

```
Table[i * j, {i, 0, 4}, {j, 0, 4}] // MatrixForm // TeXForm
```

```
\left(
\begin{array}{ccccc}
0 & 0 & 0 & 0 & 0 \\
0 & 1 & 2 & 3 & 4 \\
0 & 2 & 4 & 6 & 8 \\
0 & 3 & 6 & 9 & 12 \\
0 & 4 & 8 & 12 & 16
\end{array}
\right)
```

```
Table[i + j, {i, 0, 4}, {j, 0, 4}] // MatrixForm // TeXForm
```

```
\left(
\begin{array}{ccccc}
0 & 1 & 2 & 3 & 4 \\
1 & 2 & 3 & 4 & 5 \\
2 & 3 & 4 & 5 & 6 \\
3 & 4 & 5 & 6 & 7 \\
4 & 5 & 6 & 7 & 8
\end{array}
\right)
```

```
 $\begin{pmatrix} 1 & 1 \\ 1 & 2 \end{pmatrix} \cdot \begin{pmatrix} 1 & 0 \\ 0 & 2 \end{pmatrix} \cdot \text{Inverse} \left[ \begin{pmatrix} 1 & 1 \\ 1 & 2 \end{pmatrix} \right]$  // MatrixForm
```

```
 $\begin{pmatrix} 0 & 1 \\ -2 & 3 \end{pmatrix}$ 
```

```
MatrixForm /@ JordanDecomposition  $\left[ \begin{pmatrix} 0 & 1 \\ -2 & 3 \end{pmatrix} \right]$ 
```

```
 $\left\{ \begin{pmatrix} 1 & 1 \\ 1 & 2 \end{pmatrix}, \begin{pmatrix} 1 & 0 \\ 0 & 2 \end{pmatrix} \right\}$ 
```

```
 $\begin{pmatrix} 0 & 1 \\ -2 & 3 \end{pmatrix}$  // TeXForm
```

```
\left(
\begin{array}{cc}
0 & 1 \\
-2 & 3
\end{array}
\right)
```

```
MatrixForm /@ JordanDecomposition  $\left[ \begin{pmatrix} 1 & 0 \\ 3 & -2 \end{pmatrix} \right]$ 
```

```
 $\left\{ \begin{pmatrix} 0 & 1 \\ 1 & 1 \end{pmatrix}, \begin{pmatrix} -2 & 0 \\ 0 & 1 \end{pmatrix} \right\}$ 
```