Matrices - Find Inverse from Simplified Augmented Matrix (3x3)

1 Find the inverse of this augmented matrix by doing the required row operations

$$\left[\begin{array}{ccc|ccc} 0 & 0 & 3 & 1 & 0 & 0 \\ 0 & 1 & 0 & 0 & 1 & 0 \\ 4 & 0 & 0 & 0 & 0 & 1 \end{array}\right]$$

A	$\begin{bmatrix} 0 & 0 & -36 \\ 0 & -12 & 0 \\ -48 & 0 & 0 \end{bmatrix}$	B	$\begin{bmatrix} 7 & 5 & 0 \\ 5 & 0 & 6 \\ 5 & 9 & 3 \end{bmatrix}$
C	$\begin{bmatrix} 0 & 0 & 0.25 \\ 0 & 1 & 0 \\ 0.33 & 0 & 0 \end{bmatrix}$	D	$\begin{bmatrix} 0 & 0 & -0.38 \\ 0 & -1.5 & 0 \\ -0.5 & 0 & 0 \end{bmatrix}$
E	$\begin{bmatrix} 0 & 0 & 0.12 \\ 0 & 0.5 & 0 \\ 0.17 & 0 & 0 \end{bmatrix}$	F	$\begin{bmatrix} 0 & 0 & -0.25 \\ 0 & -0.08 & 0 \\ -0.33 & 0 & 0 \end{bmatrix}$

2 Find the inverse of this augmented matrix by doing the required row operations

$$\left[\begin{array}{ccc|ccc} -3 & 0 & 0 & 1 & 0 & 0 \\ 0 & 0.33 & 0 & 0 & 1 & 0 \\ 0 & 0 & 0.33 & 0 & 0 & 1 \end{array}\right]$$

A	$\begin{bmatrix} -0.67 & 0 & 0 \\ 0 & 6 & 0 \\ 0 & 0 & 6 \end{bmatrix}$	B	$undefined$
C	$\begin{bmatrix} 0.5 & 0 & 0 \\ 0 & -4.5 & 0 \\ 0 & 0 & -4.5 \end{bmatrix}$	D	$\begin{bmatrix} 2 & 9 & 2 \\ 3 & 9 & 4 \\ 4 & 1 & 9 \end{bmatrix}$
E	$\begin{bmatrix} 0.17 & 0 & 0 \\ 0 & -1.5 & 0 \\ 0 & 0 & -1.5 \end{bmatrix}$	F	$\begin{bmatrix} -0.33 & 0 & 0 \\ 0 & 3 & 0 \\ 0 & 0 & 3 \end{bmatrix}$

3 Find the inverse of this augmented matrix by doing the required row operations

$$\left[\begin{array}{ccc|ccc} 1 & 0 & 0 & 1 & 0 & 0 \\ 0 & 0 & 2 & 0 & 1 & 0 \\ 0 & -3 & 0 & 0 & 0 & 1 \end{array}\right]$$

A	$\begin{bmatrix} -1.5 & 0 & 0 \\ 0 & 0 & 0.5 \\ 0 & -0.75 & 0 \end{bmatrix}$	B	$\begin{bmatrix} 1 & 0 & 0 \\ 0 & 0 & 2 \\ 0 & -3 & 0 \end{bmatrix}$
C	$\begin{bmatrix} 6 & 0 & 0 \\ 0 & 0 & 12 \\ 0 & -18 & 0 \end{bmatrix}$	D	$\begin{bmatrix} -2 & 0 & 0 \\ 0 & 0 & 0.67 \\ 0 & -1 & 0 \end{bmatrix}$
E	$\begin{bmatrix} 1 & 0 & 0 \\ 0 & 0 & -0.33 \\ 0 & 0.5 & 0 \end{bmatrix}$	F	$\begin{bmatrix} 9 & 4 & 3 \\ 4 & 0 & 0 \\ 8 & 4 & 1 \end{bmatrix}$

4 Find the inverse of this augmented matrix by doing the required row operations

$$\left[\begin{array}{ccc|ccc} -4 & 0 & 0 & 1 & 0 & 0 \\ 0 & 0.5 & 0 & 0 & 1 & 0 \\ 0 & 0 & -0.5 & 0 & 0 & 1 \end{array}\right]$$

A	$undefined$	B	$\begin{bmatrix} 0.25 & 0 & 0 \\ 0 & -2 & 0 \\ 0 & 0 & 2 \end{bmatrix}$
C	$\begin{bmatrix} -0.25 & 0 & 0 \\ 0 & 2 & 0 \\ 0 & 0 & -2 \end{bmatrix}$	D	$\begin{bmatrix} 0.21 & 0 & 0 \\ 0 & -0.03 & 0 \\ 0 & 0 & 0.03 \end{bmatrix}$
E	$\begin{bmatrix} 0.38 & 0 & 0 \\ 0 & -3 & 0 \\ 0 & 0 & 3 \end{bmatrix}$	F	$\begin{bmatrix} -0.5 & 0 & 0 \\ 0 & 4 & 0 \\ 0 & 0 & -4 \end{bmatrix}$

5 Find the inverse of this augmented matrix by doing the required row operations

$$\left[\begin{array}{ccc|ccc} 1 & 0 & 0 & 1 & 0 & 0 \\ 0 & 0 & 3 & 0 & 1 & 0 \\ 0 & -4 & 0 & 0 & 0 & 1 \end{array}\right]$$

A	$\begin{bmatrix} -0.5 & 0 & 0 \\ 0 & 0 & 0.12 \\ 0 & -0.17 & 0 \end{bmatrix}$	B	$\begin{bmatrix} 0.05 & 0 & 0 \\ 0 & 0 & 0.14 \\ 0 & -0.18 & 0 \end{bmatrix}$
C	$undefined$	D	$\begin{bmatrix} 1 & 0 & 0 \\ 0 & 0 & -0.25 \\ 0 & 0.33 & 0 \end{bmatrix}$
E	$\begin{bmatrix} 2 & 1 & 9 \\ 0 & 5 & 7 \\ 5 & 8 & 7 \end{bmatrix}$	F	$\begin{bmatrix} 1.5 & 0 & 0 \\ 0 & 0 & -0.38 \\ 0 & 0.5 & 0 \end{bmatrix}$

6 Find the inverse of this augmented matrix by doing the required row operations

$$\left[\begin{array}{ccc|ccc} -0.33 & 0 & 0 & 1 & 0 & 0 \\ 0 & -2 & 0 & 0 & 1 & 0 \\ 0 & 0 & -4 & 0 & 0 & 1 \end{array}\right]$$

A	$\begin{bmatrix} -3 & 0 & 0 \\ 0 & -0.5 & 0 \\ 0 & 0 & -0.25 \end{bmatrix}$	B	$\begin{bmatrix} 9 & 4 & 4 \\ 0 & 7 & 4 \\ 1 & 3 & 7 \end{bmatrix}$
C	$\begin{bmatrix} 6 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 0.5 \end{bmatrix}$	D	$\begin{bmatrix} 0.04 & 0 & 0 \\ 0 & 0.26 & 0 \\ 0 & 0 & 0.52 \end{bmatrix}$
E	$\begin{bmatrix} -3 & 2 & 0 \\ 0 & -0.5 & 0 \\ 1 & -1 & -0.25 \end{bmatrix}$	F	$\begin{bmatrix} -3 & 2 & 0 \\ 0 & -0.5 & 0 \\ 0 & 0 & -0.25 \end{bmatrix}$

7 Find the inverse of this augmented matrix by doing the required row operations

$$\left[\begin{array}{ccc|ccc} 0 & 4 & 0 & 1 & 0 & 0 \\ -4 & 0 & 0 & 0 & 1 & 0 \\ 0 & 0 & 1 & 0 & 0 & 1 \end{array}\right]$$

A	$\begin{bmatrix} 0 & -0.19 & 0 \\ 0.19 & 0 & 0 \\ 0 & 0 & 0.75 \end{bmatrix}$	B	$\begin{bmatrix} 0 & -0.25 & 0 \\ 0.25 & 0 & 0 \\ 0 & 0 & 1 \end{bmatrix}$
C	$\begin{bmatrix} 0 & -0.25 & 0 \\ 0.25 & 3 & 0 \\ 0 & 0 & 1 \end{bmatrix}$	D	$\begin{bmatrix} 0 & -0.25 & 0 \\ 0.25 & 2 & 0 \\ 0 & 0 & 1 \end{bmatrix}$
E	$\begin{bmatrix} 0 & 0.13 & 0 \\ -0.13 & 0 & 0 \\ 0 & 0 & 0.03 \end{bmatrix}$	F	$\begin{bmatrix} 0 & -0.25 & 0 \\ 0.25 & 0 & 0 \\ 0 & 2 & 1 \end{bmatrix}$

8 Find the inverse of this augmented matrix by doing the required row operations

$$\left[\begin{array}{ccc|ccc} 2 & 0 & 0 & 1 & 0 & 0 \\ 0 & 2 & 0 & 0 & 1 & 0 \\ 6 & 6 & 1 & 0 & 0 & 1 \end{array}\right]$$

A	$\begin{bmatrix} -0.25 & 0 & 0 \\ 0 & -0.25 & 0 \\ 1.5 & 1.5 & -0.5 \end{bmatrix}$	B	$\begin{bmatrix} 0.5 & 0 & 0 \\ 0 & 0.5 & 0 \\ -3 & -3 & 1 \end{bmatrix}$
C	$\begin{bmatrix} -0.38 & 0 & 0 \\ 0 & -0.38 & 0 \\ 2.25 & 2.25 & -0.75 \end{bmatrix}$	D	$\begin{bmatrix} 0.14 & 0 & 0 \\ 0 & 0.14 & 0 \\ 0.43 & 0.43 & 0.07 \end{bmatrix}$
E	$undefined$	F	$\begin{bmatrix} 8 & 0 & 0 \\ 0 & 8 & 0 \\ 24 & 24 & 4 \end{bmatrix}$