

Console

A=

```
10.  1.  0.  0.  0. -1.
 1. 10.  1.  0.  0.  0.
 2.  0. 20.  1.  0.  0.
 0.  0.  1. 10. -1.  0.
 0.  3.  0.  0. 30.  3.
 0.  0.  0.  2. -2. 20.
```

B=

```
5.
10.
10.
0.
0.
5.
```

A11=

```
10.  1.
 1. 10.
```

A12=

```
0.  0.
 1.  0.
```

A13=

```
0. -1.
 0.  0.
```

A21=

```
2.  0.
 0.  0.
```

A22=

```
20.  1.
 1. 10.
```

A23=

```
0.  0.
```

- 1. 0.

A31=

0. 3.
0. 0.

A32=

0. 0.
0. 2.

A33=

30. 3.
- 2. 20.

B1=

5.
10.

B2=

10.
0.

B3=

0.
5.

Inverse of Matrix A11=

0.1010101 - 0.0101010
- 0.0101010 0.1010101

Inverse of Matrix A22=

0.0502513 - 0.0050251
- 0.0050251 0.1005025

Inverse of Matrix A33=

0.0330033 - 0.0049505
0.0033003 0.0495050

X1=

0.3232323
0.7676768

X2=

0.3760215
- 0.0376022

X3=

- 0.0809059
0.1949176

X1=

0.3470009
0.7505717

X2=

0.3782526
- 0.0450498

X3=

- 0.0803371
0.1975195

X1=

0.3477439
0.7499768

X2=

0.3782205
- 0.0451500

X3=

- 0.0802896
0.1975582

X1=

0.3477630
0.7499656

X2=

0.3782186
- 0.0451480

X3=

- 0.0802884
0.1975586

X1=

0.3477634
0.7499655

X2=

0.3782185
- 0.0451479

X3=

- 0.0802884
0.1975586

X1=

0.3477634
0.7499655

X2=

0.3782185
- 0.0451479

X3=

- 0.0802884
0.1975586

Iteration	x1	x2	x3	x4	x5	x6	
0.	0.	0.	0.	0.	0.	0.	
1.	0.3232323	0.7676768	0.3760215	- 0.0376022	- 0.0809059	0.1949170	
2.	0.3470009	0.7505717	0.3782526	- 0.0450498	- 0.0803371	0.1975190	
3.	0.3477439	0.7499768	0.3782205	- 0.0451500	- 0.0802896	0.1975580	
4.	0.3477630	0.7499656	0.3782186	- 0.0451480	- 0.0802884	0.1975580	
5.	0.3477634	0.7499655	0.3782185	- 0.0451479	- 0.0802884	0.1975580	
6.	0.3477634	0.7499655	0.3782185	- 0.0451479	- 0.0802884	0.1975580	

After 5 iterations exact solution is:

$x_1=0.347763$ $x_2=0.749965$ $x_3=0.378219$ $x_4=-0.045148$ $x_5=-0.080288$ x_6
.197559