

```
In[1]:= D1 =  $\begin{pmatrix} 1 & 0 \\ 0 & -2 \end{pmatrix}$ ; D2 =  $\begin{pmatrix} 2 & 1 \\ 0 & 2 \end{pmatrix}$ ; CC =  $\begin{pmatrix} 1 & -1 \\ -1 & 2 \end{pmatrix}$ ;  
Inverse[CC] // MatrixForm
```

```
Out[2]/MatrixForm=
```

$$\begin{pmatrix} 2 & 1 \\ 1 & 1 \end{pmatrix}$$

```
In[3]:= MatrixForm /@ {D1, CC.D1.Inverse[CC]}
```

```
Out[3]=  $\left\{ \begin{pmatrix} 1 & 0 \\ 0 & -2 \end{pmatrix}, \begin{pmatrix} 4 & 3 \\ -6 & -5 \end{pmatrix} \right\}$ 
```

```
In[4]:= MatrixForm /@ {D2, CC.D2.Inverse[CC]}
```

```
Out[4]=  $\left\{ \begin{pmatrix} 2 & 1 \\ 0 & 2 \end{pmatrix}, \begin{pmatrix} 3 & 1 \\ -1 & 1 \end{pmatrix} \right\}$ 
```