Matrices lesson 8 - Solving sim. equations with matrices

Magic Monk Tutorials

1 Solve the following simultaneous equations with matrices.

1.1

$x + y = 2$
$x - y = 1$

1.2

$3x + 2y = 4$
$x + 2y = 1$

1.3

$2x + y = 3$
$7x + 4y = 2$

2 Solve the following simultaneous equations, given the following information.

$x + 2y + 2z = 2$
$2x + 5y + 4z = 3$
$x + 2y + 3z = 4$
and
$$\begin{pmatrix} 1 & 2 & 2 \\ 2 & 5 & 4 \\ 1 & 2 & 3 \end{pmatrix}^{-1} = \begin{pmatrix} 7 & -2 & -2 \\ -2 & 1 & 0 \\ -1 & 0 & 1 \end{pmatrix}$$