



Math worksheet on 'Matrices - Find Inverse of Diagonal Matrix (3x3) (Level 1)'. Part of a broader unit on 'Matrices'

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1 Find the inverse of this matrix if it has one

$$\begin{bmatrix} 3 & 0 & 0 \\ 0 & 3 & 0 \\ 0 & 0 & 6 \end{bmatrix}$$

a $\begin{bmatrix} 0.04 & 0 & 0 \\ 0 & 0.04 & 0 \\ 0 & 0 & 0.08 \end{bmatrix}$

c $\begin{bmatrix} 0.05 & 0 & 0 \\ 0 & 0.05 & 0 \\ 0 & 0 & 0.1 \end{bmatrix}$

e $\begin{bmatrix} 0.42 & 0 & 0 \\ 0 & 0.42 & 0 \\ 0 & 0 & 0.21 \end{bmatrix}$

b $\begin{bmatrix} 0.33 & 0 & 0 \\ 0 & 0.33 & 0 \\ 0 & 0 & 0.17 \end{bmatrix}$

d $\begin{bmatrix} 0.06 & 0 & 0 \\ 0 & 0.06 & 0 \\ 0 & 0 & 0.12 \end{bmatrix}$

f $\begin{bmatrix} 0.06 & 0 & 0 \\ 0 & 0.06 & 0 \\ 0 & 0 & 0.11 \end{bmatrix}$

2 Find the inverse of this matrix if it has one

$$\begin{bmatrix} 9 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 6 \end{bmatrix}$$

a $\begin{bmatrix} -0.22 & 0 & 0 \\ 0 & -2 & 0 \\ 0 & 0 & -0.33 \end{bmatrix}$

e $\begin{bmatrix} 6 & 1 & 5 \\ 9 & 3 & 0 \\ 0 & 9 & 7 \end{bmatrix}$

e $\begin{bmatrix} 6 & 7 & 8 \\ 5 & 8 & 0 \\ 0 & 0 & 3 \end{bmatrix}$

b $\begin{bmatrix} 0.11 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 0.17 \end{bmatrix}$

d $\begin{bmatrix} 0.06 & 0 & 0 \\ 0 & 0.5 & 0 \\ 0 & 0 & 0.08 \end{bmatrix}$

f $\begin{bmatrix} 7 & 8 & 5 \\ 3 & 0 & 1 \\ 7 & 2 & 7 \end{bmatrix}$

3 Find the inverse of this matrix if it has one

$$\begin{bmatrix} 3 & 0 & 0 \\ 0 & 3 & 0 \\ 0 & 0 & 1 \end{bmatrix}$$

a $\begin{bmatrix} -0.25 & 0 & 0 \\ 0 & -0.25 & 0 \\ 0 & 0 & -0.75 \end{bmatrix}$

c $\begin{bmatrix} 0.33 & 0 & -2 \\ 0 & 0.33 & 0 \\ 0 & 0 & 1 \end{bmatrix}$

e $\begin{bmatrix} 0.33 & 0 & 0 \\ 0 & 0.33 & 0 \\ 0 & 0 & 1 \end{bmatrix}$

b $\begin{bmatrix} -0.17 & 0 & 0 \\ 0 & -0.17 & 0 \\ 0 & 0 & -0.5 \end{bmatrix}$

d $\begin{bmatrix} 0.17 & 0 & 0 \\ 0 & 0.17 & 0 \\ 0 & 0 & 0.5 \end{bmatrix}$

f $\begin{bmatrix} -0.67 & 0 & 0 \\ 0 & -0.67 & 0 \\ 0 & 0 & -2 \end{bmatrix}$

4 Find the inverse of this matrix if it has one

$$\begin{bmatrix} 3 & 0 & 0 \\ 0 & 2 & 0 \\ 0 & 0 & 9 \end{bmatrix}$$

a $\begin{bmatrix} 0.33 & 0 & 0 \\ 0 & 0.5 & 0 \\ -2 & 1 & 2.11 \end{bmatrix}$

c $\begin{bmatrix} 0.08 & 0 & 0 \\ 0 & 0.05 & 0 \\ 0 & 0 & 0.23 \end{bmatrix}$

e $\begin{bmatrix} 0.17 & 0 & 0 \\ 0 & 0.25 & 0 \\ 0 & 0 & 0.06 \end{bmatrix}$

b $\begin{bmatrix} 0.33 & 0 & 1 \\ 0 & 0.5 & 0 \\ 0 & 0 & -2.89 \end{bmatrix}$

d $\begin{bmatrix} 0.33 & 0 & 0 \\ 0 & 0.5 & 0 \\ 0 & 0 & 0.11 \end{bmatrix}$

f $\begin{bmatrix} 5 & 0 & 4 \\ 8 & 2 & 2 \\ 4 & 4 & 0 \end{bmatrix}$

5 Find the inverse of this matrix if it has one

$$\begin{bmatrix} 6 & 0 & 0 \\ 0 & 4 & 0 \\ 0 & 0 & 1 \end{bmatrix}$$

a *undefined*

c $\begin{bmatrix} 0.15 & 0 & 0 \\ 0 & 0.1 & 0 \\ 0 & 0 & 0.03 \end{bmatrix}$

e $\begin{bmatrix} 0.25 & 0 & 0 \\ 0 & 0.17 & 0 \\ 0 & 0 & 0.04 \end{bmatrix}$

b $\begin{bmatrix} 0.17 & 0 & -2 \\ 0 & 0.25 & 1 \\ 0 & 0 & 1 \end{bmatrix}$

d $\begin{bmatrix} 0.67 & 0 & 0 \\ 0 & 0.44 & 0 \\ 0 & 0 & 0.11 \end{bmatrix}$

f $\begin{bmatrix} 0.17 & 0 & 0 \\ 0 & 0.25 & 0 \\ 0 & 0 & 1 \end{bmatrix}$

6 Find the inverse of this matrix if it has one

$$\begin{bmatrix} 4 & 0 & 0 \\ 0 & 4 & 0 \\ 0 & 0 & 8 \end{bmatrix}$$

a $\begin{bmatrix} 0.25 & 0 & 0 \\ 0 & 0.25 & 0 \\ 0 & 0 & 0.12 \end{bmatrix}$

c $\begin{bmatrix} 0.25 & 0 & 0 \\ 0 & 0.25 & 0 \\ 0 & -3 & 0.12 \end{bmatrix}$

e $\begin{bmatrix} 0.25 & 0 & 3 \\ -3 & 0.25 & 0 \\ -2 & 0 & 0.12 \end{bmatrix}$

b $\begin{bmatrix} 0.12 & 0 & 0 \\ 0 & 0.12 & 0 \\ 0 & 0 & 0.06 \end{bmatrix}$

d $\begin{bmatrix} 8 & 9 & 9 \\ 2 & 7 & 9 \\ 4 & 4 & 7 \end{bmatrix}$

f $\begin{bmatrix} 0 & 0 & 0 \\ 0 & 0 & 0 \\ 0 & 0 & 0 \end{bmatrix}$

7 Find the inverse of this matrix if it has one

$$\begin{bmatrix} 8 & 0 & 0 \\ 0 & 6 & 0 \\ 0 & 0 & 4 \end{bmatrix}$$

a $\begin{bmatrix} 0.03 & 0 & 0 \\ 0 & 0.04 & 0 \\ 0 & 0 & 0.06 \end{bmatrix}$

c *undefined*

e $\begin{bmatrix} 0.12 & 0 & 0 \\ 1 & 2.17 & 3 \\ -2 & 0 & 0.25 \end{bmatrix}$

b $\begin{bmatrix} 0.12 & 0 & 0 \\ 0 & 0.17 & 0 \\ 0 & 0 & 0.25 \end{bmatrix}$

d $\begin{bmatrix} 1,536 & 0 & 0 \\ 0 & 1,152 & 0 \\ 0 & 0 & 768 \end{bmatrix}$

f $\begin{bmatrix} -0.25 & 0 & 0 \\ 0 & -0.33 & 0 \\ 0 & 0 & -0.5 \end{bmatrix}$