



Matrices - Find Minor Matrix from Number (3x3)

1 Find the resulting 2x2 'minor' matrix for the '4' at row 1 and column 3

$$M_{13} \text{ of } \begin{bmatrix} 3 & 8 & 4 \\ 1 & 9 & 5 \\ 3 & 6 & 9 \end{bmatrix}$$

A	B	C	D	E	F
$\begin{bmatrix} 3 & 8 \\ 1 & 9 \end{bmatrix}$	$\begin{bmatrix} 8 & 4 \\ 6 & 9 \end{bmatrix}$	$\begin{bmatrix} 9 & 5 \\ 6 & 9 \end{bmatrix}$	$\begin{bmatrix} 1 & 9 \\ 3 & 6 \end{bmatrix}$	$\begin{bmatrix} 3 & 4 \\ 3 & 9 \end{bmatrix}$	$\begin{bmatrix} 3 & 8 \\ 3 & 6 \end{bmatrix}$

2 Find the resulting 2x2 'minor' matrix for the '7' at row 3 and column 3

$$M_{33} \text{ of } \begin{bmatrix} 3 & 6 & 5 \\ 0 & 5 & 1 \\ 8 & 0 & 7 \end{bmatrix}$$

A	B	C	D	E	F
$\begin{bmatrix} 0 & 5 \\ 8 & 0 \end{bmatrix}$	$\begin{bmatrix} 0 & 1 \\ 8 & 7 \end{bmatrix}$	$\begin{bmatrix} 6 & 5 \\ 5 & 1 \end{bmatrix}$	$\begin{bmatrix} 5 & 1 \\ 0 & 7 \end{bmatrix}$	$\begin{bmatrix} 3 & 6 \\ 0 & 5 \end{bmatrix}$	$\begin{bmatrix} 6 & 5 \\ 0 & 7 \end{bmatrix}$

3 Find the resulting 2x2 'minor' matrix for the '3' at row 1 and column 1

$$M_{11} \text{ of } \begin{bmatrix} 3 & 0 & 0 \\ 4 & 9 & 9 \\ 1 & 6 & 5 \end{bmatrix}$$

A	B	C	D	E	F
$\begin{bmatrix} 3 & 0 \\ 4 & 9 \end{bmatrix}$	$\begin{bmatrix} 9 & 9 \\ 6 & 5 \end{bmatrix}$	$\begin{bmatrix} 3 & 0 \\ 1 & 6 \end{bmatrix}$	$\begin{bmatrix} 3 & 0 \\ 1 & 5 \end{bmatrix}$	$\begin{bmatrix} 0 & 0 \\ 6 & 5 \end{bmatrix}$	$\begin{bmatrix} 0 & 0 \\ 9 & 9 \end{bmatrix}$

4 Find the resulting 2x2 'minor' matrix for the '7' at row 3 and column 2

$$M_{32} \text{ of } \begin{bmatrix} 6 & 8 & 5 \\ 5 & 5 & 9 \\ 0 & 7 & 4 \end{bmatrix}$$

A	B	C	D	E	F
$\begin{bmatrix} 5 & 5 \\ 0 & 7 \end{bmatrix}$	$\begin{bmatrix} 8 & 5 \\ 5 & 9 \end{bmatrix}$	$\begin{bmatrix} 6 & 8 \\ 5 & 5 \end{bmatrix}$	$\begin{bmatrix} 6 & 5 \\ 0 & 4 \end{bmatrix}$	$\begin{bmatrix} 6 & 5 \\ 5 & 9 \end{bmatrix}$	$\begin{bmatrix} 6 & 8 \\ 0 & 7 \end{bmatrix}$

5 Find the resulting 2x2 'minor' matrix for the '0' at row 1 and column 3

$$M_{13} \text{ of } \begin{bmatrix} 1 & 9 & 0 \\ 1 & 6 & 2 \\ 4 & 9 & 3 \end{bmatrix}$$

A	B	C	D	E	F
$\begin{bmatrix} 1 & 6 \\ 4 & 9 \end{bmatrix}$	$\begin{bmatrix} 1 & 0 \\ 4 & 3 \end{bmatrix}$	$\begin{bmatrix} 9 & 0 \\ 6 & 2 \end{bmatrix}$	$\begin{bmatrix} 1 & 9 \\ 1 & 6 \end{bmatrix}$	$\begin{bmatrix} 6 & 2 \\ 9 & 3 \end{bmatrix}$	$\begin{bmatrix} 1 & 9 \\ 4 & 9 \end{bmatrix}$

6 Find the resulting 2x2 'minor' matrix for the '9' at row 2 and column 3

$$M_{23} \text{ of } \begin{bmatrix} 7 & 7 & 8 \\ 3 & 7 & 9 \\ 0 & 7 & 6 \end{bmatrix}$$

A	B	C	D	E	F
$\begin{bmatrix} 3 & 7 \\ 0 & 7 \end{bmatrix}$	$\begin{bmatrix} 7 & 8 \\ 3 & 9 \end{bmatrix}$	$\begin{bmatrix} 7 & 7 \\ 0 & 7 \end{bmatrix}$	$\begin{bmatrix} 7 & 7 \\ 3 & 7 \end{bmatrix}$	$\begin{bmatrix} 7 & 8 \\ 7 & 9 \end{bmatrix}$	$\begin{bmatrix} 3 & 9 \\ 0 & 6 \end{bmatrix}$

7 Find the resulting 2x2 'minor' matrix for the '9' at row 3 and column 3

$$M_{33} \text{ of } \begin{bmatrix} 4 & 7 & 1 \\ 5 & 7 & 6 \\ 5 & 2 & 9 \end{bmatrix}$$

A	B	C	D	E	F
$\begin{bmatrix} 7 & 6 \\ 2 & 9 \end{bmatrix}$	$\begin{bmatrix} 4 & 1 \\ 5 & 9 \end{bmatrix}$	$\begin{bmatrix} 4 & 1 \\ 5 & 6 \end{bmatrix}$	$\begin{bmatrix} 5 & 7 \\ 5 & 2 \end{bmatrix}$	$\begin{bmatrix} 4 & 7 \\ 5 & 7 \end{bmatrix}$	$\begin{bmatrix} 5 & 6 \\ 5 & 9 \end{bmatrix}$

8 Find the resulting 2x2 'minor' matrix for the '4' at row 2 and column 3

$$M_{23} \text{ of } \begin{bmatrix} 3 & 5 & 5 \\ 2 & 0 & 4 \\ 0 & 3 & 5 \end{bmatrix}$$

A	B	C	D	E	F
$\begin{bmatrix} 3 & 5 \\ 2 & 0 \end{bmatrix}$	$\begin{bmatrix} 3 & 5 \\ 2 & 4 \end{bmatrix}$	$\begin{bmatrix} 3 & 5 \\ 0 & 5 \end{bmatrix}$	$\begin{bmatrix} 2 & 4 \\ 0 & 5 \end{bmatrix}$	$\begin{bmatrix} 3 & 5 \\ 0 & 3 \end{bmatrix}$	$\begin{bmatrix} 0 & 4 \\ 3 & 5 \end{bmatrix}$