

```
[> restart
=> AA := array([[2, 3], [1, 4]])
```

$$AA := \begin{bmatrix} 2 & 3 \\ 1 & 4 \end{bmatrix} \quad (1)$$

```
[> with(linalg) :
=> MatExp := exponential(AA, t)
```

$$MatExp := \begin{bmatrix} \frac{3}{4} e^t + \frac{1}{4} e^{5t} & \frac{3}{4} e^{5t} - \frac{3}{4} e^t \\ \frac{1}{4} e^{5t} - \frac{1}{4} e^t & \frac{1}{4} e^t + \frac{3}{4} e^{5t} \end{bmatrix} \quad (2)$$

```
[> DerMatExp := map(diff, MatExp, t)
```

$$DerMatExp := \begin{bmatrix} \frac{3}{4} e^t + \frac{5}{4} e^{5t} & \frac{15}{4} e^{5t} - \frac{3}{4} e^t \\ \frac{5}{4} e^{5t} - \frac{1}{4} e^t & \frac{1}{4} e^t + \frac{15}{4} e^{5t} \end{bmatrix} \quad (3)$$

```
[> AAA := map(rcurry(eval, t=0'), DerMatExp)
```

$$AAA := \begin{bmatrix} 2 & 3 \\ 1 & 4 \end{bmatrix} \quad (4)$$

```
[>
```