

Construct the matrix of minors

1 What does this matrix operation produce?

$$A^{-1}$$

A the matrix where each entry is replaced by the determinant of its minor matrix

B the transpose of the cofactor matrix

C the matrix that multiplies with A to give the identity matrix

D the matrix formed by swapping the rows and columns of A

E the matrix of minors with the checkerboard (+/-) sign pattern applied

2 What is the entry at row 1, column 3 of the matrix of minors of this matrix?

A	B	C
2	0	-7
D	E	F
-10	-4	1

3 Which shows row 3 of the matrix of minors of this matrix? Fill only that row and leave the other entries blank.

A

$$\begin{bmatrix} \square & \square & \square \\ \square & \square & \square \\ -41 & -50 & -46 \end{bmatrix}$$

B

$$\begin{bmatrix} \square & \square & \square \\ \square & \square & \square \\ -41 & -48 & -49 \end{bmatrix}$$

C

$$\begin{bmatrix} \square & \square & \square \\ \square & \square & \square \\ -41 & -47 & -46 \end{bmatrix}$$

D

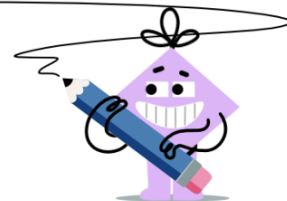
$$\begin{bmatrix} \square & \square & \square \\ \square & \square & \square \\ -44 & -51 & -47 \end{bmatrix}$$

4 What is the determinant of the minor matrix for the entry at row 1, column 1?

A	B	C
3	-1	2
D	E	F
-9	0	-3

5 What is the determinant of the minor matrix for the entry at row 2, column 1?

A	B	C
-22	-32	-24
D	E	F
-28	-27	-21



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- 6 Which diagram correctly finds the determinant of the minor matrix for the entry at row 1, column 1? Green is added, red is subtracted.

A $\begin{bmatrix} \overset{+}{2} & 8 \\ 7 & \overset{-}{3} \end{bmatrix}$

B $\begin{bmatrix} \overset{-}{2} & 8 \\ 7 & \overset{+}{3} \end{bmatrix}$

C $\begin{bmatrix} \overset{+}{5} & 2 \\ 1 & \overset{-}{7} \end{bmatrix}$

D $\begin{bmatrix} \overset{+}{5} & 8 \\ 1 & \overset{-}{3} \end{bmatrix}$

- 7 Which is the minor matrix for the entry at row 2, column 2?

A $\begin{bmatrix} -1 \end{bmatrix}$

B $\begin{bmatrix} 5 \end{bmatrix}$

C $\begin{bmatrix} 1 \end{bmatrix}$

- 8 Which is the minor matrix for the entry at row 1, column 2?

A $\begin{bmatrix} 2 & -6 \\ -8 & 9 \end{bmatrix}$

B $\begin{bmatrix} 2 & -1 \\ -8 & -8 \end{bmatrix}$

C $\begin{bmatrix} -6 & 9 \\ -8 & -8 \end{bmatrix}$

D $\begin{bmatrix} -6 & -1 \\ -5 & 9 \end{bmatrix}$

- 9 Which diagram shows how to form the minor matrix for the entry at row 2, column 1 by crossing out its row and column?

A $\begin{bmatrix} 9 & 8 & 1 \\ 4 & 5 & 3 \\ 6 & 7 & 2 \end{bmatrix}$

B $\begin{bmatrix} 9 & 8 & 1 \\ 4 & 5 & 3 \\ 6 & 7 & 2 \end{bmatrix}$

C $\begin{bmatrix} 9 & 8 & 1 \\ 4 & 5 & 3 \\ 6 & 7 & 2 \end{bmatrix}$

D $\begin{bmatrix} 9 & 8 & 1 \\ 4 & 5 & 3 \\ 6 & 7 & 2 \end{bmatrix}$