$$D^{-1}$$

```
     [,1] [,2] [,3] [,4] [,5] [,6]
[1,]   1    0    0    0    0    0
[2,]   0    1    0    0    0    0
[3,]   0    0    1    0    0    0
[4,]   0    0    0    2    0    0
[5,]   0    0    0    0    2    0
[6,]   0    0    0    0    0    2
```

$$L^{-1}$$

```
      [,1] [,2] [,3] [,4] [,5] [,6]
[1,]   1.0  0.0  0.0  0.0  0.0   0
[2,]   0.0  1.0  0.0  0.0  0.0   0
[3,]   0.0  0.0  1.0  0.0  0.0   0
[4,]  -0.5 -0.5  0.0  1.0  0.0   0
[5,]   0.0 -0.5 -0.5  0.0  1.0   0
[6,]   0.0  0.0  0.0 -0.5 -0.5   1
```

```
      [,1] [,2] [,3] [,4] [,5] [,6]
[1,]   1    0    0 -0.5  0.0  0.0
[2,]   0    1    0 -0.5 -0.5  0.0
[3,]   0    0    1  0.0 -0.5  0.0
[4,]   0    0    0  1.0  0.0 -0.5
[5,]   0    0    0  0.0  1.0 -0.5
[6,]   0    0    0  0.0  0.0  1.0
```

$$(L^{T})^{-1}$$

```
      [,1] [,2] [,3] [,4] [,5] [,6]
[1,]   1    0    0   -1    0    0
[2,]   0    1    0   -1   -1    0
[3,]   0    0    1    0   -1    0
[4,]   0    0    0    2    0   -1
[5,]   0    0    0    0    2   -1
[6,]   0    0    0    0    0    2
```

$$(L^{T})^{-1} \cdot D^{-1}$$

```
      [,1] [,2] [,3] [,4] [,5] [,6]
[1,]   1.5  0.5  0.0 -1.0  0.0   0
[2,]   0.5  2.0  0.5 -1.0 -1.0   0
[3,]   0.0  0.5  1.5  0.0 -1.0   0
[4,]  -1.0 -1.0  0.0  2.5  0.5  -1
[5,]   0.0 -1.0 -1.0  0.5  2.5  -1
[6,]   0.0  0.0  0.0 -1.0 -1.0   2
```

$$A^{-1}$$