

In [1]:

```
A=matrix([[3,2,-1],[2,-1,0],[2,3,1]])  
show(A)
```

Out[1]:

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

In [2]:

```
show(A.adjugate())  
# Adjoint of matrix A
```

Out[2]:

$$\begin{pmatrix} -1 & -5 & -1 \\ -2 & 5 & -2 \\ 8 & -5 & -7 \end{pmatrix}$$

In [3]:

```
det(A)
```

Out[3]:

-15

In [4]:

```
show(A.adjugate()/det(A))
```

Out[4]:

$$\begin{pmatrix} \frac{1}{15} & \frac{1}{3} & \frac{1}{15} \\ \frac{2}{15} & -\frac{1}{3} & \frac{2}{15} \\ -\frac{8}{15} & \frac{1}{3} & \frac{7}{15} \end{pmatrix}$$

In [5]:

```
#double check  
show(A^(-1))
```

Out[5]:

$$\begin{pmatrix} \frac{1}{15} & \frac{1}{3} & \frac{1}{15} \\ \frac{2}{15} & -\frac{1}{3} & \frac{2}{15} \\ -\frac{8}{15} & \frac{1}{3} & \frac{7}{15} \end{pmatrix}$$

In [0]: