

1)

```
Case:
Selected: 1
1      1      -2      1      -2      -5      8
2      -4      -1      2      3      3      1
2      -2      6      -1      6      5      5
0      2      1      1      4      5      5
-5      0      4      -1      9      4      10
7      -2      -4      5      3      -1      -5
Simple Gause!
1      1      -2      1      -2      -5      8
0      -6      3      0      7      13      -15
0      0      8      -3      5.33333      6.33333      -1
0      0      0      1.75      5      7.75      0.25
0      0      0      0      -0.511905      -19.2976      36.6786
0      0      0      0      0      -90.2093      152.395
x0=-9.43387
x1=-1.49549
x2=17.918
x3=30.3857
x4=-7.96649
x5=-1.68935
```

2)

Microsoft Visual Studio Debug Console

Case:

Selected: 2

```
8      2      2      4      5
2      5      1      1     -4
0      3      4      1      2
-1     -2      1      5      7
```

Jacobiego!

```
LU!-----
0      2      2      4
2      0      1      1
0      3      0      1
-1     -2      1      0
```

```
D_reversed!-----
0.125  0      0      0
0      0.2    0      0
0      0      0.25  0
0      0      0      0.2
```

```
b!-----
5
-4
2
7
```

```
P!-----
0      -0.25  -0.25  -0.5
-0.4    0     -0.2   -0.2
0      -0.75  0     -0.25
0.2     0.4   -0.2    0
```

```
q!-----
0.625
-0.8
0.5
1.4
```

How many iterations?

```
5
x[0]:
0.625
-0.8
0.5
1.4
```

```
x[1]:-----
0
-1.43
0.75
1.105
```

```
x[2]:-----
0.2425
-1.171
1.29625
0.678
```

```
x[3]:-----
0.254687
-1.29185
1.20875
0.72085
```

```
x[4]:-----
0.28535
-1.2878
1.28868
0.692447
```

Result!-----

```
x0=0.28535
x1=-1.2878
x2=1.28868
x3=0.692447
```

3)

```

Microsoft Visual Studio Debug Console

Selected: 3
2      4      2      1      10
1      2      3      3      6
4      5      2      1      6
0      1      2      9      1
Gause with pivot!
4      5      2      1      6
0      1.5    1      0.5    7
0      0      2      2.5    1
0      0      0      7      -4.33333
x0=-4.0119
x1=4.02381
x2=1.27381
x3=-0.619048

```

Pomiędzy metodą Gausa I Jacobiego (dla 5 iteracji) dla zestawu

```

8      2      2      4      5
2      5      1      1      -4
0      3      4      1      2
-1     -2      1      5      7

```

Widzimy iż wyniki różnią się mniej więcej od 1% do 4%

Variable	Gause	Jacobie (5 iterations)	Difference	Percentage
x0	0.289318	0.28535	0.003968	1.371501255
x1	-1.31306	-1.2878	-0.02526	1.923750628
x2	1.31751	1.28868	0.02883	2.188218685
x3	0.669139	0.692447	-0.023308	-3.483282248