

The matrix L is

1.0000000	0.0000000	0.0000000
-2.0000000	1.0000000	0.0000000
3.0000000	-0.5000000	1.0000000

The matrix U is

1.0000000	4.0000000	-3.0000000
0.0000000	16.0000000	-1.0000000
0.0000000	0.0000000	15.5000000

The inverse of M is

0.145161	-0.161290	0.177419
0.116935	0.064516	0.004032
-0.129032	0.032258	0.064516