

2x2 Matrix Solver

Input Equations

$$\begin{array}{rclcl} 3x & + & 5y & = & 19 \\ 2x & + & 3y & = & 12 \end{array}$$

Output

"equation form"		"matrix form"		"row echelon form"	
$\begin{array}{rclcl} 3x & + & 5y & = & 19 \\ 2x & + & 3y & = & 12 \end{array}$		$\begin{bmatrix} 3 & 5 \\ 2 & 3 \end{bmatrix} \begin{bmatrix} x \\ y \end{bmatrix} = \begin{bmatrix} 19 \\ 12 \end{bmatrix}$		$\left \begin{array}{cc c} 3 & 5 & 19 \\ 2 & 3 & 12 \end{array} \right $	
				$\left \begin{array}{cc c} 1 & 1.6667 & 6.3333 \\ 0 & -0.3333 & -0.6667 \end{array} \right $	$\begin{array}{l} R1 / 3 \\ R2 - 2 R1^* \end{array}$
$\begin{array}{rclcl} 1x & + & 0y & = & 3 \\ 0x & + & 1y & = & 2 \end{array}$		$\begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix} \begin{bmatrix} x \\ y \end{bmatrix} = \begin{bmatrix} 3 \\ 2 \end{bmatrix}$		$\left \begin{array}{cc c} 1 & 0 & 3 \\ 0 & 1 & 2 \end{array} \right $	$\begin{array}{l} R1 - 1.7 R2^* \\ R2 / -0.3 \end{array}$

$$\begin{array}{rcl} x & = & 3 \\ y & = & 2 \end{array}$$