

```
> sys3 := {a[11]x[1] + a[12]x[2] + a[13]·x[3] = b[1],
  a[21]x[1] + a[22]x[2] + a[23]·x[3] = b[2], a[31]x[1] + a[32]x[2] + a[33]·x[3]
  = b[3]};
sys3 := {a11x1 + a12x2 + a13x3 = b1, a21x1 + a22x2 + a23x3 = b2, a31x1 + a32x2 + a33x3
  = b3} (1)
```

```
> solve(sys3, {x[1], x[2], x[3]});
{ x1 =  $\frac{a_{12} a_{23} b_3 - a_{12} a_{33} b_2 - a_{13} a_{22} b_3 + a_{13} a_{32} b_2 + a_{22} a_{33} b_1 - a_{23} a_{32} b_1}{a_{11} a_{22} a_{33} - a_{11} a_{23} a_{32} - a_{12} a_{21} a_{33} + a_{12} a_{23} a_{31} + a_{13} a_{21} a_{32} - a_{13} a_{22} a_{31}}$ , x2
  =  $-\frac{a_{11} a_{23} b_3 - a_{11} a_{33} b_2 - a_{13} a_{21} b_3 + a_{13} a_{31} b_2 + a_{21} a_{33} b_1 - a_{23} a_{31} b_1}{a_{11} a_{22} a_{33} - a_{11} a_{23} a_{32} - a_{12} a_{21} a_{33} + a_{12} a_{23} a_{31} + a_{13} a_{21} a_{32} - a_{13} a_{22} a_{31}}$ ,
  x3 =  $\frac{a_{11} a_{22} b_3 - a_{11} a_{32} b_2 - a_{12} a_{21} b_3 + a_{12} a_{31} b_2 + a_{21} a_{32} b_1 - a_{22} a_{31} b_1}{a_{11} a_{22} a_{33} - a_{11} a_{23} a_{32} - a_{12} a_{21} a_{33} + a_{12} a_{23} a_{31} + a_{13} a_{21} a_{32} - a_{13} a_{22} a_{31}}$  } (2)
```

```
> latex(%)
\left\{ x_{\{1\}} = \frac{a_{\{12\}}a_{\{23\}}b_{\{3\}} - a_{\{12\}}a_{\{33\}}
b_{\{2\}} - a_{\{13\}}a_{\{22\}}b_{\{3\}} + a_{\{13\}}a_{\{32\}}b_{\{2\}} + a_{\{22\}}a_{\{33\}}
b_{\{1\}} - a_{\{23\}}a_{\{32\}}b_{\{1\}}}{a_{\{11\}}a_{\{22\}}a_{\{33\}} - a_{\{11\}}a_{\{23\}}a_{\{32\}} - a_{\{12\}}a_{\{21\}}a_{\{33\}} + a_{\{12\}}a_{\{23\}}a_{\{31\}} + a_{\{13\}}a_{\{21\}}a_{\{32\}} - a_{\{13\}}a_{\{22\}}a_{\{31\}}}
}, x_{\{2\}} = -\frac{a_{\{11\}}
a_{\{23\}}b_{\{3\}} - a_{\{11\}}a_{\{33\}}b_{\{2\}} - a_{\{13\}}a_{\{21\}}b_{\{3\}} + a_{\{13\}}a_{\{31\}}b_{\{2\}} + a_{\{21\}}a_{\{33\}}b_{\{1\}} - a_{\{23\}}a_{\{31\}}b_{\{1\}}}{a_{\{11\}}a_{\{22\}}a_{\{33\}} - a_{\{11\}}a_{\{23\}}a_{\{32\}} - a_{\{12\}}a_{\{21\}}a_{\{33\}} + a_{\{12\}}a_{\{23\}}a_{\{31\}} + a_{\{13\}}a_{\{21\}}a_{\{32\}} - a_{\{13\}}a_{\{22\}}a_{\{31\}}}
}, x_{\{3\}} = \frac{a_{\{11\}}a_{\{22\}}b_{\{3\}} - a_{\{11\}}a_{\{32\}}b_{\{2\}} - a_{\{12\}}a_{\{21\}}b_{\{3\}} + a_{\{12\}}a_{\{31\}}b_{\{2\}} + a_{\{21\}}a_{\{32\}}b_{\{1\}} - a_{\{22\}}a_{\{31\}}b_{\{1\}}}{a_{\{11\}}a_{\{22\}}a_{\{33\}} - a_{\{11\}}a_{\{23\}}a_{\{32\}} - a_{\{12\}}a_{\{21\}}a_{\{33\}} + a_{\{12\}}a_{\{23\}}a_{\{31\}} + a_{\{13\}}a_{\{21\}}a_{\{32\}} - a_{\{13\}}a_{\{22\}}a_{\{31\}}}
\right\}
```