

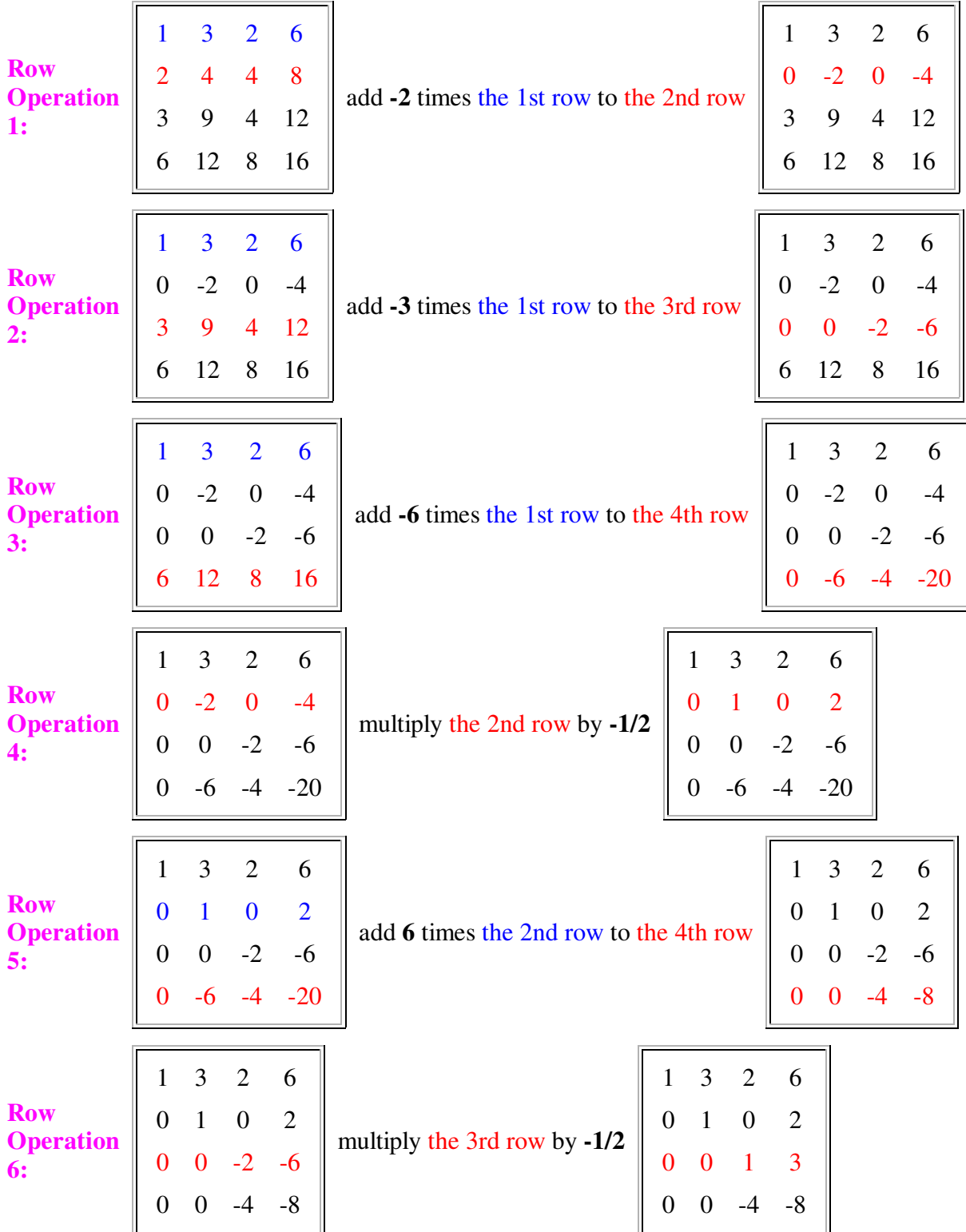


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Transforming a matrix to reduced row echelon form

v. 1.24

TRANSFORMING MATRIX TO THE REDUCED ROW ECHELON FORM



Row
Operation
7:

$$\begin{array}{cccc} 1 & 3 & 2 & 6 \\ 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 3 \\ 0 & 0 & -4 & -8 \end{array}$$

add 4 times the 3rd row to the 4th row

$$\begin{array}{cccc} 1 & 3 & 2 & 6 \\ 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 3 \\ 0 & 0 & 0 & 4 \end{array}$$

Row
Operation
8:

$$\begin{array}{cccc} 1 & 3 & 2 & 6 \\ 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 3 \\ 0 & 0 & 0 & 4 \end{array}$$

multiply the 4th row by $\frac{1}{4}$

$$\begin{array}{cccc} 1 & 3 & 2 & 6 \\ 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 3 \\ 0 & 0 & 0 & 1 \end{array}$$

Row
Operation
9:

$$\begin{array}{cccc} 1 & 3 & 2 & 6 \\ 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 3 \\ 0 & 0 & 0 & 1 \end{array}$$

add -3 times the 4th row to the 3rd row

$$\begin{array}{cccc} 1 & 3 & 2 & 6 \\ 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{array}$$

Row
Operation
10:

$$\begin{array}{cccc} 1 & 3 & 2 & 6 \\ 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{array}$$

add -2 times the 4th row to the 2nd row

$$\begin{array}{cccc} 1 & 3 & 2 & 6 \\ 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{array}$$

Row
Operation
11:

$$\begin{array}{cccc} 1 & 3 & 2 & 6 \\ 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{array}$$

add -6 times the 4th row to the 1st row

$$\begin{array}{cccc} 1 & 3 & 2 & 0 \\ 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{array}$$

Row
Operation
12:

$$\begin{array}{cccc} 1 & 3 & 2 & 0 \\ 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{array}$$

add -2 times the 3rd row to the 1st row

$$\begin{array}{cccc} 1 & 3 & 0 & 0 \\ 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{array}$$

Row
Operation
13:

$$\begin{array}{cccc} 1 & 3 & 0 & 0 \\ 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{array}$$

add -3 times the 2nd row to the 1st row

$$\begin{array}{cccc} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{array}$$