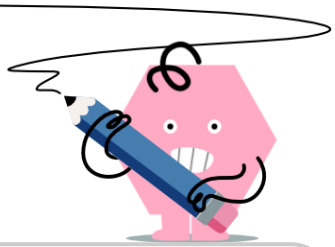
Name

Matrices - Find Determinant Formula (3x3)



1 Choose the correct formula for the determinant of this matrix based on expanding the first row

$|N| = a_{11} \cdot |M_{11}| - a_{12} \cdot |M_{12}| + a_{13} \cdot |M_{13}|$

$N = \begin{bmatrix} 3 & 4 & 2 \\ 6 & 7 & 8 \\ 9 & 9 & 3 \end{bmatrix}$

A $-3 \cdot 46 - 4 \cdot 32 - 2 \cdot 9$

B $-3 \cdot 51 + 4 \cdot 54 - 2 \cdot 9$

C $-3 \cdot 51 + 4 \cdot 76 - 2 \cdot 11$

D $-3 \cdot 56 + 4 \cdot 54 - 2 \cdot 9$

E $-3 \cdot 51 - 4 \cdot 54 - 2 \cdot 9$

F $-3 \cdot 66 + 4 \cdot 54 - 2 \cdot 10$

2 Choose the correct formula for the determinant of this matrix based on expanding the first row

$|C| = a_{11} \cdot |M_{11}| - a_{12} \cdot |M_{12}| + a_{13} \cdot |M_{13}|$

$C = \begin{bmatrix} 4 & 1 & 5 \\ 0 & 0 & 4 \\ 3 & 7 & 1 \end{bmatrix}$

A $-4 \cdot 28 - 1 \cdot 12 + 5 \cdot 0$

B $-4 \cdot 28 + 1 \cdot 12 + 5 \cdot 0$

C $-4 \cdot 28 + 1 \cdot 10 + 5 \cdot 0$

D $-4 \cdot 14 - 1 \cdot 18 + 5 \cdot 0$

E $-1 \cdot 28 + 1 \cdot 12 + 1 \cdot 0$

F $-4 \cdot 28 + 1 \cdot 14 + 5 \cdot 0$

3 Choose the correct formula for the determinant of this matrix based on expanding the first row

$|Y| = a_{11} \cdot |M_{11}| - a_{12} \cdot |M_{12}| + a_{13} \cdot |M_{13}|$

$Y = \begin{bmatrix} 4 & 7 & 2 \\ 1 & 6 & 6 \\ 9 & 9 & 4 \end{bmatrix}$

A $-4 \cdot 21 - 7 \cdot 55 - 2 \cdot 45$

B $-4 \cdot 24 - 7 \cdot 75 - 2 \cdot 45$

C $-4 \cdot 30 + 7 \cdot 50 - 2 \cdot 68$

D $-4 \cdot 30 + 7 \cdot 30 + 2 \cdot 0$

E $-4 \cdot 30 + 7 \cdot 50 - 2 \cdot 45$

F $-1 \cdot 30 + 1 \cdot 50 - 1 \cdot 45$

4 Choose the correct formula for the determinant of this matrix based on expanding the first row

$|D| = a_{11} \cdot |M_{11}| - a_{12} \cdot |M_{12}| + a_{13} \cdot |M_{13}|$

$D = \begin{bmatrix} 5 & 4 & 3 \\ 0 & 4 & 1 \\ 9 & 6 & 0 \end{bmatrix}$

A $-5 \cdot 9 - 4 \cdot 8 - 3 \cdot 36$

B $-5 \cdot 6 + 4 \cdot 9 - 3 \cdot 36$

C $-5 \cdot 6 + 4 \cdot 10 - 3 \cdot 47$

D $-5 \cdot 6 + 4 \cdot 12 - 3 \cdot 32$

E $-5 \cdot 6 - 4 \cdot 0 - 3 \cdot 43$

F $-1 \cdot 6 + 1 \cdot 9 - 1 \cdot 36$

5 Choose the correct formula for the determinant of this matrix based on expanding the first row

$|N| = a_{11} \cdot |M_{11}| - a_{12} \cdot |M_{12}| + a_{13} \cdot |M_{13}|$

$N = \begin{bmatrix} 9 & 8 & 0 \\ 8 & 5 & 5 \\ 7 & 5 & 0 \end{bmatrix}$

A $-9 \cdot 25 - 8 \cdot 35 + 0 \cdot 5$

B $-9 \cdot 25 + 8 \cdot 49 + 0 \cdot 8$

C $-1 \cdot 25 + 1 \cdot 35 + 1 \cdot 5$

D $-9 \cdot 25 + 8 \cdot 35 + 0 \cdot 5$

E $-9 \cdot 38 - 8 \cdot 18 + 0 \cdot 5$

F $-9 \cdot 33 - 8 \cdot 39 + 0 \cdot 5$

6 Choose the correct formula for the determinant of this matrix based on expanding the first row

$|M| = a_{11} \cdot |M_{11}| - a_{12} \cdot |M_{12}| + a_{13} \cdot |M_{13}|$

$M = \begin{bmatrix} 2 & 2 & 0 \\ 8 & 6 & 0 \\ 6 & 0 & 8 \end{bmatrix}$

A $2 \cdot 48 - 2 \cdot 83 - 0 \cdot 43$

B $2 \cdot 48 + 2 \cdot 64 - 0 \cdot 36$

C $2 \cdot 48 - 2 \cdot 64 - 0 \cdot 18$

D $2 \cdot 48 - 2 \cdot 64 - 0 \cdot 36$

E $1 \cdot 48 - 1 \cdot 64 - 1 \cdot 36$

F $2 \cdot 34 - 2 \cdot 64 - 0 \cdot 47$

7 Choose the correct formula for the determinant of this matrix based on expanding the first row

$|M| = a_{11} \cdot |M_{11}| - a_{12} \cdot |M_{12}| + a_{13} \cdot |M_{13}|$

$M = \begin{bmatrix} 4 & 0 & 3 \\ 2 & 9 & 2 \\ 0 & 1 & 2 \end{bmatrix}$

A $4 \cdot 16 - 0 \cdot 5 + 3 \cdot 1$

B $4 \cdot 8 + 0 \cdot 5 + 3 \cdot 2$

C $4 \cdot 16 - 0 \cdot 4 + 3 \cdot 0$

D $4 \cdot 16 - 0 \cdot 4 + 3 \cdot 2$

E $4 \cdot 16 - 0 \cdot 5 + 3 \cdot 0$

F $4 \cdot 16 - 0 \cdot 5 + 3 \cdot 3$

8 Choose the correct formula for the determinant of this matrix based on expanding the first row

$|B| = a_{11} \cdot |M_{11}| - a_{12} \cdot |M_{12}| + a_{13} \cdot |M_{13}|$

$B = \begin{bmatrix} 1 & 2 & 2 \\ 3 & 7 & 8 \\ 6 & 2 & 1 \end{bmatrix}$

A $-1 \cdot 9 + 2 \cdot 45 - 2 \cdot 36$

B $-1 \cdot 9 + 2 \cdot 27 - 2 \cdot 43$

C $-1 \cdot 8 - 2 \cdot 23 - 2 \cdot 36$

D $-1 \cdot 9 + 1 \cdot 45 - 1 \cdot 36$

E $-1 \cdot 10 - 2 \cdot 50 - 2 \cdot 36$

F $1 \cdot 0 - 2 \cdot 68 - 2 \cdot 36$