

```
>
```

実習9.2

```
> with(linalg):
```

```
> A := matrix(2, 2, [2, 3, 3, 1])
```

$$A := \begin{bmatrix} 2 & 3 \\ 3 & 1 \end{bmatrix} \tag{1}$$

```
> B := matrix(2, 2, [3, 4, 5, 3])
```

$$B := \begin{bmatrix} 3 & 4 \\ 5 & 3 \end{bmatrix} \tag{2}$$

```
(1)
```

```
> inverse(A)
```

$$\begin{bmatrix} -\frac{1}{7} & \frac{3}{7} \\ \frac{3}{7} & -\frac{2}{7} \end{bmatrix} \tag{3}$$

```
(2)
```

```
> transpose(transpose(A))
```

$$\begin{bmatrix} 2 & 3 \\ 3 & 1 \end{bmatrix} \tag{4}$$

```
(3)
```

```
> inverse(A • B)
```

$$\begin{bmatrix} \frac{15}{77} & -\frac{17}{77} \\ -\frac{2}{11} & \frac{3}{11} \end{bmatrix} \tag{5}$$

```
(4)
```

```
> inverse(B)
```

$$\begin{bmatrix} -\frac{3}{11} & \frac{4}{11} \\ \frac{5}{11} & -\frac{3}{11} \end{bmatrix} \tag{6}$$

```
> evalm(inverse(A).inverse(B))
```

$$\begin{bmatrix} \frac{18}{77} & -\frac{13}{77} \\ -\frac{19}{77} & \frac{18}{77} \end{bmatrix} \tag{7}$$

```
(5)
```

```
> evalm(inverse(B).inverse(A))
```

$$\begin{bmatrix} \frac{15}{77} & -\frac{17}{77} \\ -\frac{2}{11} & \frac{3}{11} \end{bmatrix} \tag{8}$$

```
(6)
> inverse(B - A)
Error. (in linalg:-inverse) singular matrix
```

```
逆行列は存在しない
```

```
(7)
> det(B - A)
0 (9)
```

```
(8)
> det(A)
-7 (10)
```

```
(9)
> det(transpose(A))
-7 (11)
```

```
>
```