Name

Matrices - Find Determinant Formula (3x3)

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

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

A $1 \cdot 36 - 1 \cdot 13 - 1 \cdot 34$

B $9 \cdot 54 - 2 \cdot 13 - 2 \cdot 37$

C $9 \cdot 36 - 2 \cdot 13 - 2 \cdot 34$

D $9 \cdot 36 - 2 \cdot 16 - 2 \cdot 31$

E $9 \cdot 36 - 2 \cdot 7 - 2 \cdot 37$

F $9 \cdot 36 + 2 \cdot 13 - 2 \cdot 34$

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

$$\begin{bmatrix} 8 & 9 & 6 \\ 6 & 0 & 6 \\ 9 & 9 & 3 \end{bmatrix}$$

A $8 \cdot 65 - 9 \cdot 43 + 6 \cdot 54$

B $8 \cdot 54 + 9 \cdot 36 + 6 \cdot 54$

C $8 \cdot 49 - 9 \cdot 18 + 6 \cdot 54$

D $8 \cdot 43 - 9 \cdot 22 + 6 \cdot 54$

E $8 \cdot 54 - 9 \cdot 36 + 6 \cdot 54$

F $8 \cdot 38 + 9 \cdot 36 + 6 \cdot 59$

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

$$\begin{bmatrix} 0 & 2 & 4 \\ 0 & 1 & 8 \\ 4 & 4 & 9 \end{bmatrix}$$

A $0 \cdot 23 + 2 \cdot 32 - 4 \cdot 4$

B $-0 \cdot 23 - 2 \cdot 0 - 4 \cdot 5$

C $-0 \cdot 23 + 2 \cdot 32 - 4 \cdot 6$

D $-0 \cdot 23 - 2 \cdot 32 - 4 \cdot 4$

E $-0 \cdot 23 + 2 \cdot 45 - 4 \cdot 2$

F $-0 \cdot 23 + 2 \cdot 26 - 4 \cdot 4$

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

$$\begin{bmatrix} 0 & 3 & 6 \\ 4 & 2 & 8 \\ 9 & 3 & 2 \end{bmatrix}$$

A $0 \cdot 20 + 3 \cdot 77 - 6 \cdot 5$

B $-1 \cdot 20 + 1 \cdot 64 - 1 \cdot 6$

C $-0 \cdot 20 + 3 \cdot 64 - 6 \cdot 6$

D $-0 \cdot 20 + 3 \cdot 38 - 6 \cdot 8$

E $-0 \cdot 20 - 3 \cdot 64 - 6 \cdot 6$

F $-0 \cdot 28 - 3 \cdot 38 - 6 \cdot 6$

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

$$\begin{bmatrix} 9 & 4 & 4 \\ 8 & 7 & 0 \\ 5 & 3 & 2 \end{bmatrix}$$

A $9 \cdot 14 + 4 \cdot 16 - 4 \cdot 11$

B $9 \cdot 18 + 4 \cdot 19 - 4 \cdot 11$

C $9 \cdot 14 - 4 \cdot 16 - 4 \cdot 11$

D $9 \cdot 21 - 4 \cdot 16 - 4 \cdot 9$

E $1 \cdot 14 - 1 \cdot 16 - 1 \cdot 11$

F $9 \cdot 0 - 4 \cdot 16 - 4 \cdot 8$

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

$$\begin{bmatrix} 2 & 2 & 2 \\ 7 & 8 & 6 \\ 0 & 2 & 5 \end{bmatrix}$$

A $2 \cdot 28 - 2 \cdot 42 + 2 \cdot 7$

B $2 \cdot 28 + 2 \cdot 35 + 2 \cdot 14$

C $2 \cdot 28 - 2 \cdot 35 + 2 \cdot 14$

D $2 \cdot 28 - 2 \cdot 25 + 2 \cdot 20$

E $1 \cdot 28 - 1 \cdot 35 + 1 \cdot 14$

F $2 \cdot 28 - 2 \cdot 28 + 2 \cdot 20$

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

$$\begin{bmatrix} 9 & 7 & 0 \\ 5 & 2 & 1 \\ 6 & 3 & 6 \end{bmatrix}$$

A $9 \cdot 9 - 7 \cdot 24 + 0 \cdot 3$

B $9 \cdot 5 + 7 \cdot 24 + 0 \cdot 3$

C $9 \cdot 7 + 7 \cdot 17 + 0 \cdot 3$

D $9 \cdot 9 + 7 \cdot 29 + 0 \cdot 3$

E $9 \cdot 7 - 7 \cdot 24 + 0 \cdot 3$

F $9 \cdot 9 + 7 \cdot 24 + 0 \cdot 3$

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

$$\begin{bmatrix} 7 & 0 & 0 \\ 9 & 3 & 9 \\ 4 & 6 & 5 \end{bmatrix}$$

A $-7 \cdot 39 - 0 \cdot 9 + 0 \cdot 42$

B $-7 \cdot 39 - 0 \cdot 5 + 0 \cdot 55$

C $-7 \cdot 39 - 0 \cdot 11 + 0 \cdot 46$

D $-7 \cdot 39 - 0 \cdot 0 + 0 \cdot 25$

E $-1 \cdot 39 - 1 \cdot 9 + 1 \cdot 42$

F $-7 \cdot 39 - 0 \cdot 12 + 0 \cdot 34$