsistentSystem(AEChelonB)
Out[177]: True
```

```
In [179]: C = np.loadtxt('h2m3.txt')

In [180]: AEChelonC = forwardElimination(C)

In [181]: inconsistentSystem(AEChelonC)
Out[181]: False

In [182]: backsubstitution(AEChelonC)
Out[182]:
array([[  1.00000000e+00,   0.00000000e+00,   0.00000000e+00,
          0.00000000e+00,   0.00000000e+00,   0.00000000e+00],
       [  0.00000000e+00,   1.00000000e+00,  -0.00000000e+00,
         -0.00000000e+00,  -0.00000000e+00,  -0.00000000e+00],
       [  0.00000000e+00,   0.00000000e+00,   1.00000000e+00,
          0.00000000e+00,   0.00000000e+00,   0.00000000e+00],
       [  0.00000000e+00,   0.00000000e+00,   0.00000000e+00,
          1.00000000e+00,  -0.00000000e+00,  -0.00000000e+00],
       [  0.00000000e+00,   0.00000000e+00,   0.00000000e+00,
          0.00000000e+00,   1.00000000e+00,   0.00000000e+00],
       [  0.00000000e+00,   0.00000000e+00,   0.00000000e+00,
          0.00000000e+00,   0.00000000e+00,   3.55271368e-15]])



In [184]: D = np.loadtxt('h2m4.txt')

In [185]: AEChelonD = forwardElimination(D)

In [186]: inconsistentSystem(AEChelonD)
Out[186]: False

In [187]: backsubstitution(AEChelonD)
Out[187]:
array([[ 1.        ,  0.        ,  0.        , -1.04878049, -2.41463415,
         2.        ],
       [ 0.        ,  1.        ,  0.        ,  2.07317073,  4.12195122,
        -2.        ],
       [ 0.        ,  0.        ,  1.        , -1.90243902, -4.17073171,
         4.        ]])
```