

**Original matrix**

compute reduced row echelon form (without column pivoting)

Equation	Left Hand Side	Right Hand Side
1	$x_1$	1
2	$x_2$	1
3	$x_3$	1

**Check**

add the zero rows

Equation	Left Hand Side	Right Hand Side	Equation	Left Hand Side	Right Hand Side
			4	$x_1$	0
1	$x_1$	1		$x_2$	0
2	$x_2$	1		$x_3$	0
	$x_3$	1	5	$x_1$	0
	$x_2$	0		$x_2$	0
	$x_3$	0		$x_3$	0
	$x_1$	0	6	$x_1$	0
7	$x_1$	0		$x_2$	0
8	$x_2$	0		$x_3$	0
	$x_3$	0	7	$x_1$	0
10	$x_1$	0		$x_2$	0
11	$x_2$	0		$x_3$	0
	$x_3$	0	8	$x_1$	0
	$x_2$	0		$x_2$	0
	$x_3$	0		$x_3$	0