Given the following 2x2 matrix...

we can find the inverse matrix of A,

$$A = \left[\begin{array}{cc} a & b \\ c & d \end{array} \right]$$

$$A^{-1} = \frac{1}{\det A} \begin{bmatrix} d & -b \\ -c & a \end{bmatrix}$$

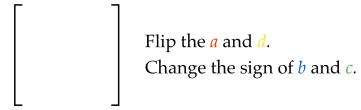
The Inverse Matrix

1. Find Determinant of Original Matrix 3. Calculate the Inverse

$$A = \left[\begin{array}{cc} a & b \\ c & d \end{array} \right]$$

$$A^{-1} =$$

2. Create the other matrix to multiply.



Find the inverse of the following matrix

$$A = \begin{bmatrix} 2 & 1 \\ 3 & 1 \end{bmatrix}$$

- 1. Find Determinant of Original Matrix
- 2. Create the other Matrix

The Inverse of Matrix *A*,

$$A^{-1} = \frac{1}{\det A} \begin{bmatrix} d & -b \\ -c & a \end{bmatrix}$$

3. Calculate the Inverse

Find the inverse of the following matrix

$$A = \begin{bmatrix} 3 & 1 \\ 4 & 2 \end{bmatrix}$$

- 1. Find Determinant of Original Matrix
- 2. Create the other Matrix

The Inverse of Matrix
$$A$$
,
$$A^{-1} = \frac{1}{\det A} \begin{bmatrix} d & -b \\ -c & a \end{bmatrix}$$

3. Calculate the Inverse

Find the inverse of the following matrix

$$A = \begin{bmatrix} -4 & 1 \\ 6 & -2 \end{bmatrix}$$

- 1. Find Determinant of Original Matrix
- 2. Create the other Matrix

The Inverse of Matrix
$$A$$
,
$$A^{-1} = \frac{1}{\det A} \begin{bmatrix} d & -b \\ -c & a \end{bmatrix}$$

3. Calculate the **Inverse**

The Inverse Matrix

1. Find Determinant of Original Matrix

$$A = \begin{bmatrix} \mathbf{A} & \mathbf{B} \\ \mathbf{A} & \mathbf{A} \end{bmatrix} = \det A$$

2. Create the other matrix to multiply.

$$\begin{bmatrix} d & -b \\ -c & a \end{bmatrix}$$
 Flip the a and d .
Change the sign of b and c .

3. Calculate the Inverse

$$A^{-1} = \frac{1}{\det A} \begin{bmatrix} d & -b \\ -c & a \end{bmatrix}$$