```
A = [-130 70 0 0; 70 -170 100 0; 0 100 -155 55; 0 0 55 55];
[L,U,P] = lu(A)
B = [0;0;0;-2];

D = L\B
X = U\D

B2 = [-0.0981;-0.1962;-0.14715;-2.2943];

D2 = L\B2
X2 = U\D2
```

L =

```
          1            0            0            0
   -0.53846            1            0            0
          0     -0.75581            1            0
          0            0     -0.69253            1
```

U =

```
       -130           70            0            0
          0      -132.31          100            0
          0            0      -79.419           55
          0            0            0       93.089
```

P =

```
     1     0     0     0
     0     1     0     0
     0     0     1     0
     0     0     0     1
```

D =

```
      0
      0
      0
     -2
```

X =

```
   -0.0060554
   -0.011246
   -0.014879
   -0.021485
```

D2 =

```
     -0.0981
```

```
     -0.24902
     -0.33537
      -2.5266


 X2 =

    -0.0041629
    -0.0091326
     -0.014573
     -0.027141
```