```
> restart;
> with(linalg):
Warning, the protected names norm and trace have been redefined and unprotected
> A:=matrix([[2,4],[-1,6]]);
```

$$A := \begin{bmatrix} 2 & 4 \\ -1 & 6 \end{bmatrix}$$

```
> X0:=matrix([[-1],[6]]);
```

$$X0 := \begin{bmatrix} -1 \\ 6 \end{bmatrix}$$

```
> eAt:=exponential(A,t);
```

$$eAt := \begin{bmatrix} \mathbf{e}^{(4t)} - 2\,t\,\mathbf{e}^{(4t)} & 4\,t\,\mathbf{e}^{(4t)} \\ -t\,\mathbf{e}^{(4t)} & \mathbf{e}^{(4t)} + 2\,t\,\mathbf{e}^{(4t)} \end{bmatrix}$$

```
> X:=evalm(eAt&*X0);
```

$$X := \begin{bmatrix} -\mathbf{e}^{(4t)} + 26\,t\,\mathbf{e}^{(4t)} \\ 13\,t\,\mathbf{e}^{(4t)} + 6\,\mathbf{e}^{(4t)} \end{bmatrix}$$

```
> 
```