

In [24]:

```
from sympy import *
```

In [26]:

```
M = Matrix([[3, 11, 19, -2], [7, 23, 39, 10], [-4, -3, -2, 6]])
```

In [27]:

```
M.rref()
```

Out[27]:

```
(Matrix([
 [1, 0, -1, 0],
 [0, 1, 2, 0],
 [0, 0, 0, 1]]),
 (0, 1, 3))
```

In [22]:

```
M = GF7([[3, 1, 4, 1], [5, 2, 6, 5], [0, 5, 2, 1]])
```

In [23]:

```
GF7.row_reduce(M)
```

Out[23]:

```
GF([[1, 0, 0, 4],
 [0, 1, 0, 3],
 [0, 0, 1, 0]], order=7)
```

In [ ]: