

The Short Cut of Finding An Inverse Matrix Pre Calculus 9.6

Lesson 248 | Precalculus | Determinants and inverse matrices

<https://www.youtube.com/watch?v=17yn-X81drc>

Original practice aligned to the saved video title.

Name: _____ Date: _____ Show your reasoning.

01

Find the determinant and inverse, if it exists, of $A = \begin{bmatrix} 8 & 10 \\ 1 & 11 \end{bmatrix}$.

02

Find the determinant and inverse, if it exists, of $A = \begin{bmatrix} 7 & 14 \\ 1 & 12 \end{bmatrix}$.

03

Find the determinant and inverse, if it exists, of $A = \begin{bmatrix} 14 & 2 \\ 1 & 7 \end{bmatrix}$.

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04

Find the determinant and inverse, if it exists, of $A = \begin{bmatrix} 9 & 2 \\ 1 & 5 \end{bmatrix}$.

05

Find the determinant and inverse, if it exists, of $A = \begin{bmatrix} 4 & 10 \\ 1 & 11 \end{bmatrix}$.

06

Find the determinant and inverse, if it exists, of $A = \begin{bmatrix} 4 & 13 \\ 1 & 5 \end{bmatrix}$.

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01

Find the determinant and inverse, if it exists, of $A = \begin{bmatrix} 8 & 10 \\ 1 & 11 \end{bmatrix}$.

$\det A = 8 \cdot 11 - 10 = 78$. $A^{-1} = (1/78) \begin{bmatrix} 11 & -10 \\ -1 & 8 \end{bmatrix}$. Multiplying by A gives the identity.

02

Find the determinant and inverse, if it exists, of $A = \begin{bmatrix} 7 & 14 \\ 1 & 12 \end{bmatrix}$.

$\det A = 7 \cdot 12 - 14 = 70$. $A^{-1} = (1/70) \begin{bmatrix} 12 & -14 \\ -1 & 7 \end{bmatrix}$. Multiplying by A gives the identity.

03

Find the determinant and inverse, if it exists, of $A = \begin{bmatrix} 14 & 2 \\ 1 & 7 \end{bmatrix}$.

$\det A = 14 \cdot 7 - 2 = 96$. $A^{-1} = (1/96) \begin{bmatrix} 7 & -2 \\ -1 & 14 \end{bmatrix}$. Multiplying by A gives the identity.

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04

Find the determinant and inverse, if it exists, of $A = \begin{bmatrix} 9 & 2 \\ 1 & 5 \end{bmatrix}$.

$\det A = 9 \cdot 5 - 2 = 43$. $A^{-1} = (1/43) \begin{bmatrix} 5 & -2 \\ -1 & 9 \end{bmatrix}$. Multiplying by A gives the identity.

05

Find the determinant and inverse, if it exists, of $A = \begin{bmatrix} 4 & 10 \\ 1 & 11 \end{bmatrix}$.

$\det A = 4 \cdot 11 - 10 = 34$. $A^{-1} = (1/34) \begin{bmatrix} 11 & -10 \\ -1 & 4 \end{bmatrix}$. Multiplying by A gives the identity.

06

Find the determinant and inverse, if it exists, of $A = \begin{bmatrix} 4 & 13 \\ 1 & 5 \end{bmatrix}$.

$\det A = 4 \cdot 5 - 13 = 7$. $A^{-1} = (1/7) \begin{bmatrix} 5 & -13 \\ -1 & 4 \end{bmatrix}$. Multiplying by A gives the identity.