In[22]:=
```
Clear[A]
```

In[26]:=
```
A = {{2, -3, 1, 2}, {-3, 4, -4, 1}, {-2, 9, -9, 0}}; A // MatrixForm
```

Out[26]//MatrixForm=

$$\begin{pmatrix} 2 & -3 & 1 & 2 \\ -3 & 4 & -4 & 1 \\ -2 & 9 & -9 & 0 \end{pmatrix}$$

In[27]:=
```
A[[2]]
```

Out[27]=
```
{-3, 4, -4, 1}
```

In[28]:=
```
A[[2]] = 3 / 2 * A[[1]] + A[[2]]; A // MatrixForm
```

Out[28]//MatrixForm=

$$\begin{pmatrix} 2 & -3 & 1 & 2 \\ 0 & -\frac{1}{2} & -\frac{5}{2} & 4 \\ -2 & 9 & -9 & 0 \end{pmatrix}$$

In[29]:=
```
A[[3]] = 1 * A[[1]] + A[[3]]; A // MatrixForm
```

Out[29]//MatrixForm=

$$\begin{pmatrix} 2 & -3 & 1 & 2 \\ 0 & -\frac{1}{2} & -\frac{5}{2} & 4 \\ 0 & 6 & -8 & 2 \end{pmatrix}$$

In[30]:=
```
A[[1]] = 1 / 2 * A[[1]]; A // MatrixForm
```

Out[30]//MatrixForm=

$$\begin{pmatrix} 1 & -\frac{3}{2} & \frac{1}{2} & 1 \\ 0 & -\frac{1}{2} & -\frac{5}{2} & 4 \\ 0 & 6 & -8 & 2 \end{pmatrix}$$

In[31]:=
```
A[[2]] = -2 * A[[2]]; A // MatrixForm
```

Out[31]//MatrixForm=

$$\begin{pmatrix} 1 & -\frac{3}{2} & \frac{1}{2} & 1 \\ 0 & 1 & 5 & -8 \\ 0 & 6 & -8 & 2 \end{pmatrix}$$

In[32]:=
```
A[[3]] = -6 * A[[2]] + A[[3]]; A // MatrixForm
```

Out[32]//MatrixForm=

$$\begin{pmatrix} 1 & -\frac{3}{2} & \frac{1}{2} & 1 \\ 0 & 1 & 5 & -8 \\ 0 & 0 & -38 & 50 \end{pmatrix}$$

In[33]:=
```
A[[3]] = -1 / 38 * A[[3]]; A // MatrixForm
```

Out[33]//MatrixForm=

$$\begin{pmatrix} 1 & -\frac{3}{2} & \frac{1}{2} & 1 \\ 0 & 1 & 5 & -8 \\ 0 & 0 & 1 & -\frac{25}{19} \end{pmatrix}$$

In[34]:=
```
A[[2]] = -5 * A[[3]] + A[[2]]; A // MatrixForm
```

Out[34]//MatrixForm=

$$\begin{pmatrix} 1 & -\frac{3}{2} & \frac{1}{2} & 1 \\ 0 & 1 & 0 & -\frac{27}{19} \\ 0 & 0 & 1 & -\frac{25}{19} \end{pmatrix}$$

In[35]:=
```
A[[1]] = 3 / 2 * A[[2]] + A[[1]]; A // MatrixForm
```

Out[35]//MatrixForm=

$$\begin{pmatrix} 1 & 0 & \frac{1}{2} & -\frac{43}{38} \\ 0 & 1 & 0 & -\frac{27}{19} \\ 0 & 0 & 1 & -\frac{25}{19} \end{pmatrix}$$

In[36]:=
```
A[[1]] = -1 / 2 * A[[3]] + A[[1]]; A // MatrixForm
```

Out[36]//MatrixForm=

$$\begin{pmatrix} 1 & 0 & 0 & -\frac{9}{19} \\ 0 & 1 & 0 & -\frac{27}{19} \\ 0 & 0 & 1 & -\frac{25}{19} \end{pmatrix}$$

maka diperoleh :

x1 = -9 / 19

x2 = -27 / 19

x3 = -25 / 19